19 STATE AGENCIES

Submission 4099 (Ruby Kwan-Davis, California Department of Fish and Wildlife, September 15, 2022)

Palmdale - Burbank - RECORD #4099 DETAIL

Status :	Action Pending
Record Date :	9/15/2022
Interest As :	State Agency
First Name :	Ruby
Last Name :	Kwan-Davis

Stakeholder Comments/Issues :

Dear Mr. Stanich,

4099-7678

Can you please point me to where I can download the following reports or let me know who I should contact to get ahold of them?

Thank you.

Ruby

Ruby Kwan-Davis
Senior Environmental Scientist (Specialist) | California Department of Fish and Wildlife
South Coast | Region 5 | Habitat Conservation Planning Program
4665 Lampson Ave, Suite C | Los Alamitos, CA 90720
Ruby.Kwan-Davis@wildlife.ca.gov
Cell: (562)-619-2230

Response to Submission 4099 (Ruby Kwan-Davis, California Department of Fish and Wildlife, September 15, 2022)

4099-7678

Refer to Standard Response PB-Response-GEN-7: Access to Technical Reports.

The commenter asks where they can download reports. The Draft EIR/EIS is available on the Authority website and was made available via hard copy at multiple repository locations during the public review period. A member of the project team contacted the commenter to provide requested materials. Please refer to Standard Response PB-Response-GEN-7: Access to Technical Reports. CEQA and NEPA require a Final EIR and EIS to respond to the comments received on environmental issues (see 14 C.C.R. §15088(a) and Federal Railroad Administration Procedures for Considering Environmental Impacts 14(s)). This comment does not address the sufficiency of the Draft EIR/EIS, nor does it suggest edits to the document. No change has been made to the document in response to this comment.

Submission 4209 (Patrica Michel, Santa Monica Mountains Conservancy, October 21, 2022)

Palmdale - Burbank - RECORD #4209 DETAIL

Status :	Delimited
Record Date :	10/21/2022
Interest As :	State Agency
First Name :	Patrica
Last Name :	Michel
Attachments :	Attachment A - SR14A Build Alternative Overview Map.pdf (298 kb) Attachment B - SR14A Segment 2 and Vicinity Map.pdf (322 kb) Attachment C - SR14A Agua Dulce Canyon Map.pdf (305 kb) SMMC Comment Letter - CA HSR Draft EIR-EIS (2022).pdf (78 kb) Attachment_D__SR14A_Spring_and_Bee_Canyons_Map.pdf (323 kb)

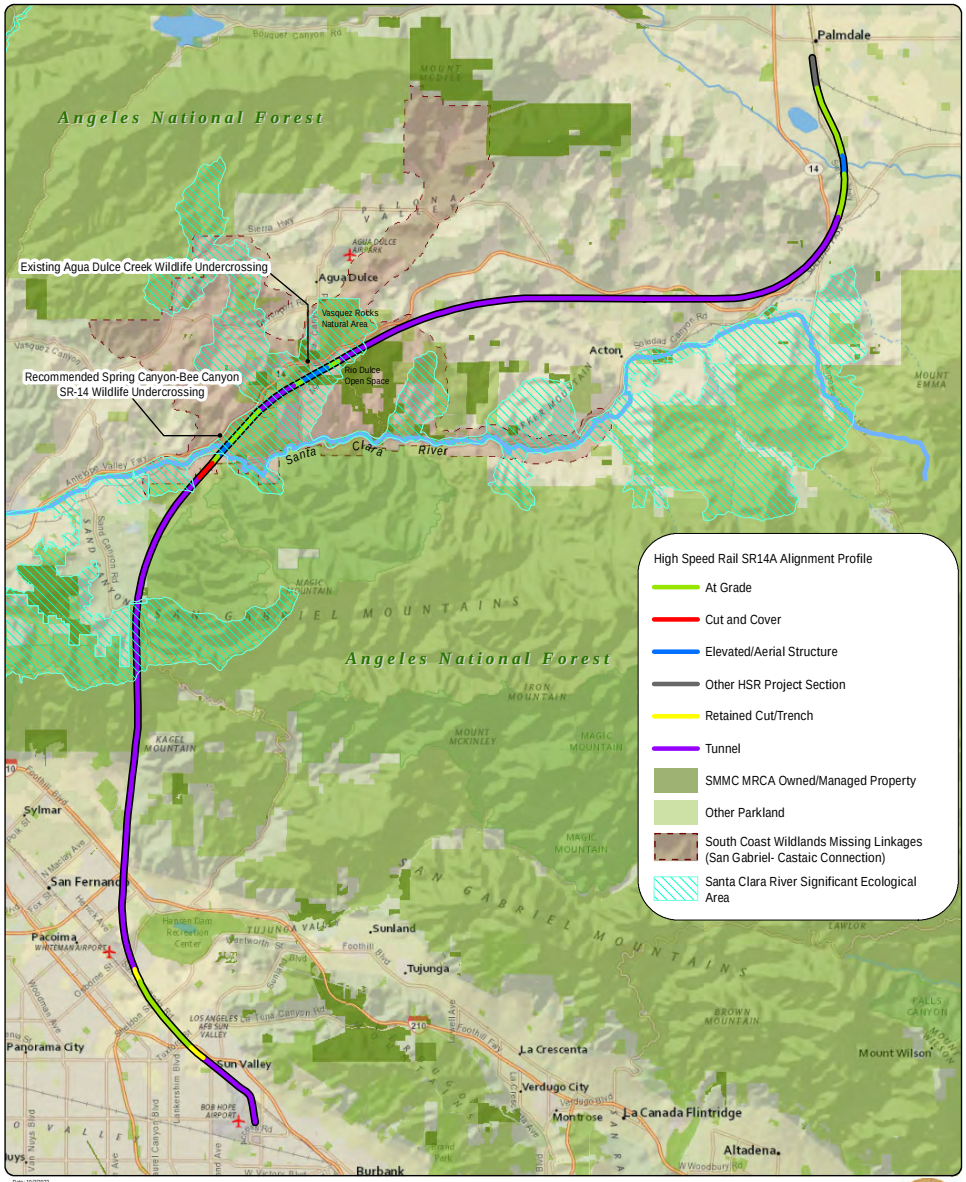
Stakeholder Comments/Issues :

To whom may concern

Please find attached the Comment letter for SMMC, kindly reply to this email as received.

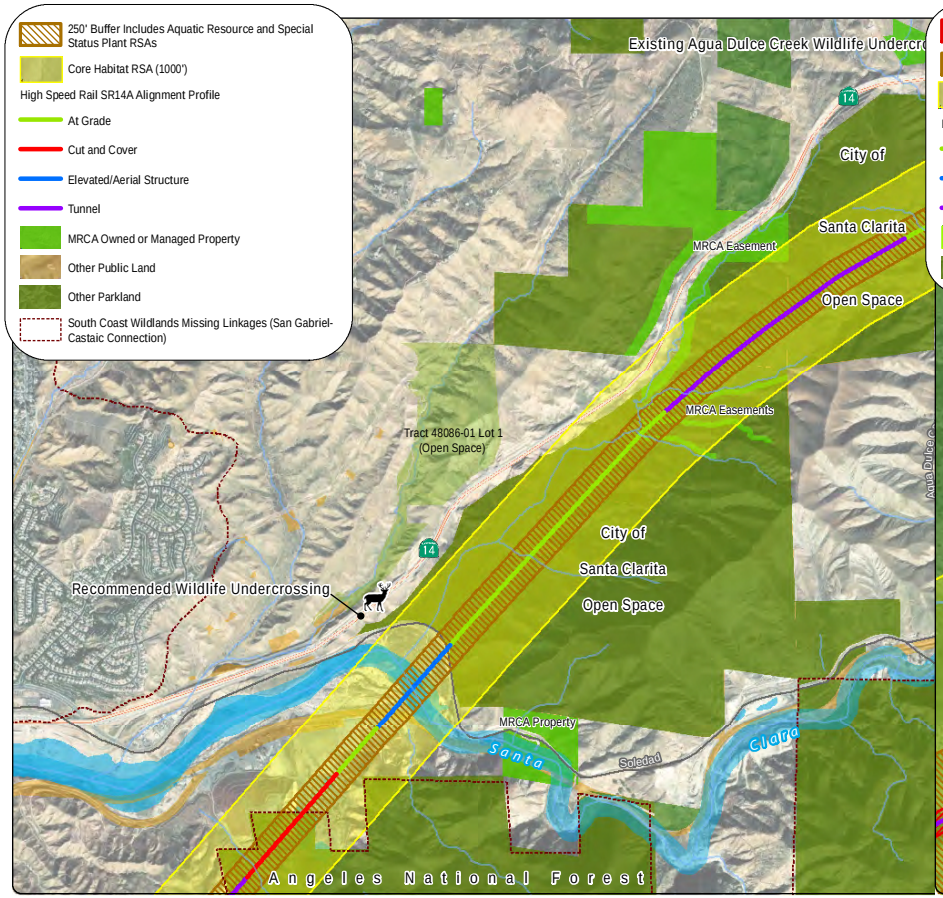
Please do not hesitate to contact me for any questions.

Patricia Michel
Project Assistant III step 5
Mountains Recreation & Conservation Authority
King Gillette Ranch
26800 Mulholland Highway
Calabasas, CA 91302
(310) 589-3230 ext 122

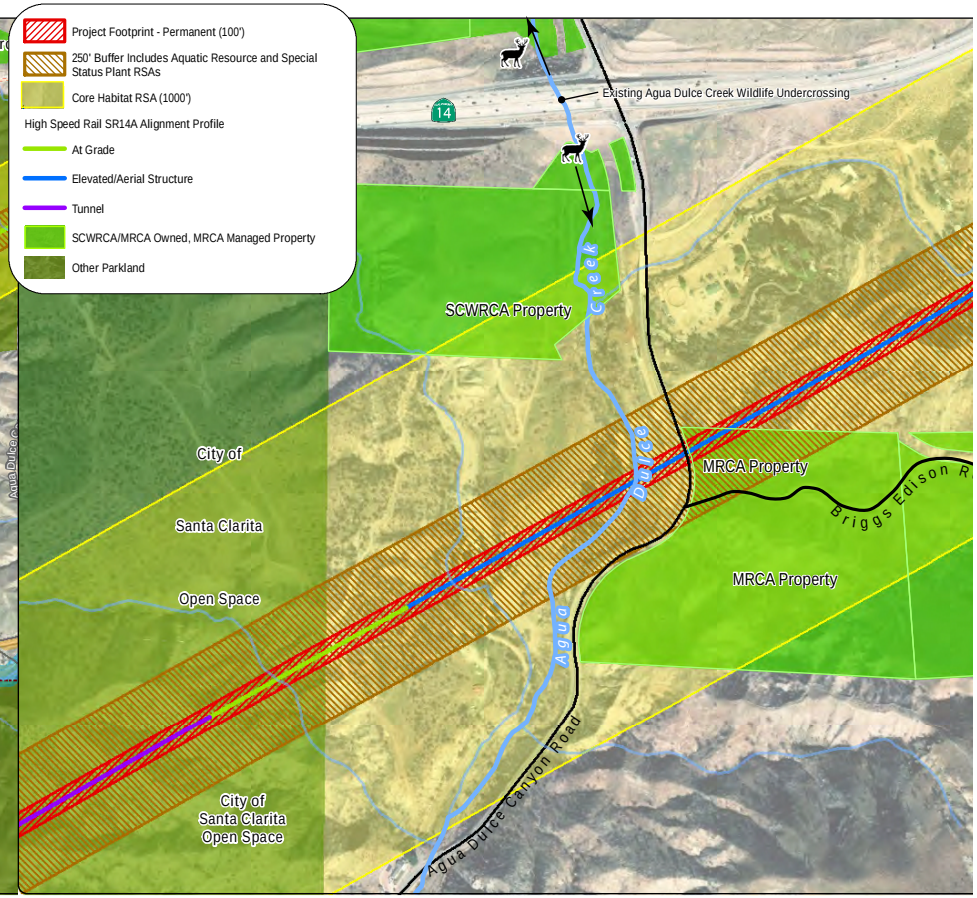


CALIFORNIA HIGH-SPEED RAIL AUTHORITY - PALMDALE TO BURBANK PROJECT SECTION
SR14A Build Alternative Overview Map

Submission 4209 (Patrica Michel, Santa Monica Mountains Conservancy, October 21, 2022) - Continued



CALIFORNIA HIGH-SPEED RAIL AUTHORITY - PALMDALE TO BURBANK PROJECT
SR14A Segment 2 and Vicinity



CALIFORNIA HIGH-SPEED RAIL AUTHORITY - PALMDALE TO BURBANK PROJECT
SR14-A Agua Dulce Canyon Map

Submission 4209 (Patrica Michel, Santa Monica Mountains Conservancy, October 21, 2022) - Continued

STATE OF CALIFORNIA–THE NATURAL RESOURCES AGENCY GAVIN NEWSOM, *Governor*

SANTA MONICA MOUNTAINS CONSERVANCY
KING GILLETTE RANCH
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PHONE (310) 589-3200
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October 17, 2022

Mr. Serge Stanich
California High-Speed Rail Authority
770 L Street, Suite 620 MS-1
Sacramento, California 95814

Draft Project Environmental Impact Report/Environmental Impact Statement for the Palmdale to Burbank Section of the California High-Speed Rail (SCH 2014071074)

Dear Mr. Stanich:

4209-8320

The Santa Monica Mountains Conservancy (Conservancy) offers the following comments and requests for additional mitigation measures within the California High-Speed Rail Authority's (Authority) Draft Project Environmental Impact Report/Environmental Impact Statement (D-EIR/EIS) for the construction and operation of the Palmdale to Burbank Section of the High-Speed Rail (Project). Maps are attached for reference.

In general, the Conservancy supports the Project goals to improve multi-modal transportation options throughout California in a manner sensitive to, and protective of, California's unique natural resources. The transportation needs within the Project Area are primarily served by Interstate 5 (I-5), State Route 14 (SR-14), and the Union Pacific Railroad with service by Metrolink, BNSF Railway, and Amtrak, and the D-EIR/EIS recognizes the intercity transportation system between Palmdale and Burbank is insufficient to meet existing and future travel demands. If the SR14A Build Alternative—the Preferred Alternative for the proposed High-Speed Rail (HSR)—is selected, the following mitigation measures and recommendations must be included in the design to offset regional habitat fragmentation impacts from the proposed Project.

4209-8321

Mitigation Measure No. 1: Construct a new SR-14 wildlife undercrossing between the Spring Canyon Tract No. 48086-01 dedicated open space and City of Santa Clarita-owned Bee Canyon open space. This undercrossing should be a bored tunnel with a minimum 13-foot diameter and would not require any cut and over freeway traffic disruption. See Attachment D – SR14A Spring and Bee Canyons Map with proposed undercrossing location. Construction access to the east tunnel entrance area is excellent. The nexus for this additional mitigation measure follows below.

The SR14A Build Alternative proposes the HSR emerge from a tunnel in Bee Canyon approximately 1.33 miles northeast of Bee Creek's confluence with the Santa Clara River in Soledad Canyon. The HSR route then remains at grade for approximately 1.13 miles in Bee Canyon before spanning the Santa Clara River. The entirety of Bee Canyon and portions of Soledad Canyon containing the floodplain of the Santa Clara River are part of a Los Angeles County (County) designated Significant Ecological Area (SEA) serving as the primary east-west linkage between coastal habitats and desert-montane habitats. This section of the proposed Project Area is identified in the South Coast Missing Linkages (SCML) Project *San Gabriel – Castaic Connection* representing the least-cost corridor for several wildlife species to move between the Saugus (northern) and Tujunga (southern) units of the Angeles National Forest (ANF). The approximate 3.25-mile stretch of SR-14 between Stonecrest Road undercrossing and Agua Dulce Creek undercrossing comprises a significant regional-scale wildlife movement barrier. See Attachment A – SR14A Build Alternative Overview Map and Attachment B – SR14A Segment 2 and Vicinity Map for reference. Construction of additional, at-grade facilities like the HSR and appurtenant structures will further reduce wildlife permeability in this critical habitat linkage.

The *San Gabriel – Castaic Connection* identifies a fill slope supporting SR-14 for a new wildlife undercrossing structure to connect Spring Canyon (north of SR-14) with Bee Canyon (south of SR-14). The D-EIR/EIS Figure 3.7-25 (Mountain Lion Habitat within the Resource Study Area) indicates the recommended Spring Canyon – Bee Canyon wildlife crossing structure would directly support mountain lion Breeding and Foraging Habitat connectivity. The D-EIR/EIS Figure 3.7-48 (Wildlife Corridor Impermeability Map: SR14A Build Alternative) shows the proximity of the at-grade SR14A Segment 2 that contributes an additional 1.13 miles of impermeable wildlife barrier to this vital habitat corridor. The Conservancy recommends the Authority coordinate with the California Department of Transportation (Caltrans) to design and construct the recommended SR-14 undercrossing between Spring and Bee Canyons as part of the mitigation for new impacts to terrestrial wildlife movement related to at-grade HSR construction and operation and legacy impacts of SR-14.

Mitigation Measure No. 2: Minimize HSR bridge footings within the Santa Clara River floodplain.

As presented in the D-EIR/EIS, the SR14A Build Alternative would require spanning the Santa Clara River as this perennial stretch of river exits Soledad Canyon south of SR-14 to avoid affecting habitat for the unarmored threespine stickleback (UTS; *Gasterosteus aculeatus williamsoni*). UTS are a fully protected species under state law and under immense pressure from continued Santa Clara River floodplain development and climate

Submission 4209 (Patrica Michel, Santa Monica Mountains Conservancy, October 21, 2022) - Continued

4209-8321

change impacts. Near this same location, ephemeral Bee Creek joins the Santa Clara River and is, per Figure 3.8-A-47 (SR14A Central Subsection (Center) Surface Water Callout), designated as Federal Emergency Management Agency (FEMA) Special Flood Hazard Area Zone A. The Conservancy recommends that bridge span design place footings as far as feasible from the Santa Clara River active channel and outside FEMA Zone A Special Flood Hazard Area to minimize construction and operational disturbances to this vital water resource and wildlife corridor. See Attachment D – SR14A Spring and Bee Canyons Map for the Bridge Footing Avoidance Zone.

In addition, the Conservancy is concerned about improvements to Lang Station Road—whether temporary improvements during construction or permanent improvements related to the planned Traction Power Facility—through the floodplain of the Santa Clara River and its associated SEA. All efforts should be made to elevate any roadway and HSR infrastructure out of the floodplain to reduce impacts to the SEA and increase infrastructure resilience to climate change impacts.

Mitigation Measure No. 3: Restrict construction activities within 30 feet of the Santa Clara River wetted channel.

Due to the sensitivity of UTS and UTS habitat within the Santa Clara River, the proposed BIO-MM#85 minimum setback of 10 feet from the Santa Clara River wetted channel is insufficient protection for UTS and UTS habitat. The Conservancy recommends a minimum buffer of 30 feet (or a buffer distance recommended by the California Department of Fish and Wildlife [CDFW]) from the river's wetted channel where no construction related activities would be allowed to prevent loss of cover habitat for aquatic species and to prevent fuel or fluid leaks from operated heavy equipment impacting UTS or UTS habitat during temporary and permanent bridge construction. Maintaining the recommended minimum 30-foot setback from the Santa Clara River wetted channel will also help BIO-MM#86, BIO-MM#87, BIO-MM#88, BIO-MM#89, and BIO-MM#90 achieve their stated goals.

4209-8322

Mitigation Measure No. 4: Elevate Soledad Canyon Road at the convergence of Bee Canyon and Soledad Canyon with new, large-dimension box culverts or arch spans for wildlife permeability and to restore prior hydrology potential.

During peak commute hours or off-peak hours with traffic delays on SR-14, many motorists use two-lane Soledad Canyon Road as an alternative route between Santa Clarita and Acton. While Soledad Canyon Road is a County-designated Scenic Highway, it often becomes a high-volume, high-speed thoroughfare for impatient commuters. As Soledad Canyon Road travels northeastward from its SR-14 interchange, it generally

4209-8322

parallels SR-14 and the Santa Clara River. Near its interchange with Stonecrest Road, Soledad Canyon Road begins an easterly descent onto a raised berm within the floodplain of the Santa Clara River and Bee Creek, FEMA Zone A Special Flood Hazard Area, before the road bends southward along an at-grade elevation above the floodplain. To mitigate for ever increasing traffic volume, the Project must include elevating an approximate 1,000-foot-long section of Soledad Canyon Road (see Attachment D – SR14A Spring and Bee Canyons Map) to complement the recommended SR-14 wildlife undercrossing between Spring and Bee Canyons immediately north of this section of roadway and *increase* wildlife permeability within the Santa Clara River SEA and between the ANF's Saugus and Tujunga units. Proper design and footing spacing will also improve roadway resiliency for flood impacts resulting from less frequent but more intense storm events consistent with current climate change models.

Recommendation No. 1: Buy out ungraded, undeveloped Spring Canyon Tract No. 48086-01 as the northerly approach to a new SR-14 wildlife undercrossing in a CAL FIRE designated Very High Fire Hazard Severity Zone to improve wildlife movement and create extensive Project offsite mitigation potential.

4209-8323

The Conservancy's recommended SR-14 wildlife undercrossing between Spring and Bee Canyons has public ownership to the south via City of Santa Clarita's recent acquisition of the majority of Bee Canyon to serve as a greenbelt buffer. To the north of SR-14, Los Angeles County Flood Control District owns the western parcel along the terminus of Valley Canyon Road and eastward are several recorded but as-yet undeveloped 500-unit single-family residences all within a CAL FIRE designated Very High Fire Hazard Severity Zone in State Responsibility Area. Of these subdivisions, Tract No. 48086-01 directly connects to the SR-14 wildlife undercrossing and is comprised of a single 155-acre lot, Lot 1, that was accepted by the County for open space purposes in July 2017.

Considering the vast amounts of habitat preservation that will be required as compensatory mitigation for permanent impacts of the HSR construction and operation, the Conservancy recommends the Authority acquire, or fully fund the public acquisition of most, if not all, of Tract 48086, Tract 48086-01, Tract 48086-02, and Tract 48086-03 within Spring Canyon to help preserve the habitat and wildlife corridor identified by the SCML *San Gabriel – Castaic Connection* between the Saugus and Tujunga units of the ANF and reduce the ever-increasing risk of building another 500 homes in a state-recognized very high fire danger area.

4209-8324

Recommendation No. 2: Coordinate with Mountains Recreation and Conservation Authority (MRCA) regarding impacts to Park, Recreation, and Open Space Resources and opportunities for compensatory mitigation.

Submission 4209 (Patrica Michel, Santa Monica Mountains Conservancy, October 21, 2022) - Continued

4209-8324

The MRCA is a joint powers agency established in 1985 between the Conservancy, the Conejo Recreation and Park District, and the Rancho Simi Recreation and Park District. The MRCA manages over 80,000 acres of parkland owned by the Conservancy, MRCA, and other local joint powers authorities including the Santa Clarita Watershed Recreation and Conservation Authority (SCWRCA) and Desert and Mountain Conservation Authority (DMCA). MRCA is a United States Army Corps of Engineers approved in-lieu fee mitigation partner and a CDFW approved conservation easement holder.

The MRCA holds fee title interests, conservation easements, and manages SCWRCA and DMCA land interests along portions of the SR14A Build Alternative route and within the 1000-foot Core Habitat Resource Study Areas of this proposed Project route. MRCA has active restoration projects on either side of SR-14 at the Agua Dulce Creek undercrossing that might be impacted by HSR construction and operation. In addition, MRCA owns the property that contains the Briggs-Edison Road connection to Agua Dulce Canyon Road that is proposed for widening. See Attachment C – SR14A Agua Dulce Canyon Map for reference. Coordination with MRCA will facilitate mitigation measures to reduce Park, Recreation, and Opens Space Resources impacts related to temporary and permanent impacts related to construction and operation of the HSR.

4209-8325

MRCA is also actively working in partnership with United States Fish and Wildlife Service (USFWS), United States Forest Service (USFS), CDFW, Caltrans, Los Angeles County Department of Public Works, Metropolitan Water District of Southern California, Southern California Edison, and various other local governments, public utilities, and non-profit entities to preserve and restore habitat in the upper Santa Clara River watershed and upper Los Angeles River watershed—among other areas. Upon determination of suitable compensatory mitigation by jurisdictional agencies, the Authority is encouraged to coordinate with MRCA regarding opportunities to implement preservation, establishment, re-establishment, restoration, or enhancement of appropriate habitat types.

Please direct any future correspondence to Paul Edelman of our staff by email at edelman@smmc.ca.gov, by phone at 310-589-3200 ext. 128, or at the above letterhead address.

Sincerely,

LINDA PARKS
Chairperson

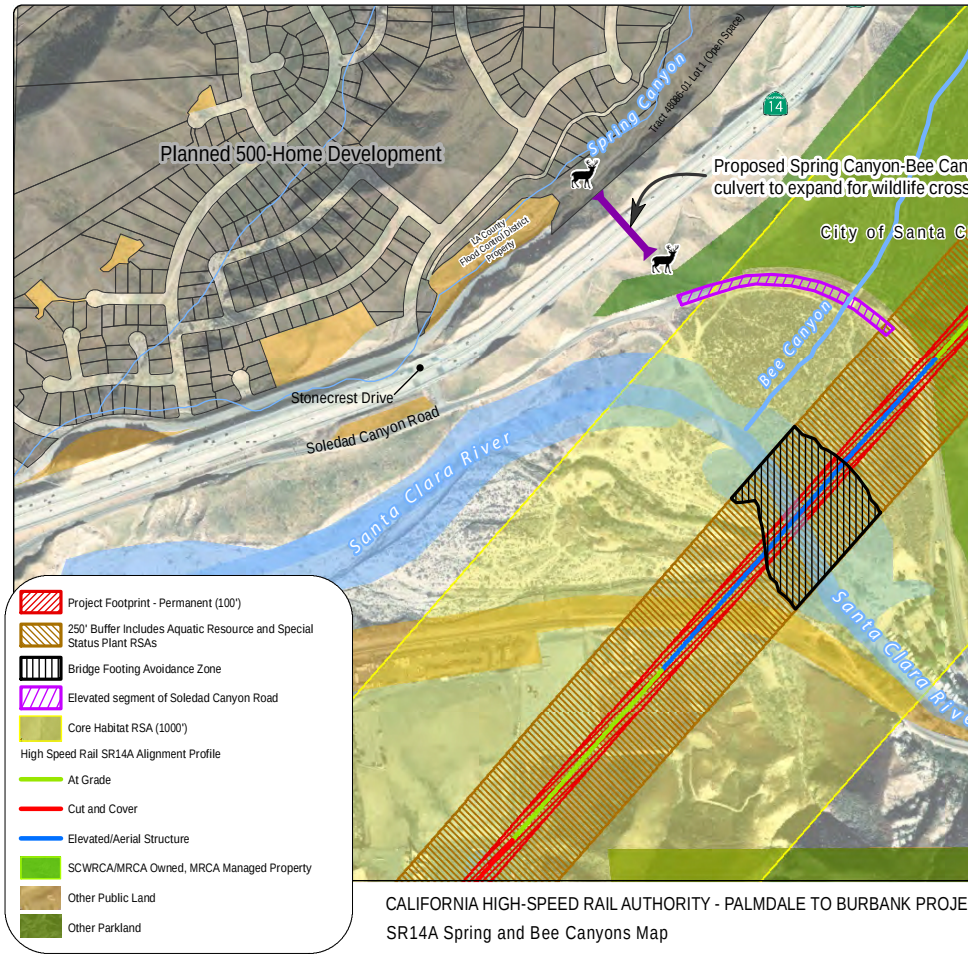
4209-8326

Serge Stanich, California High-Speed Rail Authority
Draft Project EIR/EIS Palmdale to Burbank Project Section (SCH 2014071074)
October 17, 2022

4209-8326

Attachments:
A – SR14A Build Alternative Overview Map
B – SR14A Segment 2 Vicinity Map
C – SR14A Agua Dulce Canyon Map
D – SR14A Spring and Bee Canyons Map

Submission 4209 (Patrica Michel, Santa Monica Mountains Conservancy, October 21, 2022) - Continued



CALIFORNIA HIGH-SPEED RAIL AUTHORITY - PALMDALE TO BURBANK PROJE
SR14A Spring and Bee Canyons Map

Response to Submission 4209 (Patrica Michel, Santa Monica Mountains Conservancy, October 21, 2022)

4209-8320

Refer to Standard Response PB-Response-GEN-4: General Opinions, Opposition or Support.

The commenter expresses support for the goals of the HSR Palmdale to Burbank Project Section. The commenter recommends mitigation measures to offset regional habitat fragmentation impacts; specific responses to the commenter's specific recommendations follow in subsequent numbered comments. The commenter's support and recommendations are acknowledged. Please refer to PB-Response-GEN-4: General Opinions, Opposition or Support.

4209-8321

Refer to Standard Response PB-Response-BIO-1: Impacts in Bee Canyon, PB-Response-BIO-3: Wildlife Movement Corridors.

The commenter recommends that the Authority coordinate with the California Department of Transportation (Caltrans) to design and construct a new wildlife undercrossing under the SR 14 freeway between Spring and Bee Canyons as part of the mitigation for new impacts to wildlife movement. Section 5.3.1, Existing Crossing Structures in the Wildlife Corridor Assessment (WCA) Report (Authority 2019c) identifies those structures that could provide crossing opportunities for wildlife movement across the SR 14 freeway. Photographs of each of the crossing opportunities are provided in Appendix C of the WCA. Figure 4-5 in the WCA shows the spatial relationship between the project and existing bridges. As shown in Table 6-6 in the WCA and Table 2-13 of the supplemental WCA (Authority 2019c), the SR14A Build Alternative includes six permeable segments that include a 13.25-mile, 8.28-mile, and 1.04-mile tunnel segments where wildlife can cross over the alignment. Furthermore, the SR14A Build Alternative includes a 0.43-mile, 0.40-mile, and 0.19-mile elevated viaduct segment where wildlife can cross underneath the HSR alignment. Similarly, the Refined SR14 Build Alternative includes a 13.06-mile, 7.21-mile, 3.14-mile, 1.62-mile, 0.99-mile, and 0.51-mile tunnel segment where wildlife can cross over the alignment. Furthermore, the Refined SR14 Build Alternative includes a 0.68-mile, 0.65-mile, 0.44-mile, 0.37-mile, 0.32-mile, 0.16-mile, 0.06-mile, and 0.03-mile elevated viaduct segment where wildlife can cross underneath the HSR alignment. Figure 4-5 of the WCA shows the existing crossings under the SR 14 freeway align with large tunnel and viaduct sections of the Refined SR14/SR14A Build Alternatives that would maintain wildlife movement.

Regarding the recommended undercrossing at the SR 14 freeway between Spring and Bee Canyons; the SR 14 freeway would be permeable to wildlife movement at Bee Canyon, as described above. For example, the Stonecrest Road –SR 14 freeway undercrossing identified in the WCA provides a connection from Spring Canyon (referenced by the commenter) to the north of the SR 14 freeway to the Santa Clara River where wildlife can cross underneath a 0.4-mile-long elevated viaduct. Figure 4-4 of the WCA and Figure 2-10 in the supplemental WCA show the Linkage Design and the 0.4-mile elevated viaduct adjacent to the Stonecrest Road undercrossing. Implementation of the Build Alternatives would not constrain wildlife movement in Bee

Response to Submission 4209 (Patrica Michel, Santa Monica Mountains Conservancy, October 21, 2022) - Continued

4209-8321

Canyon, given the permeability of the alignment and the SR 14 freeway. Overall, both the SR14A Build Alternative and Refined SR14 Build Alternative are in tunnel or on viaduct for 83 percent of the alignment. Wildlife movement will be further enhanced at two proposed wildlife crossing locations - one located near East Barrel Springs Road (east of Una Lake) and a second crossing south of the Soledad Siphon (south of the California Aqueduct).

Therefore, after careful consideration of the commenter's recommendation, the Authority has concluded that construction of an undercrossing at the SR 14 freeway between Spring and Bee Canyons to address a legacy barrier not related to the project is not warranted as mitigation for the impacts of construction and operation of the SR14A Build Alternative.

The commenter also indicates that the bored tunnel should have a diameter of 13 feet and would not require any cut and cover freeway traffic disruption. Based on available literature, including the Federal Highway Administration (FHWA) Wildlife Crossing Structure Handbook, a wildlife crossing for this specific location should have a minimum width/height of 10 feet and a length preferably not exceeding 200 to 260 feet. The wildlife crossing should also maintain a horizontal profile, or as close to horizontal as possible. A wildlife crossing in the location recommended by the commenter would need to have a length of approximately 550 feet. The length of the wildlife crossing greatly exceeds the suggested maximum length for this type of crossing. Furthermore, given that wildlife undercrossings are designed to be relatively level, the crossing entrance would need to be positioned relatively high on the slope above Soledad Canyon Road. A wildlife crossing with these characteristics would not meet the crossing's intended goal.

The commenter also points out the importance of Bee Canyon and identifies it as part of a defined Significant Ecological Area (SEA) and part of the South Coast Missing Linkages (SCML) Project San Gabriel –Castaic Connection. The WCA identifies the South Coast Missing Linkages San Gabriel-Castaic Connection least cost corridors and Linkage Design are crossed by the Refined SR14 and SR14A Build Alternatives. The Draft EIR/EIS (Section 3.7.5.9) identified several SEAs within the core habitat resource study area (RSA), including the San Andreas SEA, Santa Clara River SEA, and Tujunga Valley/Hansen Dam SEA. The Santa Clara River SEA encompasses the river corridor

4209-8321

and linkage zones, including Bee Canyon, that are considered essential to ensuring connectivity and resource values within the historical movement zones for local wildlife species. The Refined SR14 and SR14A Build Alternative alignments would traverse the northwestern portion of the Santa Clara River SEA; however, the SR14A Build Alternative alignment would have less at-grade footprint where it first encounters this area compared to the Refined SR14 Build Alternative alignment. Impact BIO#11 of the Draft EIR/EIS concludes that the Refined SR14, SR14A, E1, E1A, E2, and E2A Build Alternatives would not result in a substantial adverse effect on SEAs with implementation of mitigation measures, such as BIO-MM#6 (Prepare and Implement a Restoration and Revegetation Plan), BIO-MM#47 (Prepare and Implement a Compensatory Mitigation Plan for Impacts on Aquatic Resources), BIO-MM#50 (Implement Measures to Minimize Impacts During Off-Site Habitat Restoration, or Enhancement, or Creation on Mitigation Site), and BIO-MM#53 (Prepare and Implement a Compensatory Mitigation Plan for Species and Species Habitat). Please also refer to Standard Response PB-Response-BIO-3: Wildlife Movement Corridors and Standard Response PB-Response-BIO-1: Impacts in Bee Canyon, for discussion regarding biological impacts to wildlife movement corridors and in Bee Canyon, respectively.

Response to Submission 4209 (Patrica Michel, Santa Monica Mountains Conservancy, October 21, 2022) - Continued

4209-8322

Refer to Standard Response PB-Response-GEN-6: Impacts on the Santa Clara River.

The commenter indicates that habitat occurs in the Santa Clara River for the unarmored three-spine stickleback (UTS), notes that UTS is a fully-protected species, and recommends that the bridge over the Santa Clara River be designed to place footings as far as feasible from the active channel and outside FEMA Zone A Special Flood Hazard Area to minimize construction and operational disturbances to this vital water resource and wildlife corridor. In addition, the commenter is concerned about improvements to Lang Station Road and impacts associated with the significant ecological area (SEA).

The SR14A Build Alternative design at the Santa Clara River consists of a viaduct, with the permanent viaduct infrastructure elevated above the ground and spanning the low-flow channel of the Santa Clara River. Permanent support structures will be installed only outside of the 25-year flood limit using a “no-water-contact” approach that is reflected in IAMFs and mitigation measures in the Final EIR/EIS, including BIO-IAMF#8 (Delineate Equipment Staging Areas and Traffic Routes), BIO-MM#85 (Establish Construction Zones and Environmentally Sensitive Areas for Unarmored Three-spine Stickleback and its Habitat), BIO-MM#86 (Santa Clara River Construction and Maintenance Activity Weather Related and Seasonal Work Restrictions), BIO-MM#87 (Prepare and Implement Spill Prevention and Containment Measures), BIO-MM#88 (Implement Construction or Maintenance Activity Debris Prevention Measures), BIO-MM#89 (Implement Construction Measures for Unarmored Three- spine Stickleback Avoidance), BIO-MM#90 (Prepare a Construction Groundwater Dewatering Plan), BIO-MM#92 (Implement Avoidance Measures During Operations and Maintenance for the Santa Clara River), and BIO-MM#104 (Implement Scour Avoidance Features Around Bridge Piers). The Santa Clara River in this area is restricted much of the year to a small, defined, wetted channel and, in dry years, may be totally underground during the summer. However, because of the relatively flat topography in this area, during winter storm events the flooded zone (FEMA Zone A) can be quite large. As a result, it is not feasible to design a bridge that would span the entire FEMA Zone A in this area. However, as noted above, the Authority's approach is to avoid the low-flow channel of the Santa Clara River locating permanent structures outside the 25-year flood zone.

Implementation of the mitigation measures for viaduct/bridge construction activities will

4209-8322

ensure that contact with the wetted channel of the river is avoided and that bridge construction equipment, concrete, or other materials are not allowed to enter or be discharged into the wetted channel. For example, BIO-MM#104 (Implement Scour Avoidance Features Around Bridge Piers) in the Final EIR/EIS would ensure that scour and cavity formation around the base of bridge piers is avoided through implementation of design features that prevent erosion by dissipating the energy of the water flowing around the base of piers. The approach follows guidance issued by California Department of Fish and Wildlife (CDFW) for unarmored three-spine stickleback (CDFW 2017; Warburton and Fisher 2002). Please also refer to PB-Response-GEN-6: Impacts on the Santa Clara River for details on the analysis of impacts to the Santa Clara River and mitigation measures to be implemented.

The traction power facility at Lang Station Road noted by the commenter would consist of an above-ground electrical transmissions line. This above-ground electrical line would not impact the river floodplain and would be similar to the existing electrical power line already running along Lang Station Road. Lang Station Road across the Santa Clara River will not be modified.

Response to Submission 4209 (Patrica Michel, Santa Monica Mountains Conservancy, October 21, 2022) - Continued

4209-8323

The commenter notes that, per BIO-MM#85, the minimum setback of 10 feet from the Santa Clara River wetted channel is insufficient protection for UTS and UTS habitat and suggests that the buffer be increased to 30 feet, or a buffer distance recommended by the CDFW.

The Authority believes the 10-foot setback is reasonable to protect UTS if they occur in the wetted channel of the Santa Clara River. During temporary and permanent bridge construction, the Authority will implement BIO-IAMF#8 (Delineate Equipment Staging Areas and Traffic Routes) and BIO-MM#58 (Establish Environmentally Sensitive Areas and Non-disturbance Zones) to ensure no work takes place where UTS may be affected. Additionally, BIO-MM#85 (Establish Construction Zones and Environmentally Sensitive Areas for Unarmored Three-spine Stickleback and Its Habitat) would require that no construction activities or personnel occur within 10 feet of or near the edge of the wetted channel that would have potential to destabilize the low flow channel bank. Permanent structures associated with bridge construction will remain outside of the 25-year flood zone and all construction activities associated with bridge construction will remain a minimum of 10 feet away from wetted channel. The primary purpose of the 10-foot buffer is to prevent personnel and equipment from accessing the channel to avoid impacts to UTS. Other measures, including BIO-MM#87, HYD-IAMF#3, HYD-IAMF#4, and HMW-IAMF#6, address handling of fuels and other fluids to avoid impacts to the Santa Clara River and UTS.

4209-8324

Refer to Standard Response PB-Response-BIO-3: Wildlife Movement Corridors.

The commenter requests that Soledad Canyon Road be elevated at the convergence of Bee Canyon and Soledad Canyon with new, large-dimension box culverts or arch spans to provide for wildlife permeability and to restore prior hydrology potential. Currently, Soledad Canyon Road crosses Bee Canyon with an embankment and a box culvert of approximately 30 feet wide and 10 feet high. The Preferred Alternative SR14A does not alter or modify the current condition of Soledad Canyon Road and existing culvert when crossing Bee Canyon. The environmental footprint included in the Draft EIR/EIS in Soledad Canyon Road is reserved for the construction of a water pipeline to connect the existing water network with the tunnel portal P4A.

The commenter is also concerned with the traffic volumes and speeds on Soledad Canyon Road. The nearest measurement of traffic volumes on Soledad Canyon Road near Bee Canyon is at Lang Station Road. The 7:00 am to 9:00 am counts include 226 westbound vehicles, and 61 eastbound vehicles during the same period. The 4:00 pm to 6:00 pm traffic counts are 424 vehicles eastbound and 65 vehicles westbound. Unlike the high traffic volumes on the SR 14 freeway that are considered a deterrent to wildlife movement, the traffic volumes on Soledad Canyon Road are considered relatively low and not a deterrent to wildlife movement. Traffic volumes on Soledad Canyon Road would be considerably less during the hours when nocturnal species are the most active. In addition, the existing 30 foot wide and 10-foot-high box culvert provides an additional option for wildlife to cross under Soledad Canyon Road at Bee Canyon. The posted speed limit on Soledad Canyon Road is 50 mph. The volume of vehicles and speed limit on Soledad Canyon Road would not be affected by the preferred alternative.

To restore prior hydrology potential, as mentioned in the comment, it would be necessary to raise Soledad Canyon Road's vertical profile. An elevated structure spanning the flood zone would extend for approximately 1,500 feet when considering the necessary approach ramps to achieve the raised profile and provide enough headroom over flood elevation level. Construction of this elevated structure would require the closure of Soledad Canyon Road and temporary traffic detours and additional environmental footprint for construction and staging areas for a period not less than one year. Build Alternative SR14A does not preclude from developing future

Response to Submission 4209 (Patrica Michel, Santa Monica Mountains Conservancy, October 21, 2022) - Continued

4209-8324

projects on Soledad Canyon Road to address the concerns expressed by the commenter regarding hydrology and wildlife. Please refer to Standard Response PB-Response-BIO-3: Wildlife Movement Corridors.

4209-8325

Refer to Standard Response PB-Response-BIO-3: Wildlife Movement Corridors.

The commenter recommends that the Authority acquire Tract 48086, Tract 48086-01, Tract 48086-02, and Tract 48086-03 and implement a wildlife crossing under SR 14 between Spring and Bee Canyon to help preserve the habitat and wildlife corridor identified by the SCML San Gabriel –Castaic Connection. The Authority does not have any current plans to acquire Tract 48086, Tract 48086-01, Tract 48086-02, and Tract 48086-03. The Draft EIR/EIS found that the primary existing constraint in this area (SR 14 freeway) would be permeable to wildlife movement, as described below.

For example, the Stonecrest Road –SR 14 freeway undercrossing identified in the WCA, which is within the Linkage Design, provides a connection from Spring Canyon (referenced by the commenter) to the north of the SR 14 freeway to the Santa Clara River where wildlife can cross underneath a 0.4-mile-long elevated viaduct. Figure 4-4 of the WCA and Figure 2-10 in the supplemental WCA show the Linkage Design and the 0.4-mile elevated viaduct adjacent to the Stonecrest Road undercrossing. Implementation of the Build Alternatives would not constrain wildlife movement in Bee Canyon, given the permeability of the alignment and the SR 14 freeway. Therefore, acquisition of Tract 48086, Tract 48086-01, Tract 48086-02, and Tract 48086-03 is not warranted.

Please refer to Response to Comment 10544, which describes the permeability and crossing opportunities for the SR14A and Refined SR14 Build Alternatives, including those in proximity to the SR 14 freeway. Please also refer to Response to Comment #8609, which describes the Spring Canyon subdivision and its implications on the analysis of cumulative impacts to wildlife movement.

For more information about the locations of the proposed wildlife crossings and how they were chosen for each Build Alternative, please refer to Standard Response PB-Response-BIO-3: Wildlife Movement Corridors.

Response to Submission 4209 (Patrica Michel, Santa Monica Mountains Conservancy, October 21, 2022) - Continued

4209-8326

The commenter provides a summary of the Mountains Recreation and Conservation Authority (MRCA), including the lands that it manages and encourages the Authority to coordinate with the MRCA regarding opportunities for the preservation, establishment, re-establishment, restoration, or enhancement of appropriate habitat types. The commenter also specifically calls out restoration projects managed by MRCA on either side of SR 14 at the Agua Dulce Creek undercrossing that might be impacted by HSR construction and operation. As a result of the comments received in the Draft EIR/EIS, the Authority considered alternative design options that would avoid impacts to Agua Dulce as well as Bee Canyon by shifting the alignment underground. Construction of a tunnel to underground the alignment in Agua Dulce and Bee Canyon is not feasible since in would require a vertical profile for HSR to return to grade that exceeds the maximum allowable grade of 2.5% as defined in the Authority's Technical Memorandum (TM) 2.1.2 Section 3.3.1. Instead, mitigation is proposed to minimize impacts in the Agua Dulce area. The Authority has included numerous mitigation measures that would involve the preservation, establishment, re-establishment, restoration, or enhancement of habitat. BIO-MM#53, in particular, involves the preparation of a compensatory mitigation plan that includes a description of habitat restoration or enhancement projects, if any, that will contribute to compensatory mitigation commitments. Please see Section 3.7.7 for other relevant mitigation measures. The Authority appreciates the information provided by the commenter and will consider coordination with the MRCA, as suggested, when developing the compensatory mitigation plan.

Submission 4238 (Valerie Zara, Los Angeles Regional Water Quality Control Board, November 3, 2022)

Palmdale - Burbank - RECORD #4238 DETAIL

Status :	Delimited
Record Date :	11/3/2022
Interest As :	State Agency
First Name :	Valerie
Last Name :	Zara

Stakeholder Comments/Issues :

4238-7785

Hi. My name is Valerie Zara with the Los Angeles Regional Water Quality Control Board. I'm trying to find out if there is a copy or recording of any of the community meetings regarding the draft EIR/EIS for Palmdale to Burbank. If anyone could please call me back and let me know how I can access or rewatch that if it was filmed. Um, because it's not on the website. And I need to, I need to look at something from that meeting. Um. I can be reached at area code [redacted]. Again, it's Valerie from the Los Angeles Regional Water Quality Control Board. I'm going to be commenting on the EIR draft, EIR/EIS and I needed to know if there's a recording of any community meeting. Thank you.

Response to Submission 4238 (Valerie Zara, Los Angeles Regional Water Quality Control Board, November 3, 2022)

4238-7785

The commenter requested a copy or recording of the community meetings regarding the Draft EIR/EIS. A member of the project team responded to the commenter to address this request. Moreover, Chapter 9 of the Draft EIR/EIS summarizes the public scoping process through the release of the Draft EIR/EIS. CEQA and NEPA require a Final EIR and EIS to respond to the comments received on environmental issues (see 14 C.C.R. §15088(a) and Federal Railroad Administration Procedures for Considering Environmental Impacts 14(s)). This comment does not address the sufficiency of the Draft EIR/EIS, nor does it suggest edits to the document. No change has been made to the document in response to this comment.

Submission 4267 (Valerie Zara, Los Angeles Regional Water Quality Control Board, November 4, 2022)

Palmdale - Burbank - RECORD #4267 DETAIL

Status :	Action Pending
Record Date :	11/9/2022
Interest As :	Individual
First Name :	Valerie
Last Name :	Zara

Stakeholder Comments/Issues :

4267-7757

Hi. My name is Valerie Zara from the Los Angeles Regional Water Quality Control Board. I'd like to request an electronic copy of the tier one documents for the Palmdale to Burbank segment so that I could review the jurisdictional delineation regarding any waters. And I need the I need the entire document electronically. My work email is [redacted] again it's [redacted]. Thank you. I really do need the whole document so that I can review it electronically. Thank you.

Response to Submission 4267 (Valerie Zara, Los Angeles Regional Water Quality Control Board, November 4, 2022)

4267-7757

Refer to Standard Response PB-Response-GEN-7: Access to Technical Reports.

The commenter requested an electronic copy of the tier-one documents for the Palmdale to Burbank Section. A member of the project team contacted the commenter and provided the requested materials. The Draft EIR/EIS is available on the Authority website and was made available via hard copy at multiple repository locations during the public review period. Please refer to Standard Response PB-Response-GEN-7: Access to Technical Reports. CEQA and NEPA require a Final EIR and EIS to respond to the comments received on environmental issues (see 14 C.C.R. §15088(a) and Federal Railroad Administration Procedures for Considering Environmental Impacts 14(s)). This comment does not address the sufficiency of the Draft EIR/EIS, nor does it suggest edits to the document. No change has been made to the document in response to this comment.

Submission 4347 (Brenda Benavides, California Regional Water Quality Control Board, Los Angeles Region, November 29, 2022)

Palmdale - Burbank - RECORD #4347 DETAIL

Status : Delimited
Record Date : 11/29/2022
Interest As : State Agency
First Name : Brenda
Last Name : Benavides

Stakeholder Comments/Issues :

Hello,

4347-8000

I am still preparing general comments on the environmental documents on behalf of the Los Angeles Regional Water Board's Site Cleanup Program. Some of our other programs/departments have not completed their review of the environmental documents and would need additional time to provide feedback. We would like to request a three week extension of the deadline for comments on the HSR Palmdale to Burbank Section EIR/EIS documents.

Thank you,

Brenda

Brenda Benavides
Water Resource Control Engineer
Site Cleanup Program, Unit II
California Regional Water Quality Control Board, Los Angeles Region
320 West 4th Street, Suite 200, Los Angeles, CA 90013
(213) 620-2094 | brenda.benavides@waterboards.ca.gov<mailto:brenda.benavides@waterboards.ca.gov>

Response to Submission 4347 (Brenda Benavides, California Regional Water Quality Control Board, Los Angeles Region, November 29, 2022)

4347-8000

Refer to Standard Response PB-Response-GEN-3: Public Outreach on the Draft EIR/EIS.

The commenter requested to extend the public comment period. The commenter's request has been noted. Refer to Standard Response PB-Response-GEN-3: Public Outreach on the Draft EIR/EIS, which provides general information regarding the public comment period and the extension of the public comment period. The Draft EIR/EIS was originally made available for review and comment for a 60-day public review beginning on September 2, 2022. In response to agency and stakeholder requests, and in consideration of limitations caused by the novel coronavirus, the Authority extended the comment period by 30 days. CEQA and NEPA require a Final EIR and EIS to respond to the comments received on environmental issues (see 14 C.C.R. §15088(a) and Federal Railroad Administration Procedures for Considering Environmental Impacts 14(s)). This comment does not address the sufficiency of the Draft EIR/EIS, nor does it suggest edits to the document. No change has been made to the document in response to this comment.

Submission 4350 (Torianne Cahoon, CA Department of Water Resources, November 29, 2022)

Palmdale - Burbank - RECORD #4350 DETAIL

Status :	No Action Required
Record Date :	11/29/2022
Interest As :	State Agency
First Name :	Torianne@DWR
Last Name :	Cahoon

Stakeholder Comments/Issues :

Good afternoon,

Attached is DWR's comments to the Palmdale to Burbank Project Section Draft EIR/EIS document. Please let us know if you have any questions or concerns in regard to our comments.

Thank you,

Torianne Cahoon

Environmental Scientist
Environmental Assessments and Permitting
Division of Integrated Science and Engineering
CA Department of Water Resources
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Submission 4350 (Torianne Cahoon, CA Department of Water Resources, November 29, 2022) - Continued

Palmdale to Burbank Project Section: Draft Comments

	SR#	Comments	Page#	Name	Agency	Type of Comments	Actions	Other Comments
4350-8176	1	BIO-IAMF#1 does not say who the names and qualifications would be submitted to. Usually they are submitted to USFWS, NMFS, and CDFW for review and approval.	3.7-18	Analisa Martinez	DWR			
4350-8177	2	It would be helpful to have the impacts to Waters of the State into a table broken down by Alternative as opposed to the text and then the table with the combined impact. The table does not provide any valuable information with the information summed to be able to evaluate the alternatives.	3.7-84 and 3.7-85	Analisa Martinez	DWR			
4350-8178	3	In the E2A Build Alternative, it mistakeningly says least bell's vireo when it should say Southern willow flycatcher.	3.7-126	Analisa Martinez	DWR			
4350-8179	4	Suggest that there is also a fish rescue and relocation plan associated with the dewatering plan or in a separate measure.	3.7-143	Analisa Martinez	DWR			
4350-8180	5	How any acres of mountain lion foraging and dispersal habitat is located in the area? It says there is abundant but it would be better to put that inforamtion into numbers to show the impact. Mountain lion has a pretty big range size.	3.7-150	Analisa Martinez	DWR			
4350-8181	6	The impacts to not all of the special-status mammals in the table are discussed in this section. There should be some discussion on the impacts to the other mammals in the table since there are sevral acres of habitat that will be impacted for each species.	3.7-148 to 3.7-157	Analisa Martinez	DWR			
4350-8182	8	Why is tunnel construction and associated changes in groundwater levels no expected to affect SEAs? This should be explained.	3.7-185	Analisa Martinez	DWR			
4350-8183	10	E1 and E1A Built Alternatives - The other alternatives decribed above give the associated acreages associated with the percent of alignment that is permeable and impermeable. I suggest these sections be consistent with those and provide the acreages.	3.7-193	Analisa Martinez	DWR			
	11	E2 Built Alternative - The other alternatives decribed above give the associated acreages associated with the percent of alignment that is permeable and impermeable. I suggest this section be consistent with those and provide the acreages.	3.7-194	Analisa Martinez	DWR			
	12	E2A Built Alternative - The other alternatives decribed above give the associated acreages associated with the percent of alignment that is permeable and impermeable. I suggest this section be consistent with those and provide the acreages.	3.7-197	Analisa Martinez	DWR			
4350-8184	13	Who will be given the WEAP training for operations? Will it be the train conductors? Or staff scheduling the trains? WEAP traning for maintenace makes sense but I'm not sure it does for this project.	3.7-199	Analisa Martinez	DWR			
4350-8185	14	Herbicides and Pesticides - I don't think that herbicide and pesticide use during operations make sense. This would be a mantenance activity only.	3.7-199	Analisa Martinez	DWR			
4350-8186	15	I don't think ALAN has been spelled out before.	3.7-204	Analisa Martinez	DWR			
4350-8187	16	BIO-MM#2: The plant species salvage plan should be reviewed and approved by the respective agencies as well.	3.7-213	Analisa Martinez	DWR			
4350-8188	17	Where is BIO-MM#9-13? They seem to be missing from the document.	3.7-215	Analisa Martinez	DWR			
4350-8189	20	Suggest adding "…via Environmental Mitigation Management and Assessment or similar submittal method within 24…". That is less specific to the one program to submit the information. Same suggestion throughout the mitigation measures whereever the specific program is mentioned.	3.7-225	Analisa Martinez	DWR			
4350-8190	21	BIO-MM#74: What is the horizontal and vertival buffer distances for nesting raptors and special status nesting raptors (Swainson's Hawks, Bald and Golden Eagles)? It is not specified in this mitigation measure.	3.7-230	Analisa Martinez	DWR			
4350-8191	22	BIO-MM#87: This measure should apply to any construction near or over a body of water. Same with the other measures that specifically mention the Santa Clara River.	3.7-234	Analisa Martinez	DWR			
4350-8192	23	BIO-MM#94: Put the dates of the monarch butterfly peak flight period in the mitigation measure.	3.7-237	Analisa Martinez	DWR			
4350-8193	24	The City of Palmdale General Plan is almost 30 years old. There is no updated plan?	3.10-6	Analisa Martinez	DWR			

Submission 4350 (Torianne Cahoon, CA Department of Water Resources, November 29, 2022) - Continued

	SR#	Comments	Page#	Name	Agency	Type of Comments	Actions	Other Comments
4350-8194	25	Recognized environmental conditions should be defined.	3.10-7	Analisa Martinez	DWR			
4350-8195	26	A Hazardous Materials Buisness Plan will need to be updated as required by the local CUPA(s).	3.10-29	Analisa Martinez	DWR			
4350-8196	27	Species was not dicussed or evaluated: Horn's Milkvetch or Astragalus hornii var. hornii is an annual herb that is native to California, it is California Rare Plant Rank: 1B.1 (rare, threatened, or endangered in CA and elsewhere). Found on CNDDB.	3.7-96	Torianne Cahoon	DWR			
4350-8197		Species was not discussed or evaluated: Le Conte's thrasher or Toxostoma lecontei is species of special concern for California. Found on CNNDB.	3.7-123	Torianne Cahoon	DWR			
4350-8198	28	When applying for an Encroachment Permit to conduct acitivities within DWR right-of-way please provide all final envrionmental documents (agency issued permits, concurrence letters, authorizations) associated with the project. This inlcudes all technical reports for biological and cutlrual resources.	----	Torianne Cahoon and Daniel Jackson	DWR			

Response to Submission 4350 (Torianne Cahoon, CA Department of Water Resources, November 29, 2022)

4350-8176

The commenter notes that BIO-IAMF#1 does not provide the identity of the agencies to which qualified biologist names and resumes would be submitted. The commenter notes that qualified biologist names are usually submitted to USFWS, NMFS, and CDFW. The Authority acknowledges the comment and appreciates the feedback on BIO-IAMF#1. The Authority intends to submit names and resumes of qualified biologists to all appropriate agencies. Agency involvement will be further clarified as project review progresses.

4350-8177

The commenter notes they think it would be helpful to have impacts to waters of the State summarized in a table by Build Alternative. The Authority acknowledges the comment and appreciates the commenter's interest in having the data presented clearly so as to best understand the impacts. Impacts to waters of the State are presented in the Final EIR/EIS in Section 3.7 and summarized in Table 3.7-8, Table 3.7-24, Table 3.7-25, Table 3.7-34, and Table 3.7-35.

4350-8178

The commenter points out that under Section 3.7.6, page 3.7-126, addressing E2A Build Alternative, in the Draft EIR/EIS, a typo exists where “least Bell’s vireo” should read “southern willow flycatcher”. The Authority acknowledges the comment and appreciates the attention to detail and careful reading of the Draft EIR/EIS by the commenter. The Authority has revised Section 3.7.6 in the Final EIR/EIS to refer to the southern willow flycatcher instead of the least Bell’s vireo, in the bullet point related to the E2A Build Alternative.

4350-8179

The commenter suggests that a fish rescue and relocation plan associated with the dewatering plan be included in BIO-MM#62 or be included in another separate measure. In response to this comment, the Authority has revised BIO-MM#62 in the Final EIR/EIS to specify that the Dewatering Plan will include a Fish Salvage and Relocation Plan.

Under BIO-MM#62, a Fish Salvage and Relocation Plan will be drafted as part of the project Dewatering Plan and will be submitted to CDFW and USFWS for review and approval. Fish species would be excluded from dewatering areas using 1/8-inch block nets, or other physical barriers. Any fish found within the project work area after block nets have been installed will be salvaged and relocated to an area outside the work area and out of harm’s way, such as upstream to reduce the chance of re-netting or to another water body, depending on species and location, consistent with regulatory requirements. Salvage and relocation methods will be outlined in the Fish Salvage and Relocation Plan and will be performed using commonly approved and safe methods, such as daily net monitoring with all trapped fish relocated upstream or to other water bodies to reduce re-trapping. If relocation is required, fish would be relocated using transport tanks with oxygen delivery designed to reduce stress. The Authority will continue to consult with resource agencies during final design and construction of the project to ensure an approved approach to fish salvage and relocation.

4350-8180

The commenter asks how any acres of mountain lion foraging and dispersal habitat are located “in the area” and notes that the Draft EIR/EIS states there is abundant habitat. Figure 3.7-25 in Section 3.7, Biological and Aquatic Resources of the Draft EIR/EIS provides a map of mountain lion habitat. Impacts to mountain lion are discussed in Section 3.7.5.5 of the Draft EIR/EIS (Impact BIO#6 and Impact BIO#14). There are 89,012 acres of foraging and dispersal habitat (depicted in light grey on Figure 3.7-25) and 316,739 acres of breeding and foraging habitat (depicted in dark grey on Figure 3.7-25) located within the Auxiliary Resource Study Area (RSA) for the Palmdale to Burbank Project Section. The Auxiliary RSA extends up to 10 miles outward from the Build Alternative footprint, encompassing the areas analyzed for impacts on wildlife movement corridors and wildlife habitat linkages.

Response to Submission 4350 (Torianne Cahoon, CA Department of Water Resources, November 29, 2022) - Continued

4350-8181

The commenter notes that impacts to some special-status mammal species included in the table (Table 3.7-20) are not addressed in the text of the section (Impact BIO#6). While this section, Impact BIO#6, does not mention each special-status mammal from Table 3.7-20 directly by name, the analysis of impacts provided is equally comprehensive for all the species listed in the table. Acreages of impacts are addressed for each species in Table 3.7-20. Several species, including mountain lion, ringtail, and bats, are mentioned specifically in text because of their higher sensitivity and unique life histories. American badger is mentioned specifically in text as a representative species in the context of ground-dwelling mammals, which would also include rodent and lagomorph species from Table 3.7-20. The Authority uses these representative species to address impacts to all special-status mammals from Table 3.7-20. Special-status mammal impacts are addressed in Section 3.7.6 of the Final EIR/EIS.

4350-8182

Refer to Standard Response PB-Response-GEN-6: Impacts on the Santa Clara River, PB-Response-HYD-2: Hydrogeologic Impacts in the Angeles National Forest/Tunneling Impacts in the Angeles National Forest.

The commenter asks why tunnel construction and associated changes in groundwater levels are not expected to affect SEAs. Please see PB-Response-GEN-6: Impacts on the Santa Clara River, and PB-Response-HYD-2: Hydrogeologic Impacts in the Angeles National Forest/Tunneling Impacts in the Angeles National Forest, which address concerns associated with tunneling under SEAs. This response addresses each Build Alternative's effects on SEAs that the Build Alternatives cross, which include the Santa Clara River SEA as well as the San Andreas SEA and Tujunga Valley/Hansen Dam SEA. To address any impacts associated with groundwater change, the Authority will implement an Adaptive Management Monitoring Plan (AMMP) (see HWR-MM#4). The AMMP would be implemented throughout the tunnel construction RSA. HWR-MM#4 requires that the AMMP include monitoring protocols to establish baseline conditions of surface water resources and to detect changes in groundwater conditions related to tunnel construction to ensure timely implementation of remedial measures.

4350-8183

The commenter suggests that the wildlife permeability discussed on pages 3.7-193, 3.7-194, and 3.7-197 for the E1, E2, E1A, and E2A Build Alternatives should include area calculations in acreage. Acreage is an appropriate metric when comparing areas of impacts, but does not accurately measure permeability across a linear project. Permeability across a linear project is best measured and compared by a linear measurement and in this case miles or the percent of the alignment that could be crossed. The linear miles and percent permeability are appropriately described for each of the Build Alternatives on pages, 3.7-193, 3.7-194, and 3.7-197 in the Draft EIR/EIS. Furthermore, as a matter of clarification, the Authority's preferred alternative is the SR14A Build Alternative and not the E1, E2, E1A, E2A Build Alternatives.

4350-8184

The commenter asks who will be given (i.e., who will attend) the WEAP training for operations. Under BIO-IAMF#4, a qualified project biologist would provide a WEAP training for all workers involved in routine maintenance activities and for any unplanned maintenance work prior to any work being performed. Train conductors and staff scheduling the trains would not be expected to attend a WEAP training. Final processes and procedures will be developed leading up to project implementation and more information will be available at that time.

4350-8185

The commenter opines that the use of herbicides and pesticides during operations is inappropriate and that it should be a maintenance activity. The use of herbicides and pesticides is discussed in Section 3.7.6 in the context of impacts related to operations, which includes maintenance activities. Herbicides and pesticides would be applied by certified pesticide applicators in accordance with all requirements of the California Department of Pesticide Regulation and County Agricultural Commissioners. Control methods stipulated in the vegetation control plan required under BIO-MM#54 would ensure the controlled and safe use of both non-chemical vegetation control methods and chemical vegetation control methods and may provide a benefit to special-status plant species by protecting the species from pests and noxious/invasive weeds. This comment does not address the sufficiency of the Draft EIR/EIS nor does it suggest edits to the document. As a result, no change has been made to the document in response to this comment.

Response to Submission 4350 (Torianne Cahoon, CA Department of Water Resources, November 29, 2022) - Continued

4350-8186

The commenter notes that an acronym, ALAN, may not have been spelled out in full previously in the Draft EIR/EIS. The acronym ALAN refers to “artificial light at night” and is spelled out in full on page 3.7-150 of the Draft EIR/EIS.

4350-8187

The commenter notes that the plant salvage plan should be reviewed and approved by the respective agencies. The Authority is committed to engagement with all relevant agencies and is undertaking regular consultation with agencies during the environmental review process. If relocation or propagation is required by authorizations issued under FESA and/or CESA, the plant salvage plan will be prepared in coordination with USFWS and CDFW as appropriate and in accordance with the authorizations under FESA and CESA (BIO-MM#2).

4350-8188

The commenter notes that BIO-MM#9 through BIO-MM#13 seem to be missing from the document. Mitigation measures are numbered on an HSR Program-wide basis and kept as consistent as possible across all HSR Project Sections. As such, when certain mitigation measures are not relevant for a given section, those numbered mitigation measures are omitted, thereby leaving the appearance of a gap in the sequential numbering of relevant mitigation measures. Mitigation Measures BIO-MM#9 through BIO-MM#13 were not relevant to the HSR Palmdale to Burbank Project Section and are therefore not included in the Draft EIR/EIS.

4350-8189

The commenter requests that BIO-MM#61 be revised to indicate "Daily Compliance Reports will be submitted to the Authority via Environmental Mitigation Management and Assessment or similar submittal method within 24 hours of each monitoring day." BIO-MM#61 has been revised to indicate that other similar submittal methods shall be used as necessary.

4350-8190

The commenter asks what the horizontal and vertical buffers are for nesting raptors and special-status raptors in BIO-MM#74.

BIO-MM#74 provides both the horizontal and vertical buffer distances for nesting birds when helicopter use is required. For construction activities involving the use of a helicopters, the buffer for nesting birds will be 200 feet horizontal and 150 feet vertical. For non-special status raptor species, the default buffer is 500 feet. BIO-MM#15 in the Draft EIR/EIS specifies a no-work buffer of 500 feet for breeding/nesting raptors of all species. BIO-MM#15 has been revised in the Final EIR/EIS to clarify a minimum vertical no-work buffer of 500 feet. For Swainson’s hawk, BIO-MM#18 requires the Authority to establish no-work buffers following CDFW’s Staff Report Regarding Mitigation for Impacts to Swainson’s Hawks (Buteo swainsoni) in the Central Valley of California, which requires a one-quarter mile buffer zone from active nests in urban and suburban areas, and a one-half mile buffer zone from active nests in rural areas away from development. For bald and golden eagles, BIO-MM#66 requires the Authority to implement no-work buffers of 1-mile line-of-sight and 0.5-mile no line-of-sight for active nests. Mitigation Measures BIO-MM#18 and BIO-MM#66 have been revised in the Final EIR/EIS to include the requirement that vertical buffers from active nests be no less than one-half mile.

Response to Submission 4350 (Torianne Cahoon, CA Department of Water Resources, November 29, 2022) - Continued

4350-8191

Refer to Standard Response PB-Response-GEN-6: Impacts on the Santa Clara River.

The commenter suggests that BIO-MM#87 should apply to any construction near or over a body of water, as should the other measures that specifically mention the Santa Clara River.

Although BIO-MM#87 does specifically only mention the Santa Clara River; the intention of the measure is that it would be applied any time work is performed near or over a body of water along the alignment. Mitigation measures will be implemented to avoid or minimize impacts to sensitive natural resources, including waters, and will be applied as described in the Final EIR/EIS. BIO-MM#87, BIO-MM#88, BIO-MM#90, BIO-MM#92 have been updated in the Final EIR/EIS to reflect the use of these measures within other drainages along the alignment, in addition to the Santa Clara River. Please see Standard Response PB-Response-GEN-6: Impacts on the Santa Clara River for more information.

4350-8192

The commenter suggests that the dates of the monarch butterfly peak flight period should be added to the mitigation measure, BIO-MM#94. Monarch peak flight periods for the project area latitude is late September to early October but vary year after year depending on several factors, for example due to seasonal storms. (Monarch Watch 2023). Mitigation Measure BIO-MM#94 invokes the use of the "Project Biologist," a qualified biologist, to establish the best time of year to survey for monarch butterflies. For this reason, no changes to BIO-MM#94 have been made.

4350-8193

The commenter inquired about the use of the City of Palmdale General Plan. The updated Palmdale General Plan, Palmdale 2045 General Plan, was in development during the drafting of this final EIR/EIS.

The updated Palmdale General Plan has been noted in the Final EIR/EIS. The plan does not have a substantial effect on the Authority's analysis. For example, of most concern would be the project's compatibility where it intersects or crosses city infrastructure. In this regard the project would be consistent with the City's plans and policies relative to local roadway crossings. This comment does not pertain to the EIR/EIS and no updates to the EIR/EIS are needed based on this comment.

4350-8194

The commenter requested that recognized environmental conditions be defined on page 3.10-7 of the EIR/EIS. The edit has been made to the final EIR/EIS.

4350-8195

The commenter states that a Hazardous Materials Business Plan will need to be updated as required by the local Certified Unified Program Agencies (CUPA). The Authority agrees and will update the Hazardous Materials Business Plan for the project as necessary and required by the local CUPA(s), pursuant to state law and regulations.

Response to Submission 4350 (Torianne Cahoon, CA Department of Water Resources, November 29, 2022) - Continued

4350-8196

The commenter notes that Horn's milkvetch (*Astragalus hornii var. hornii*) was not discussed or evaluated in the Draft EIR/EIS and that the species is native to California and has a status of California Rare Plant Rank 1B.1 (rare, threatened, or endangered in CA and elsewhere). The Authority is committed to protecting California's sensitive plant and wildlife species during project construction and operation. The Authority has performed a detailed analysis of sensitive species that might be impacted by the project and continues to coordinate with resource agencies to ensure that impacts have been identified and mitigated to less than significant under CEQA. The potential for impacts to Horn's milkvetch was assessed and, due to the location of known occurrences, and historical records of observations, the species was determined to not be in the Resource Study Area and to not be at risk of impacts from the Palmdale to Burbank Project Section. The majority of occurrences of this species have been documented north of the project study area in Kern County with two in LA County. The nearest documented occurrence was an individual located in an alkali meadow along the shore of Lake Palmdale in the 1920s and no further observations have been documented at this location or within the study area.

4350-8197

Refer to Standard Response PB-Response-BIO-2: Construction and Operations Impacts to Special-Status Plants and Wildlife.

The commenter notes that LeConte's thrasher (*Toxostoma lecontei*) was not discussed or evaluated in the Draft EIR/EIS and that the species is of special concern for California. The Authority is committed to protecting California's sensitive plant and wildlife species during project construction and operation. The Authority has performed a detailed analysis of the sensitive species that might be impacted by the project and continues to coordinate with resource agencies to ensure that impacts have been identified and mitigated to less than significant under CEQA. While there is a 1926 CNDDB record of LeConte's thrasher near the intersection of Pearlblossom Highway and Sierra Highway adjacent to the northern extent of the project area, this species prefers open desert wash, desert scrub, alkali desert scrub, and desert succulent shrub habitats and is also known to utilize Joshua tree habitat with scattered shrubs that no longer occurs within the study area. The species is considered G4 (Apparently Secure), S3 (Vulnerable), and the area of potential impact no longer exhibits suitable habitat. The Authority determined a more detailed analysis of this species was not warranted, as was the case with other species considered less sensitive. Please see Standard Response PB-Response-BIO-2: Construction and Operations Impacts to Special-Status Plants and Wildlife.

4350-8198

The commenter notes that all final environmental documents (agency-issued permits, concurrence letters, authorizations) associated with the project, including technical reports for biological and cultural resources, should be included when applying for an Encroachment Permit to conduct activities within the CA Department of Water Resources right-of-way. Comment noted. Application for an Encroachment Permit will include the aforementioned materials.

Submission 4463 (Jessica Nadolski, State Water Resources Control Board, Division of Water Quality, December 1, 2022)

Palmdale - Burbank - RECORD #4463 DETAIL

Status :	Action Pending
Record Date :	12/2/2022
Interest As :	State Agency
First Name :	Jessica@Waterboards
Last Name :	Nadolski

Stakeholder Comments/Issues :

To whom it may concern,
The State Water Resources Control Board (State Water Board) offers the following comment pertaining to the Palmdale to Burbank Project Section Draft EIR/S.

4463-8261

1. The State Water Board recognizes High-Speed Rail Authority's (Authority) consideration of impacts related to surface water and groundwater, and how those impacts correlate to project design. State Water Board further recognizes the balance between these factors (impacts related to surface and groundwater and project design) that determined the SR14A Build Alternative as the Preferred Alternative for the Palmdale to Burbank Project Section. However, State Water Board notes that the Preferred Alternative crosses six to seven additional major waterbodies when compared to other alternatives (Table S-1).

4463-8262

The potential for elimination or relocation of natural drainages and their conversion into storm drains as well as other possible impacts to aquatic resources increases with every proposed crossing of a major waterbody. Therefore, State Water Board requests further consideration of project alternatives with specific focus on the currently proposed crossings of major waterbodies.

4463-8263

Lastly, State Water Board looks forward to continued coordination with the Authority regarding this Project Section. Early engagement prior to requesting permit authorization(s) is recommended to discuss avoidance and minimization (during construction) of aquatic resource areas with increased functions and values where crossings of major waterbodies must occur.

Thank you for your consideration,

Jessica A.Nadolski
Senior Environmental Scientist
Wetlands Permitting and Enforcement Unit I, Supervisor
Division of Water Quality
State Water Resources Control Board
(916) 341-5290
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[cid:image001.png@01D9059D.A52D15E0]<https://saveourwater.com/>

Response to Submission 4463 (Jessica Nadolski, State Water Resources Control Board, Division of Water Quality, December 1, 2022)

4463-8261

The commenter expressed concern regarding impacts to surface water and groundwater, noting that although SR14A is the Preferred Alternative, SR14A crosses additional major waterbodies when compared to other alternatives. Although the SR14A Build Alternative crosses more waterbodies than the E1, E1A, E2, and E2A Build Alternatives, as discussed in Chapter 8 in Table 8-2 under Hydrology and Water Resources of the Draft EIR/EIS, the Refined SR14 and SR14A Build Alternatives would have the lowest potential risk and least potential impacts on surface water resources because the alignment traverses areas with lower groundwater pressures and no known groundwater dependent resources within identified High and Moderate Risk Areas. The E2 and E2A Build Alternatives would have the highest risk and highest potential impacts on surface water resources when compared to Refined SR14, SR14A, E1, and E1A because of the comparatively higher groundwater pressures and greater prevalence of springs and streams within identified High and Moderate Risk Areas.

4463-8262

Refer to Standard Response PB-Response-ALT-1: Alternatives Selection and Evaluation Process.

The State Water Board requests further consideration of project alternatives with specific focus on the currently proposed crossings of major waterbodies.

Please refer to Standard Response PB-Response-ALT-1: Alternatives Selection and Evaluation Process, which explains the Authority's evaluation and selection of the alternatives studied in the Draft EIR/EIS.

As described in the Draft EIR/EIS Chapter 2, Alternatives, and in Standard Response PB-Response-ALT-1: Alternatives Selection and Evaluation Process, beginning in 2005, the Authority conducted a comprehensive evaluation of project-level alternatives for the Palmdale to Burbank Project Section. This evaluation is documented in the alternatives analyses reports produced for the Palmdale to Los Angeles and Palmdale to Burbank Project Sections and are cited in the Draft EIR/EIS Chapter 2.In its review of potential alignments, the Authority took into account such factors as: consistency with the project purpose and need, HSR system performance metrics, construction feasibility, cost, input from federal and state resource agencies and affected communities, environmental impacts, including impacts on wetlands and other waters, and community impacts. In coordination with the U.S. Army Corps of Engineers (USACE) and U.S. Environmental Protection Agency (USEPA), the Authority explored additional options to avoid or minimize impacts to aquatic resources, including Una Lake, which is a water of the State and the U.S., and includes wetland habitat.

As a result of this process, the Authority developed the SR14A, E1A, and E2A Build Alternatives, which are shown in Figure 2-2 in Chapter 2 of this Final EIR/EIS, and included these Build Alternatives for review in the Draft EIR/EIS along with the Refined SR14, E1, and E2 Build Alternatives. Following agency review, the USACE and USEPA concurred on December 17, 2020, and December 16, 2020, respectively, with the range of alternatives recommended in the Checkpoint B Summary Report for inclusion and consideration in the EIR/EIS. In complying with the Clean Water Act Section 404 permitting process, the Authority also coordinated with the USACE and the USEPA by preparing a Palmdale to Burbank Project Section Checkpoint C Report which provided a

Response to Submission 4463 (Jessica Nadolski, State Water Resources Control Board, Division of Water Quality, December 1, 2022) - Continued

4463-8262

detail evaluation of likely impacts to aquatic and wetland resources associated with building and operating the project.

From its evaluation, the Authority identified the SR14A Build Alternative as the Preliminary LEDPA (least environmentally damaging practicable alternative). This Preliminary LEDPA determination is based on the following factors:

• The SR14A and E1A Build Alternatives would cause the fewest direct impacts on wetlands among the build alternatives. The Refined SR14, E1, E2, and E2A Build Alternatives would cause the most direct impacts on wetlands, with the E2 Build Alternative causing the most impacts on wetlands.

•Although the SR14A Build Alternative would affect more acres of nonwetland aquatic resources than the E1A and E2A Build Alternatives, approximately 68 percent of those proposed impacts would be to constructed basins or constructed watercourses that provide minimal functions and values, as compared to 34 percent and 2 percent of proposed impacts on constructed basins and watercourses for the E1A and E2A Build Alternatives, respectively.

•Natural and modified natural streams were found to have a higher quality of condition and consequently an inferred higher functional integrity than constructed basins and watercourses. 66 percent and 98 percent of the impacts on nonwetland waters from the E1A and E2A Build Alternatives, respectively, would be on natural and modified natural streams that have higher functions and services, resulting in a far greater impact on aquatic ecosystem functional integrity as compared to 32 percent of the impacts on nonwetland waters from the SR14A Build Alternative that would be on natural and modified natural streams. Therefore, while the SR14A Build Alternative would result in the greatest number of permanent impacts on Waters of the U.S. compared to the E1A and E2A Build Alternatives, it would have the fewest impacts on High and Medium-High quality aquatic resources, affecting 4.77 acres of this quality of feature compared to 11.37 acres affected by the E1 Build Alternative and up to 25.25 acres affected by the E2 Build Alternative.

•The SR14A and Refined SR14 Build Alternatives would have the lowest potential to

4463-8262

cause secondary adverse impacts on surface water resources in the ANF from tunnel construction. The SR14A and Refined SR14 Build Alternatives would traverse areas with lower groundwater pressures and no known groundwater-dependent surface resources (e.g., springs, perennial streams). The E1, E1A, E2, and E2A Build Alternatives would all cross areas with high groundwater pressures and considerable surface aquatic resources.

As described earlier, the USACE and USEPA have concurred with the Authority's identification of the SR14A alternative as the Preliminary LEDPA. Obtaining this Preliminary LEDPA concurrence from the two agencies is a necessary step for the Authority to eventually secure a Clean Water Act Section 404 permit required for project construction.

For reference, see Appendix 3.8-B, Major Waterbodies Crossed Table, for a list of all major waterbodies crossed by the Palmdale to Burbank Project Section Build Alternatives. Additionally, please refer to Section 3.8, Hydrology and Water Resources, specifically Impact HWR#1: Permanent Alteration of Surface Drainage Patterns from Aboveground Temporary Construction Activities and Permanent Structures Required for the Build Alternatives, for the impact discussion of waterbodies crossed by the Palmdale to Burbank Project Section Build Alternatives.

4463-8263

The commenter looks forward to continued coordination with the Authority and recommends early engagement with the State Water Resources Control Board prior to requesting permit authorization(s). Comment noted. The Authority will continue to work with the State Water Resources Control Board regarding avoidance and minimization measures of aquatic resource areas.

Submission 4512 (Ruby Kwan-Davis, California Department of Fish and Wildlife, South Coast Region 5, Habitat Conservation Planning Program, December 1, 2022)

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Palmdale - Burbank - RECORD #4512 DETAIL

Status :	No Action Required
Record Date :	12/6/2022
Interest As :	Business and/or Organization
First Name :	Ruby
Last Name :	Kwan-Davis
Attachments :	2014071074 CA High-Speed Rail Authority Palmdale to Burbank Project Section DEIR.pdf (2 mb) Attachment B.pdf (613 kb)

Stakeholder Comments/Issues :

Dear Mr. Stanich,
The California Department of Fish and Wildlife has completed review of a Draft Environmental Impact Report for the High-Speed Rail Palmdale to Burbank Project Section (SCH # 2014071074). Please find CDFW's comment letter attached. Thank you for the opportunity to provide comments. If you have any questions or concerns regarding CDFW's comments, please feel free to contact CDFW at your convenience.
Sincerely,
Ruby

4512-10540

Ruby Kwan-Davis
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GAVIN NEWSOM, Governor
CHARLTON H. BONHAM, Director

December 1, 2022

Serge Stanich
California High-Speed Rail Authority
770 L Street Suite 620, MS-1
Sacramento, CA 95814
Serge.Stanich@hsr.ca.gov

Subject: California High-Speed Rail Authority Palmdale to Burbank Project Section, Draft Environmental Impact Report/Environmental Impact Study, SCH #2014071074, California High-Speed Rail Authority

Dear Mr. Stanich:

The California Department of Fish and Wildlife (CDFW) has reviewed the Draft Environmental Impact Report/Environmental Impact Study (EIR/EIS) and referenced documentation from the California High-Speed Rail Authority (Authority) for the High-Speed Rail Palmdale to Burbank Project Section (Project). CDFW appreciates the opportunity to provide comments regarding aspects of the Project that could affect fish and wildlife resources and be subject to CDFW's regulatory authority under the Fish and Game Code.

CDFW's 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, subdivision (a) & 1802; Pub. Resources Code, § 21070; California Environmental Quality Act (CEQA) Guidelines, § 15386, subdivision (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 State 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, including 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.*), or CESA-listed rare plant pursuant to the Native Plant Protection Act (NPPA; Fish & G. Code, §1900 *et seq.*), CDFW recommends the Project Applicant obtain appropriate authorization under the Fish and Game Code.

Submission 4512 (Ruby Kwan-Davis, California Department of Fish and Wildlife, South Coast Region 5, Habitat Conservation Planning Program, December 1, 2022) - Continued

Project Description and Summary

4512-10541

Objective: The High-Speed Rail (HSR) system would provide a reliable high-speed electrified train system linking the San Francisco Bay Area and Central Valley to Southern California. The Project would construct, maintain, and operate an electrified, high-speed train system connecting Palmdale Transportation Center in the City of Palmdale to Hollywood Burbank Airport (formerly Bob Hope Airport) in the City of Burbank. The approximately 31- to 38-mile Project would be a critical link in Phase 1 of the HSR. The Project would provide predictable and consistent travel times between the Antelope Valley and San Fernando Valley; provide connectivity to airports, mass transit systems, and the highway network in the Antelope Valley and the San Fernando Valley; and connect the northern and southern portions of the State-wide HSR system.

There are six end-to-end Build Alternatives for the Project: Refined State Route (SR)14, SR14A, E1, E1A, E2, and E2A. Build Alternatives Refined SR14 and SR14A would follow the SR 14 freeway corridor from Antelope Valley to Santa Clarita and would cross the Santa Clara River. Build Alternatives E1, E1A, E2, and E2A make a more direct connection between Palmdale and Burbank by incorporating long tunnels beneath portions of the Angeles National Forest and San Gabriel Mountains National Monument. Build Alternatives E2 and E2A would cross Big Tujunga Wash. Build Alternatives SR14A, E1A, and E2A would avoid Una Lake by traveling approximately 300 feet east of Una Lake. The Authority has identified SR14A Build Alternative as the Preferred Alternative.

The Project includes construction, improvement, upgrade, operation, and maintenance of new and existing facilities and infrastructure necessary to support the HSR system. The Project includes construction of power transmission lines; traction power substations; switching and paralleling stations; adits and intermediate windows to facilitate underground tunnel construction and maintenance; access roads; and drainage facilities (e.g., concrete-lined drainage ditches, culverts, and detention basins). Each of the six Build Alternatives would use six different track profiles: at-grade, at-grade covered, cut and cover, retained cut/trench profile, tunnel, and elevated/aerial structure.

Location: The Project would span from the City of Palmdale near the vicinity of Spruce Court just west of Sierra Highway in the north and to the City of Burbank in the south. The Project extends through a variety of land uses and ecoregions, including urban, rural, and mountainous terrain. Each of the six Build Alternatives would begin and end at the same location. The Refined SR14, SR14A, E1, and E1A Build Alternative alignments would traverse several City of Los Angeles neighborhoods, including Sylmar, Pacoima, and Sun Valley in the San Fernando Valley. In contrast, the E2 and E2A Build Alternative alignments would only traverse Lake View Terrace and Shadow Hills neighborhoods.

Comments and Recommendations

4512-10542

In February 2021, CDFW provided the Authority with comments on an administrative draft EIR/EIS (see Attachment A). CDFW's primary concerns were the Project's impact on unarmored threespine stickleback (*Gasterosteus aculeatus williamsoni,* UTS), a CESA-listed, Endangered Species Act (ESA)-listed, and State Fully Protected species, wildlife connectivity, and CESA-listed species including (but not limited to) western Joshua tree (*Yucca brevifolia*) and mountain lion (*Puma concolor*) Southern California/Central Coast Evolutionarily Significant

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4512-10542

Units. CDFW appreciated the opportunity to provide early input on the administrative draft EIR/EIS.

On September 9, 2022, CDFW submitted a request to the Authority to obtain documents referenced in the EIR/EIS in order to thoroughly review and comment on the Project's impact on fish and wildlife (biological) resources. On September 23, 2022, the Authority provided CDFW with those documents[1].

Based on our review of the Project's EIR/EIS and reference documents the Authority provided on September 23, 2022, CDFW offers the comments and recommendations below to assist the Authority in adequately identifying, avoiding, and/or mitigating the Project's significant, or potentially significant, direct, and indirect impacts on biological resources. The Project's impact on UTS and wildlife connectivity continues to be a significant concern for CDFW.

CDFW recommends the measures or revisions below be included in a science-based monitoring program that contains adaptive management strategies as part of the Project's CEQA mitigation, monitoring, and reporting program (Pub. Resources Code, § 21081.6; CEQA Guidelines, § 15097).

Specific Comments

4512-10543

Comment #1: Impacts on UTS

Issue: The Project continues to have a significant impact on UTS, a State Fully Protected Species, CESA-listed species, and ESA-listed species.

Specific impacts: The Project proposes to construct a bridge across the Santa Clara River (Santa Clara River Crossing[2]) where UTS occurs. In addition, the Project proposes to install a permanent 100-foot electrical utility corridor across the Santa Clara River at Lang Station Road.

[1] Palmdale to Burbank Project Section (P-B) Draft Biological Assessment (June 2021)
P-B Draft Biological Assessment Appendices (Appendix A through K)
P-B Draft Biological Evaluation (May 2021)
P-B Draft Biological Evaluation Appendices (Appendix A through G)
P-B Biological Resource and Aquatic Resources Technical Report (BARTR) (February 2019)
P-B BARTR Supplement – Noise Effects to Federally Listed Bird Species (August 2022)
Palmdale Boulevard Undercrossing Biological and Aquatic Resources No Effect Memo (March 1, 2021)
P-B SR14A, E1A, and E2A Build Alternative Supplement to BARTR (December 2020)
P-B SR14A, E1A, and E2A Build Alternative Supplement to BARTR Appendices (Appendix A through N)
P-B Wildlife Corridor Assessment (WCA) Report (May 2019)
P-B SR14A, E1A, and E2A Build Alternative Supplement to WCA Report (December 2020)
P-B Spoils Addendum to Hydrology and Water Resources Technical Report (October 2017)
P-B Palmdale Boulevard Hydrology and Water Resources Technical Report (April 2021)
P-B Palmdale Boulevard Supplement to Hydrology and Water Resources Technical Report (March 2021)
P-B Draft Wetlands/Waters Delineation Report (August 2016)

[2] On January 25, 2017, CDFW attended a site visit with the Authority at the proposed Santa Clara River Crossing. Prior to the site visit, the Authority previously consulted with CDFW on potential methods to avoid impacts to UTS for construction and operation, including modeling efforts for the 25- and 50-year flood events for Santa Clara River and location of piling and wetted channel conditions. On August 25, 2018, CDFW provided a comment letter to the Authority requesting further evaluation of the Santa Clara River Crossing and information demonstrating that the crossing design would completely avoid impacts on UTS. Although CDFW has worked closely with the Authority on the Santa Clara River Crossing, the Authority has not responded to CDFW's comments, and upon review of the EIR, not all of CDFW's recommendations from the August 25, 2018, comment letter was incorporated (see Attachment B).

Submission 4512 (Ruby Kwan-Davis, California Department of Fish and Wildlife, South Coast Region 5, Habitat Conservation Planning Program, December 1, 2022) - Continued

4512-10543

The Project could impact UTS during construction of the Santa Clara River Crossing and utility corridor, as well as other permanent structures. The Project could continue to impact UTS during operation and maintenance of these permanent structures.

Why impacts would occur:

Santa Clara River Crossing. According to the February 2021 Bridges and Elevated Structures Plans, the Santa Clara River Crossing would install bents and columns in the 100-year floodplain of the Santa Clara River[3]. According to the Project's BIO-MM#85 and page 35 of Section 3.8 Hydrology and Water Resources, "pile installation locations would be restricted spatially to keep permanent structures out of the 25-year flood limit and therefore, no UTS may be affected[4]." CDFW appreciates that the Authority has made attempts to minimize impacts on UTS. However, the proposed Santa Clara River Crossing continues to have a significant impact on UTS.

The Santa Clara River at the proposed bridge is confined by existing, non-engineered gabion-like structures (see Attachment C). It is unclear if those gabion-like structures would need to be removed or modified in order to construct the Santa Clara River Crossing. Removing those structures could widen the wetted perimeter. Therefore, the Project could be installing permanent structures within the 25-year flood limit if the floodplain modeling and Santa Clara River Crossing design plan did not consider the potential need to remove or modify those gabion-like structures.

The Santa Clara River Crossing would be installed in the Santa Clara River where UTS occurs when there is water. Construction of the Santa Clara River Crossing within the 25-year floodplain could impact UTS both directly and as a result of habitat disturbance or degradation. Page 137 in Section 3.7 states, "direct effects on special-status fish species would result from construction activities in suitable habitat that could disturb, injure, or kill individuals if waters are disturbed, degraded, or polluted by sedimentation or construction equipment spills or leaks […] construction could require work below the ordinary high-water mark of water bodies that support, or have the potential to support, special-status fish species. […] Pile-driving in channels when surface water is present could lead to behavioral changes, injury, and possible death from vibrations […]." Lastly, trenching and installation of bridge piers could require dewatering, which could result in UTS stranding and eventual mortality.

After the Santa Clara River Crossing is constructed, the bridge could have permanent impacts on UTS. Bents and columns within the 25-year floodplain could result in erosion, scouring, and buildup of debris. Bent walls can cause scour depressions around and behind the bridge piers; isolate/strand fish in pools; impede water flow and connectivity; and cause soil and debris accumulation. Emergency maintenance is usually needed after storm events to remove debris from bridges with bent walls. The proposed Santa Clara River Crossing could result in perpetual impacts on UTS in the form of physical disturbance and changes to habitat; interruptions of fish passage; increased sedimentation, turbidity, and water temperatures; and oxygen depletion. In addition, maintenance, repair, or replacement of bridge structures after storm events or for the

[3] See Appendix 3.8-A Hydrology and Water Resources for the 100-year floodplain modelled by the Authority (page 3.8-A-34, Figure 3.8-A-33).
[4] See Appendix 2-D: Design Baseline Report for an illustration of the Authority's proposal to avoid the 25-year floodplain (page 11-10, Figure 11-12).

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4512-10543

life of the Santa Clara River Crossing could continue to impact UTS by requiring work in the Santa Clara River. The EIR/EIS has yet to describe how the Santa Clara River Crossing has been designed to completely avoid impacts on UTS during operation and maintenance.

The Authority has proposed programmatic Impact Avoidance and Minimization Features (IAMF) BIO-IAMF#1, 2, 3, and 5 through 11, as well as Biological Mitigation Measure (BIO-MM) 84 through 92 to avoid impacts on UTS. However, CDFW does not believe these measures would avoid impacts on UTS. The EIR/EIS has yet to discuss how these mitigation measures would be effective and whether mitigation would result in additional impacts on UTS. For example, BIO-MM#85 would require K-rails to be installed to prevent access to the wetted channel. K-rails placed close the wetted channel could impact riverbed, bank, and channel. During a sudden storm event, K-rails could cause erosion and scouring as well as buildup of sediment and debris. This could cause temporary impacts to the Santa Clara River and potentially UTS in addition to impacts caused during Project construction. BIO-MM#85 and 92 would prevent activities or personnel from getting within 10 feet of or near the edge of the wetted channel during construction and maintenance. Ten feet may be an insufficient buffer, especially given the Santa Clara River Crossing's proximity to UTS. Finally, BIO-MM#89 would require vibratory or oscillating methods to install bridge piles and piers; however, the EIR/EIS has yet to discuss how those methods would avoid impacts to UTS.

In addition, the mitigation measures listed above do not address the permanent impacts on UTS that could result from installing a permanent structure immediately downstream from UTS.

Lang Station Road. According to Figure 5-2 on page 5-51 in the June 2021 Draft Biological Assessment as referenced in the EIR/EIS, the Project is proposing a permanent 100-foot electrical utility corridor across the Santa Clara River at Lang Station Road. The EIR/EIS does not describe what activities would be required to construct, operate, and maintain the electrical utility corridor and consequently, what impacts there may be on UTS resulting from the electrical utility corridor. In addition, the EIR/EIS does not describe how the electrical utility corridor has been designed to completely avoid impacts on UTS. The electrical utility corridor could impact UTS during construction by causing temporary interruptions of fish passage (e.g., dewatering, installation of structures impeding passage) as well as increased sedimentation and turbidity. In addition, maintenance, repair, or replacement of the electrical utility corridor could continue to impact UTS habitat by requiring work in the Santa Clara River. Finally, the installation of the electrical utility corridor along Lang Station Road would likely result in maintenance of a "dam" as defined in Fish and Game Code that is currently preventing fish passage in violation of Fish and Game Code section 5901. The installation of the electrical corridor would require the re-design of Lang Station Road to comply with Fish and Game Code section 5901.

Arrastre Canyon. CDFW is also concerned about the Project's impact on UTS in watercourses adjacent to Arrastre Canyon Road. Page 137 in Section 3.7 Biological and Aquatic Resources states, "A utility corridor associated with E1-W1/E2-E1 would disturb unarmored three-spine stickleback habitat along Arrastre Canyon Road north of Arrastre Canyon." The EIR/EIS is not clear in disclosing what would be disturbed, what activities would cause those disturbances, how those disturbances would occur, whether those disturbances would be temporary or permanent, and whether the utility corridor would cause temporary or permanent interruptions of fish passage. Construction of the utility corridor could impact UTS through erosion and increased sedimentation, potentially resulting in fish injury or kill and reducing habitat and water

Submission 4512 (Ruby Kwan-Davis, California Department of Fish and Wildlife, South Coast Region 5, Habitat Conservation Planning Program, December 1, 2022) - Continued

4512-10543

quality. The EIR/EIS has yet to describe what measures are proposed to mitigate for impacts to UTS habitat at Arrastre Canyon or propose any compensatory mitigation to address habitat loss and disturbance.

Tunneling. According to Appendix 3.1-A Palmdale to Burbank: Footprint Mapbook (August 2022), Map 22 HSR Refined SR14, SR14A Build Alternatives appears to show permanent tunneling impacts on the southside of the Santa Clara River. The EIR/EIS does not discuss where exactly tunneling may occur in or adjacent to the Santa Clara River, what effects tunneling activities may cause, and whether effects would be temporary or permanent. Tunneling would require significant amounts of ground disturbance. Tunneling activities in or adjacent to the Santa Clara River could impact UTS through erosion and increased sedimentation, potentially resulting in fish injury or kill and reducing habitat and water quality.

Evidence impact would be significant: UTS is a State Fully Protected Species, CESA and ESA-listed species. Fully Protected Species are those animals that are rare or faced with possible extinction. Pursuant to Fish and Game Code, Fully Protected Species may not be taken or possessed at any time and no licenses or permits may be issued for their take except for collecting these species for necessary scientific research, relocation of the bird species for the protection of livestock, or if they are a covered species whose conservation and management is provided for in a Natural Community Conservation Plan.

The Project has yet to be designed to completely avoid impacts on UTS and habitat. In addition, construction, operation, and maintenance of the Santa Clara River Crossing, electrical utility corridor, utility corridor, and tunnel adjacent to the Santa Clara River could result in insufficiently mitigated or unmitigated impacts on UTS and habitat. Furthermore, the Project could be maintaining a dam at Lang Station Road. Per Fish and Game Code section 5901, it is unlawful to construct or maintain in any stream any device or contrivance the prevents, impedes, or tends to prevent or impeded, the passing of fish up and downstream.

The Project has the potential to substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels; threaten to eliminate a plant or animal community; or substantially reduce the number or restrict the range of an endangered, rare or threatened species (CEQA Guidelines, §§ 15065, 15380). As a result, the Project continues to have a substantial adverse effect, either directly or through habitat modifications, on a species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by CDFW or U.S Fish and Wildlife Service (USFWS).

Recommended Potentially Feasible Mitigation Measure(s): CDFW cannot authorize take for UTS. CDFW recommend the Authority considers our recommendations and comments in order for the Project to completely avoid impacts on UTS.

Recommendation #1: Consult with CDFW – Prior to finalizing the Project's EIR/EIS, the Authority should consult with CDFW regarding the Project's impact on UTS.

Santa Clara River Crossing. The Authority should reinitiate consultation with CDFW and resolve CDFW's concerns regarding the Project's impact on UTS. The Authority should

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4512-10543

provide the below requested information and studies for the bridge to demonstrate complete avoidance of UTS:

1) Detailed description of the geomorphic setting and why the bridge design is appropriate for the setting;
2) Geomorphic assessment of stream bed and bank stability, including potential influence of downstream mining operations, cultural activities, and the Project's impact on Bee Canyon[5];
3) Potential for debris or log jams at the bridge site;
4) Sediment transport and scour analysis (which should account for the removal of the existing non-engineered gabion-like structures);
5) Hydraulic studies (including model files, boundary conditions, and other model parameters) showing water surface profiles and average channel velocities for the design flows and the 50- and 100-year flows;
6) Detailed description of potential dewatering plans;
7) Geotechnical assessments to ensure bridge design is structurally appropriate; and
8) Design drawings showing site topography, control points, and dimensions of bridge in plan, elevation, and longitudinal profile and cross-sectional views.

CDFW recommends the Authority continue to collaborate with CDFW to develop a bridge design that would avoid impacts on UTS. CDFW looks forward to reviewing additional information on the Santa Clara River Crossing and providing further review and recommendations to assist the Authority.

Lang Station Road. The Authority should install the electrical utility corridor in a manner that does not impede fish passage to comply with Fish and Game Code section 5901, which may include elevating Lang Station Road. The Authority should consult with CDFW on designs for the proposed electrical utility corridor at Lang Station Road that would allow for fish passage.

Arrastre Canyon. The Authority should consult with CDFW on utility corridor designs such that the utility corridor would avoid impacts on UTS during construction, operation, and maintenance.

Tunneling Impacts. The Authority should consult with CDFW to design the Project so that there would be no tunneling-associated impacts on Santa Clara River/UTS during construction, operation, and maintenance.

Recommendation #2: Revise and Recirculate EIR/EIS – Following consultation with CDFW, the Authority should revise the EIR/EIS to discuss how the Santa Clara River Crossing, electrical utility corridor at Lang Station Road, utility corridor along Arrastre Canyon Road, and tunnels on the south side of Santa Clara River have been designed to completely avoid impacts on UTS. In addition, the EIR/EIS should describe all activities that may occur during the construction, operation, and maintenance phases; how frequently operation and maintenance activities would occur; describe all impacts on UTS that may occur; and provide any measures to avoid impacts on UTS.

[5] See Appendix 3.1-A Palmdale to Burbank: Footprint Mapbook (August 2022), Map 21 HSR Refined SR14, SR14A Build Alternatives and Map 18 HSR SR14 Build Alternative. The Project proposes permanent drainage basins in Bee Canyon and substantial grading.

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The Authority should recirculate a revised EIR/EIS to provide the public an opportunity to review and comment on the Project's impact on UTS, and how the Santa Clara River Crossing, electrical utility corridor at Lang Station Road, utility corridor along Arrastre Canyon Road, and tunnels have been designed to avoid those impacts [CEQA Guidelines, § 15088.5(a)(1)].

Recommendation #3: Hydroacoustic Impacts on Fish – BIO-MM#89 would require vibratory or oscillating pile driving methods to install piles and piers for the Santa Clara River crossing in order to avoid effects to UTS. The EIR/EIS does not yet provide a clear explanation of how or why vibratory or oscillating pile driving methods would avoid impacts on UTS. Accordingly, CDFW recommends the Authority revise the EIR/EIS to provide a thorough discussion of what methods the Project would use to install piles and piers, how UTS may be affected, and how those methods would avoid effects on UTS. The EIR/EIS should provide the following information:

1) A description of the driver type(s) that would be used and methodology;
2) A description of sound pressure levels and sound exposure levels;
3) An analysis of hydroacoustic impacts to nearby surface waters resulting from each bent and column as shown in the February 2021 Bridges and Elevated Structures Plans*;*
4) A description of injury levels for fish larger and less than two grams;
5) A discussion of whether the Project would result in injury and/or behavioral effects on fish;
6) A discussion of why driver type(s) would avoid effects to UTS;
7) A plan to attenuate sound pressure; and
8) A plan to monitor hydroacoustics.

CDFW recommends the Authority provide additional measures to mitigate for the Project's significant impacts on fish not previously identified.

Mitigation Measure #1: Revise BIO-MM#85 – CDFW recommends the Authority prevent access to the wetted channel by using temporary flagging, fencing, and signage. Methods used to prevent access should not cause additional erosion and scouring, allow sediment and debris buildup, and impede fish passage. In addition, CDFW recommends the Authority increase 10 feet to 50 feet in order to protect the wetted channel during Project construction and activities adjacent to UTS.

Mitigation Measure #2: Revise BIO-MM#87 – CDFW recommends the Authority specify what actions would be taken if water quality is being affected by bridge and bank stabilization-related concrete pouring activities. While CDFW appreciates that the Authority has proposed to monitor water quality, impacts may only be mitigated if the Authority has a plan or course of actions in-place to rapidly respond to a decline in water quality caused by the Project. CDFW also recommends the Authority require monitoring reports be submitted monthly or as directed to CDFW. A report should provide any fish mortalities observed due to poor water quality, water quality data, and any actions implemented in response to water quality issues.

Mitigation Measure #3: Revise BIO-MM#88, 89, and 92 – CDFW recommends the Authority increase 10 feet to 50 feet in order to protect the wetted channel during Project construction and activities adjacent to UTS.

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Mitigation Measure #4: CDFW recommends the Authority revise BIO-MM#90 to require that a Construction Groundwater Dewatering Plan be submitted to CDFW for review, and that all CDFW's comments are resolved and addressed prior to finalizing and implementing a Construction Groundwater Dewatering Plan. The Construction Groundwater Dewatering Plan should specify the following at a minimum: 1) a biological monitor should monitor any dewatering effects on the wetted channel, 2) a biological monitor should have authority to halt dewatering operations; 3) what effects would warrant halting dewatering operations, and 4) response actions in the event of negative impacts on the wetted channel, which should include consultation with CDFW, revising the Construction Groundwater Dewatering Plan as appropriate, limiting the extent of excavation dewatering, or suspending construction until such time as regional groundwater conditions are more favorable for the construction to proceed.

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Comment #2: Impacts on Mountain Lion and Wildlife Connectivity

Issue: The Project continues to have a significant impact on the Southern California/Central Coast Evolutionary Significant Unit (ESU) of mountain lion (*Puma concolor*, mountain lion), a CESA candidate species, by further constraining wildlife connectivity in the Angeles National Forest. Wildlife connectivity impacts continue to be a significant concern for CDFW considering the length of the Project, the impermeability of the track system, duration of construction activity, and long-term operation.

Specific impacts: The Refined SR14 and SR14A Build Alternatives would introduce a new barrier to mountain lion connectivity adjacent to the Angeles National Forest that did not previously exist. The Project would result in habitat loss and fragmentation and increase impermeability within the San Gabriel-Castaic Linkage (Linkage). Accordingly, the Project has the potential to worsen existing gene flow disruption for mountain lion in southern California; 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 wildlife.

Why impacts would occur: The at-grade segments of the Refined SR14 and SR14A Build Alternatives would cause habitat loss and fragmentation within the range of San Gabriel/San Bernardino Mountains (SGSB) mountain lion subpopulation. The SGSB subpopulation exhibits extremely low genetic diversity and effective population size, likely indicating a high risk of extinction (Center for Biological Diversity 2019). The cause of low genetic diversity and population size is habitat fragmentation and patterns of isolation due to roads and development creating movement barriers. The impacts to gene flow for mountain lion is the larger concern when contrasted with individual take. Isolation of subpopulations limits the genetic exchange of populations, prevents recolonization of suitable habitats following local extirpation, and ultimately puts the species at risk of local extirpation or extinction.

The Project is introducing a new barrier that did not previously exist in the vicinity of the Angeles National Forest and within the Linkage. According to Appendix 2-D Design Baseline Report, page 2-17 states that the "project footprint primarily consists of rail alignment, which would include both a northbound and a southbound track in a corridor ranging from 60 feet to several hundred feet wide. Additional right-of-way is included in the footprint to accommodate ancillary features." Appendix 3.1-A Palmdale to Burbank: Footprint Mapbook, Maps 21 and 22, shows a substantial permanent and temporary grading and disturbance footprint on both sides of the

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track. In addition, permanent detention basins would be installed on both sides of the track. Altogether, the track corridor, grading footprint, and detention basins would have a permanent impact footprint of more than 1,000 feet wide. The SR14A Build Alternative would create an almost 1-mile-long, 1,000-foot-wide barrier adjacent to the Angeles National Forest and within the Linkage along Bee Canyon. The Project as a substantial barrier could cut off wildlife from important food, shelter, and breeding areas. Resulting isolation of the SGSB subpopulation would limit the exchange of genetic material and put the subpopulation at risk of local extirpation through genetic and environmental factors.

The Project would have an individual and cumulative impact on mountain lion and wildlife connectivity. However, no mitigation is provided. In addition, mitigation measures proposed by the Project may not be sufficient to reduce the Project's impact to less than significant.

Project's Individual Impact. The EIR/EIS states the Project would have the following impacts:

- Page 3.7-198 in the Section 3.7 Biological and Aquatic Resources – "[…] construction of each of the six Build Alternatives would interfere with established wildlife movement corridors. This represents a significant impact because construction of each of the six Build Alternatives would introduce a constraint to wildlife movement that did not previously exist, interfering with established wildlife corridors."
- Page 6-5 P-B WCA Report – "Only the Refined SR14 Build Alternative would cross the San Gabriel-Castaic Linkage Design and associated least-cost corridors […] Approximately 46 percent (6.31 miles) of the San Gabriel-Castaic Linkage Design would be obstructed by nine fenced at-grade segments associated with the Refined SR14 alignment."
- Page 6-18 P-B WCA Report – "The project (without additional wildlife crossings) would increase movement cost [for mountain lion] across the 6-kilometer-wide movement cost corridor by 1.3 percent for the Refined SR14 Build Alternative. Relative permeability calculated by the moving-window average is reduced by 2 percent for the Refined SR14 Build Alternative […]"
- Page 2-32 SR14A, E1A, and E2A Build Alternative Supplement to WCA Report – "Approximately 30 percent (6.33 miles) of the San Gabriel-Castaic Linkage Design would be obstructed by five fenced at-grade segments associated with the SR14A alignment. The SR14A Build Alternative would closely parallel SR 14 along this section, which is an existing barrier for wildlife movement."

Despite acknowledging these significant impacts, no mitigation is proposed for Refined SR14 and SR14A Build Alternatives.

Page 190 Section 3.7 Biological and Aquatic Resources states, "Adding a crossing structure to segments that align with the SR 14 freeway would be impractical as wildlife movement is already constrained in these areas […] there are no at-grade segments of the Refined SR14 Build Alternative that exceed the recommended threshold lengths that would benefit from wildlife crossings." Generally, the EIR/EIS concludes that State Route 14 is an existing barrier to connectivity and any mitigation provided by the Project would not benefit wildlife connectivity.

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However, the existence of State Route 14 does not have a bearing on the Project's individual impact on wildlife connectivity. The Project would add a new barrier to wildlife connectivity that does not currently exist. The Project would result in habitat loss and fragmentation adjacent to the Angeles National Forest, obstruct 30 to 46 percent of the Linkage, and increase the movement cost for mountain lion. These impacts are significant. CDFW continues to be concerned that the Authority is not mitigating the Project's significant impact on wildlife connectivity.

BIO-MM#64 would require implementation of wildlife crossings along impermeable portions of the alignment. The Project has proposed to install one wildlife crossing south of the California Aqueduct and one wildlife crossing east of Una Lake to improve the permeability of the SR14A, E1, E1A, E2, and E2A Build Alternatives (Section 3.7 Biological and Aquatic Resources, page 278). CDFW is concerned that BIO-MM#64 as it is currently written has yet to reduce the Project's impact on wildlife connectivity. It should be noted that BIO-MM#64 recommends to the "extent feasible" and "consideration", which are not enforceable requirements. In addition, page 4-19 in the P-B WCA Report states, "It is currently anticipated that the HSR project's construction contract will be a design-build type. Therefore, it is possible that some aspects of this [Wildlife Corridor Assessment] would need to be adjusted or recalibrated to account for updated engineering conditions. However, the recommendations made in this report will be carried forward to the best ability of the Authority." Since the Project is design-build, CDFW is concerned that the Authority may not be committed to constructing wildlife crossings (i.e., committed to mitigation) unless BIO-MM#64 is revised to specifically require crossings in design plans (CEQA Guidelines, § 15126.4).

Project's Cumulative Impact. "Cumulatively considerable" means that the incremental effects of an individual project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects [Pub. Resources Code, § 21083(b)]. Table 3.19-6 in Section 3.19 Cumulative Impacts states that the Project's cumulative impact on biological resources is "not cumulatively considerable" and "similar for all Build Alternatives."

The Project, together with past and probable future projects, has a cumulatively considerable effect on mountain lion and wildlife connectivity. State Route 14 is a past project that has resulted in considerable impacts on wildlife connectivity adjacent to the Angeles National Forest. The Project is a future project that would have the same effect on wildlife connectivity. Future projects would further contribute to wildlife movement challenges along State Route 14 corridor. Page 3.19-49 in Section 3.19 Cumulative Impacts further acknowledges cumulative impacts by stating that "Cumulative development within the city of Santa Clarita could increase the amount of rural residential suburbs and transportation infrastructure along the SR14 corridor and Santa Clara River corridor […] Transportation projects, such as the I-5 HOV/Truck Lanes Project and Sierra Highway Improvements, would widen major roadway and freeway corridors through developed and undeveloped areas."

SR14 or SR14A Build Alternatives would have a cumulatively considerable impact on mountain lion and wildlife movement compared to the other alternatives. SR14 or SR14A contain at-grade portions that would result in habitat loss and fragmentation adjacent to the Angeles National Forest and within the Linkage. The other alternatives would be mostly tunneled under the Angeles National Forest and would not impact the Linkage. SR14 or SR14A would result in at

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least a 1-mile-long, 1,000-foot-wide barrier adjacent to past, present, and probable future projects that have or will have an impact on wildlife movement. The other alternatives would not.

To address the Project's cumulative effects during construction, Section 3.19 Cumulative Impacts, page 3.19-49 lists the following "to reduce the magnitude and severity of impacts associated with construction of the Build Alternative": pre-construction surveys; on-site monitoring; relocation of special-status wildlife; establishing non-disturbance zones; restoring temporary impacts on wildlife movement corridors; and implementing compensatory mitigation. To address cumulative effects during operation, page 3.19-49 states that the Project proposes a worker environmental awareness program training, vegetation and weed management plans, and stormwater management plans. First, temporarily excluding and relocating wildlife from the Project site during construction does not offset impacts on wildlife movement after the Project is completed. Second, restoring temporary impacts on wildlife movement corridors would not address wildlife passage through a barrier that would be left permanently on the landscape. Third, compensatory mitigation proposed only states, "mitigation program consisting of off-site habitat acquisition, restoration, or enhancement; purchase of mitigation credits; or payment into a land bank fund." Compensatory mitigation is general in nature and not specific to wildlife connectivity. It is unclear how compensatory mitigation would offset the Project's cumulative impact on wildlife movement. Finally, during Project operation, it is unclear how a worker awareness program and managing non-native invasive plants would mitigate for the Project's permanent impact on wildlife movement. For these reasons, the Project and mitigation measures proposed do not mitigate for the Project's addition of a barrier to wildlife connectivity.

Evidence impact would be significant: Mountain lion is a specially protected mammal in the State (Fish and G. Code, § 4800). In addition, on April 21, 2020, the California Fish and Game Commission accepted a petition to list the Southern California/Central Coast ESU of mountain lion as threatened under CESA (CDFW 2020). As a CESA candidate species, mountain lion is granted full protection of a threatened species under CESA. Take of any endangered, threatened, candidate species that results from the Project is prohibited, except as authorized by State law (Fish & G. Code, §§ 86, 2062, 2067, 2068, 2080, 2085; Cal. Code Regs., tit. 14, § 786.9)

As the Project is currently proposed, the Project has yet to mitigate for its permanent, or temporal impacts on genetic connectivity between subpopulations of mountain lion. No mitigation is provided for the Project's fair share of mitigation for impacts on mountain lion and wildlife connectivity. The Project is contributing to habitat loss and fragmentation adjacent to the Angeles National Forest and within the Linkage. The likelihood of this critical Linkage being conserved is being eroded unless the Project mitigates for its fair share of impacts.

The Project has the potential to substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels; threaten to eliminate a plant or animal community; or substantially reduce the number or restrict the range of an endangered, rare or threatened species (CEQA Guidelines, §§ 15065, 15380). As a result, the Project continues to have a substantial adverse effect, either directly or through habitat modifications, on a species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by CDFW. In addition, the Project has the continues to interfere substantially with the movement of any native resident or migratory fish or

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wildlife species or with established native resident or migratory wildlife corridors or impede the use of native wildlife nursery sites.

Recommended Potentially Feasible Mitigation Measure(s): As CDFW has discussed during early consultation and in previous HSR project comment letters, the single biggest potential biological impact arising from construction of the Project is the impact on regional movements of wildlife and connections between habitats. CDFW recommends the Authority consider our recommendations and comments for the Project to adequately mitigate and address impacts on mountain lion and wildlife connectivity.

Recommendation #4: CESA ITP – Appropriate authorization from CDFW under CESA may include an Incidental Take Permit (ITP) or a Consistency Determination in certain circumstances, among other options [Fish & Game Code, §§ 2080.1, 2081, subds. (b) and (c)]. Early consultation is encouraged, as significant modification to the project and mitigation measures may be required to obtain an ITP. Revisions to the Fish and Game Code, effective January 1998, may require that CDFW issue a separate CEQA document for the issuance of an ITP for the Project unless the Project's CEQA document addresses all the Project's impact on CESA endangered, threatened, and/or candidate species. The Project's CEQA document should also specify a mitigation monitoring and reporting program that will meet the requirements of an ITP. It is important that the take proposed to be authorized by CDFW's ITP be described in detail in the Project's CEQA document. Also, biological mitigation monitoring and reporting proposals should be of sufficient detail and resolution to satisfy the requirements for an ITP. However, it is worth noting that mitigation for the Project's impact on a CESA endangered, threatened, and/or candidate species proposed in the Project's CEQA document may not necessarily satisfy mitigation required to obtain an ITP.

Recommendation #5: Gene Flow – The EIR/EIS does not address the Project-related impacts of potentially worsening gene flow disruption for mountain lion, nor does it address how impacts to the population genetic source would impact mountain lion. CDFW recommends Section 3.7 Biological and Aquatic Resources be revised to discuss the Project's impact (and level of significance) on mountain lion from the standpoint of genetic exchange between the Southern California/Central Coast ESU subpopulations. It should be noted that the Wildlife Corridor Assessment Report is not an adequate analysis of the genetic landscape. Habitat modeling does not capture the movement of the SGSB subpopulation of mountain lions who breed and pass on genes to other subpopulations.

Recommendation #6: Cumulative Impacts – The EIR/EIS concludes that the Project's cumulative impact on biological resources is "not cumulatively considerable" and "similar for all Build Alternatives." CDFW does not agree with these conclusions. CDFW recommends that the Authority discuss the Project's cumulative impacts on mountain lion with genetic exchange effects included as part of the discussion. The EIR/EIS should provide data to support the Authority's conclusion regarding the Project's impact, and level of significance, on mountain lion.

Recommendation #7: Revise Build Alternatives – If SR14 or SR14A is the preferred alternative, CDFW recommends the Authority minimize impacts to mountain lion and wildlife movement by modifying the at-grade segment of HSR adjacent to Bee Canyon to a tunnel or at-grade covered segment. If this alternative is not feasible or the Authority declines to adopt it, the Authority should revise the EIR/EIS to provide a meaningful evaluation and analysis as to why the Authority cannot modify the at-grade segment.

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Mitigation Measure #5: Revise BIO-MM#64 – CDFW recommends BIO-MM#64 be revised to "require" (instead of recommending) wildlife crossings be constructed. BIO-MM#64 should require crossings to be constructed south of the California Aqueduct; east of Una Lake; and under State Route 14 to connect both sides of the San Gabriel-Castaic Linkage (see Attachment D). In addition, CDFW recommends that BIO-MM#64 include a design that establishes specific criteria for monitoring the performance of the crossings (viaducts, undercrossing, overcrossings) for routine and ongoing use by mountain lion and its prey.

It is paramount that the final appropriate and effective design features, dimensions, and locations for elevated rail, viaduct, tunnel, and wildlife crossings through the Project site remain as a minimum criterion. Design features, dimensions, and locations should not be design-build options. Design features, dimensions, and locations should not be reduced, altered, or relocated without approval from the wildlife agencies to ensure connectivity of gene flow for mountain lion. Changes to the Project after the CEQA review process, such as addition of more at-grade segments or a decision not to construct wildlife crossings, could result in additional significant impacts not identified and analyzed in the EIR/EIS and may necessitate preparation of a subsequent CEQA document (CEQA Guidelines, § 15162).

Mitigation Measure #6: Revise BIO-MM#77 and 78 – The Project proposes BIO-MM#77 and 78 to mitigate for impacts to mountain lion and wildlife movement through fencing and escape ramps. It should be noted that these measures lack measurable, quantifiable actions or enforceability to avoid, minimize, or mitigate impacts on wildlife movement during Project operation. CDFW recommends BIO-MM#77 and 78 be revised to require the Project Biologist or contractor to obtain CDFW's review and approval of fencing and wildlife escape plans that ensure avoidance of take of mountain lion. If mountain lion could become entangled in fencing resulting in injury or death, the Authority should obtain appropriate take authorization from CDFW pursuant to Fish and Game Code section 2081 subdivision (b).

Mitigation Measure #7: Revise BIO-MM#96 – In order to sufficiently minimize the Project's impact on mountain lion and avoid take of a CESA-listed species, CDFW recommends the Authority revise BIO-MM#96 as follows:

> "If known or potential mountain lion dens are identified or observed during pre-construction surveys, mountain lion dens will be assumed to have kittens present until the Project Biologist can document that they are not present and/or that the den is not being used. A non-disturbance buffer of at least 1,970 feet will be established around the known or potential den until the Project Biologist can document and confirm that the den is not occupied. If the den is determined to be occupied, ~~the 600-meter non-disturbance buffer will be maintained until the den is confirmed abandoned by the Project Biologist~~. then project activities in the defined buffer area would need to halt for two (2) months and a re-survey conducted to determine if the female has abandoned the den and relocated the kittens. The Project Biologist and Authority shall immediately consult with CDFW upon detection of an active den. Construction may proceed if the Project Biologist determines that the den is not being used by mountain lions."

Mitigation Measure #8: If SR14 or SR14A is the preferred alternative, the Authority should consult with CDFW to identify wildlife crossing opportunities and/or opportunities for land acquisition within the San Gabriel-Castaic Linkage. An effective way to reduce impacts to gene

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flow is with Project design features such as increased wildlife crossing opportunities in the critical area within the San Gabriel-Castaic Linkage, which would allow for the SGSB subpopulation to move between large habitat blocks and genetic exchange. Wildlife crossing opportunities should be reviewed and approved by CDFW and incorporated into final design plans. In addition to or instead of wildlife crossings, the Authority should acquire or fully fund the public acquisition of land within the San Gabriel-Castaic Linkage. The Authority should consult and collaborate with CDFW to conserve areas beneficial to the Southern California/Central Coast ESU and SGSB subpopulation that may improve and maintain connectivity.

Mitigation Measure #9: The Authority should protect mitigation lands in perpetuity under a conservation easement dedicated to a local land conservancy or other appropriate entity that has been approved to hold and manage mitigation lands[6]. The Authority should provide an appropriate endowment for the long-term management of mitigation lands. A conservation easement and endowment funds should be fully acquired, established, transferred, or otherwise executed by the Authority prior to any Project-related ground-disturbing activities.

Mitigation Measure #10: CDFW recommends the Authority prepare and implement a Mountain Lion Crossing Monitoring Plan. CDFW recommends the Authority consult with CDFW during the drafting of the Monitoring Plan and obtain approval of the Monitoring Plan prior to Project implementation. The Monitoring Plan should be contingent with action-based monitoring performance objectives and be adaptive. Goals of the Monitoring Plan should at a minimum: 1) provide data to assist in designing crossings and inform placement for future HSR segments in southern California; 2) conduct long-term population monitoring for use by the mountain lion subpopulations; 3) track progress of use; and 4) evaluate overall effectiveness of the crossings.

Mitigation Measure #11: In the event that mountain lion or dens are detected during surveys per BIO-MM#96, the Authority should prepare Mountain Lion Avoidance Plan. The avoidance plan, at a minimum, should fully avoid nursery sites, dens, and kill sites. The Authority should submit a Mountain Lion Avoidance Plan to CDFW for review. The Authority should resolve CDFW's comments prior to finalizing and implementing a Mountain Lion Avoidance Plan. A Mountain Lion Avoidance plan should be developed before ground-disturbing activities may proceed.

Mitigation Measure #12: If avoidance is not feasible, the Authority should obtain appropriate take authorization from CDFW pursuant to Fish and Game Code section 2081 subdivision (b) prior to any ground-disturbing activities.

Mitigation Measure #13: During construction, the Authority should maintain a ¼ mile buffer from movement corridors such as drainages and riparian areas to minimize impacts to mountain lion. No night work should occur in drainages and riparian areas and areas within the ¼ mile buffer. Within the Santa Clara River, the Authority should maintain a 50-foot buffer as prescribed under Mitigation Measure #3.

[6] Pursuant to Assembly Bill 1094 (2012). Assembly Bill 1094 amended Government Code sections 65965-65968. Under Government Code section 65967(c), the lead agency must exercise due diligence in reviewing the qualifications of a governmental entity, special district, or nonprofit organization to effectively manage and steward land, water, or natural resources on mitigation lands it approves.

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Comment #3: Impacts on Aquatic Resources

Issue: The Project has an impact on aquatic resources, including streams, creeks, rivers, and seeps.

Specific impacts: The Project would have above- and below-ground impacts on streams. The Project could change drainage or hydrology by filling, channelizing, diverting, redirecting, or dewatering streams. The Project could impact groundwater during tunneling activities, which could reduce or cease flow of streams, creeks, and seeps.

Why impacts would occur: Page 3.7-168 in Section 3.7 Biological and Aquatic Resources states that the Project would have unavoidable impacts on aquatic resources both during surface construction and tunnel construction. Surface construction impacts on aquatic resources would occur from "loss of aquatic resources, and associated functions and values. Construction equipment would be used to modify the landscape and place permanent fill materials (such as culverts, dirt, and/or engineering structures) in aquatic resources. Direct permanent effects on aquatic resources would occur during construction of bridges and elevated structures (e.g., viaducts) over natural waters such as rivers, washes, and wetlands, as well as over artificial ditches and basins." Tunnel construction impacts would occur from "changes in groundwater levels during tunnel construction [that] could result in indirect impacts on surface waters and associated aquatic resources, with durations of effects lasting days to months, or up to several years after tunnel completion. These impacts could affect state and federally protected aquatic resources."

BIO-MM#33 and 47 are provided to mitigate for impacts on streams. Both mitigation measures would require restoration of aquatic resources. Aquatic resources under both mitigation measures are limited to Water of the United States and waters under the Porter-Cologne Act. It is unclear if the Authority would restore aquatic resources subject to Fish and Game Code section 1600 *et seq*. Moreover, there is currently no mitigation measure that acknowledges the need for a Lake and Streambed Alteration (LSA) Agreement pursuant to Fish and Game Code section 1602.

BIO-MM#94 would require the Authority to prepare an Adaptive Management Plan for Groundwater Effects on Species and Habitat. BIO-MM#94 would implement the requirements specified under Hydrology and Water Resources (HWR)-MM#4. HWR-MM#4 would require the Authority to develop a Water Resources Adaptive Management and Monitoring Plan (AMMP) to detect adverse changes in surface and subsurface conditions within the Angeles National Forest that could occur during and after construction of the tunnels, including the construction of associated adits. Both mitigation measures could still result in impacts on aquatic resources. For example, the AMMP (see Appendix 3.8-C) sets a 20 percent reduction in overall percent cover and 20 percent reduction in or loss of herbaceous species as a trigger for warranting an adaptive response. Per the current AMMP, there could be up to 20 precent loss of vegetation (compared to baseline) before the Authority takes any adaptive response. By that time, impacts to vegetation and habitat have already occurred (e.g., reduced canopy cover, stress, mortality). Also, given that adaptive response may take time to implement, this would result in additional temporal impacts on aquatic resources.

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In addition, the AMMP would require supplemental water brought to the Project site during tunneling to sustain water sources (e.g., streams, seeps, creeks) if there is a temporary loss of flow or drop in water level. The Supplemental Water Demand Analysis (Appendix 3.8-D) states that potential sources of supplemental water include the Antelope Valley-East Kern Water Agency, Castaic Lake Water Agency, Santa Clarita Water Diversion, and Los Angeles County Waterworks District 37. It should be noted that these are "potential" water sources. The is no documentation to demonstrate that supplemental water would be guaranteed. The State has been and is still in a multi-year drought. In our current state of drought and water restrictions, those entities that the Authority listed may not be able to supply water to the Project as it would take away from the communities serviced by those agencies and water districts. The Authority might not have supplemental water. Therefore, tunneling impacts on streams, seeps, and creeks could go unmitigated per BIO-MM#94 and HWR-MM#4.

Evidence impacts would be significant: The Project may impact streams and associated natural communities. CDFW exercises its regulatory authority as provided by Fish and Game Code section 1600 *et seq*. to conserve fish and wildlife resources which includes rivers, streams, or lakes and associated natural communities. Fish and Game Code section 1602 requires any person, state or local governmental agency, or public utility to notify CDFW prior to beginning any activity that may do one or more of the following:

- Divert or obstruct the natural flow of any river, stream, or lake[7];
- Change the bed, channel, or bank of any river, stream, or lake;
- Use material from any river, stream, or lake; or
- Deposit or dispose of material into any river, stream, or lake.

CDFW requires a LSA Agreement when a project activity may substantially adversely affect fish and wildlife resources.

The Project's impact on aquatic resources has yet to be mitigated below a significant level. Accordingly, the Project continues to have a substantial adverse effect on State or federally protected wetlands (including seasonal wetlands, canals, ditches, lacustrine systems, retention and detention basins, and seasonal riverine areas) through direct removal, filling, hydrological interruption, indirect or cumulative effects, or other means.

Recommended Potentially Feasible Mitigation Measure(s):

Recommendation #8: LSA Agreement and CEQA – CDFW's issuance of an LSA Agreement for a project that is subject to CEQA will require CEQA compliance actions by CDFW as a Responsible Agency. As a Responsible Agency, CDFW may consider the CEQA document from the lead agency/project applicant for the project. To minimize additional requirements by CDFW pursuant to Fish and Game Code section 1600 *et seq*. and/or under CEQA, The Project's CEQA document should fully identify the potential impacts to the stream or riparian resources and provide adequate avoidance, mitigation, monitoring, and reporting commitments for issuance of an LSA Agreement. To compensate for any on- and off-site impacts to aquatic and riparian resources, additional mitigation conditioned in any LSA Agreement may include the

[7] "Any river, stream, or lake" includes those that are dry for periods of time (ephemeral/episodic) as well as those that flow year-round (perennial). This includes ephemeral streams, desert washes, and watercourses with a subsurface flow. It may also apply to work undertaken within the flood plain of a water body.

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following: erosion and pollution control measures; avoidance of resources; protective measures for downstream resources; on- and/or off-site habitat creation; enhancement or restoration; and/or protection and management of mitigation lands in perpetuity.

Recommendation #9: Field Evaluations – CDFW continues to believe the magnitude and scope of impacts to streams may be underestimated due to the lack of access to the Project corridor to conduct field surveys. This lack of current, site-specific information necessary to accurately quantify the extent of impacts to streams may affect the accuracy of a LSA Notification pursuant to the LSA Agreement process. We recommend field evaluations be conducted to confirm impacts to streams for the Project once Right-of-Way is secured by the Authority (also see Additional Recommendation #32).

Recommendation #10: Impacts on Streams from Nighttime Construction Lighting – CDFW recommends the EIR/EIS discuss the Project's impacts on streams from the standpoint of any nighttime lighting that may be needed during construction. The EIR/EIS should provide measures to mitigate for any significant effects on streams from construction lighting.

Recommendation #11: Appendix 3.8-C Water Resources Adaptive Management and Monitoring Plan for Potential Hydrologic Effects within the Angeles National Forest – CDFW recommends the Authority make the following revisions:

1) In Table 1 Metrics for Potential Effects Indicators, under U.S. Forest Service Standard 45, a reduction in water level is not the only change that could lead to effects on aquatic resources. Therefore, the Authority should also monitor water pressure, flow, velocity, water quality, and wetted perimeter.

2) In the same Table, under U.S. Forest Service Standards 47 and 11, the Authority should reduce the trigger level from a current proposal of 20 percent. In addition, CDFW recommends the Authority provide location and species-specific trigger levels. Trigger levels should be set lower where there are Sensitive Natural Communities or special-status species present in order to rapidly detect and respond to tunneling impacts on those resources. Lastly, CDFW recommends the Authority set a trigger not only for canopy cover reduction but also species richness, density, and abundance. Please note that CDFW may recommend a lower trigger level when the Authority convenes a working group with resources agencies and stakeholders to prepare the Water Resources Adaptive Management and Monitoring Plan (see Mitigation Measure #15).

Recommendation #12: Trigger Level – CDFW recommends the EIR/EIS discuss the new trigger level pertaining to U.S. Forest Service Standards 47 and 11 and discuss why trigger levels proposed would adequately detect and respond to impacts on aquatic resources in an efficient and effective manner.

Recommendation #13: Appendix 3.8-D Supplemental Water Demand Analysis for Potential Impacts Within the Angeles National Forest/San Gabriel Mountains National Monument – CDFW recommends the Authority provide documentation that there would be supplemental water available for the Project. Documentation should be provided in the EIR/EIS and the EIR/EIS should be recirculated so the public and agencies can review the feasibility of BIO-MM#94 and HWR-MM#4.

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Mitigation Measure #14: Include Fish and Game Code 1602 – CDFW recommends that the Authority revise BIO-MM#33, 34, and 47 to include aquatic resources subject to Fish and Game Code section 1602.

Mitigation Measure #15: Revise HWR-MM#4 – CDFW recommends that the Authority revise HWR-MM#4 to state that resource agencies and stakeholders should be consulted in preparation of a Water Resources Adaptive Management and Monitoring Plan. The Authority should convene a working group to prepare a Water Resources Adaptive Management and Monitoring Plan. The Authority should resolve all resource agency and stakeholder comments and concerns prior to finalizing the document.

Mitigation Measure #16: The Authority should notify CDFW pursuant to Fish and Game Code section 1602 for construction and activities occurring near or impacting streams and associated natural communities. The Authority should notify CDFW prior to any ground-disturbing activities and vegetation removal, including staging, near streams. The notification to CDFW should provide the following information:

1) A stream delineation in accordance with the U.S. Fish and Wildlife Service wetland definition adopted by CDFW[8] (Cowardin et al. 1979);

2) Linear feet and/or acreage of streams and associated natural communities that would be permanently and/or temporarily impacted by the Project. This includes impacts as a result of routine maintenance and fuel modification. Plant community names should be provided based on vegetation association and/or alliance per the Manual of California Vegetation;

3) A discussion as to whether impacts on streams within the Project site would impact those streams immediately outside of the Project site where there is hydrologic connectivity. Potential impacts such as changes to drainage pattern, runoff, and sedimentation should be discussed; and,

4) A hydrological evaluation of the 100-year storm event to provide information on how water and sediment is conveyed through the Project site. Additionally, the hydrological evaluation should assess a sufficient range of storm events (e.g., 100, 50, 25, 10, 5, and 2-year frequency storm events) to evaluate water and sediment transport under pre-Project and post-Project conditions.

Mitigation Measure #17: If the Project would impact streams and associated natural communities, the Authority should obtain an LSA Agreement prior to any ground-disturbing activities and vegetation removal, including staging, near streams.

[8] Be advised that some wetland and riparian habitats subject to CDFW's authority may extend beyond the jurisdictional limits of the U.S. Army Corps of Engineers' Section 404 permit and Regional Water Quality Control Board Section 401 Certification.

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Comment #4: Impacts on Western Joshua Tree

Issue: The Project has an impact on western Joshua tree, a candidate species for listing under CESA.

Specific impacts: The Project could remove western Joshua trees and potentially impact western Joshua tree seedbank.

Why impact would occur: Page 2-9 in the P-B Palmdale Boulevard Supplement to Hydrology and Water Resources Technical Report shows proposed parking areas. Based on review of Google Earth imagery, there is at least one western Joshua tree in Assessor's Parcel Number 3006-006-029. In addition, page 2-27 in the P-B SR14A, E1A, and E2A Build Alternative Supplement to BARTR states, "Joshua tree woodland is mapped in the Palmdale and Lancaster sections of the habitat study area […] there are no CNDDB occurrences within 10 miles of the Palmdale to Burbank Project Section. No focused Joshua tree mapping surveys have been conducted for the project section […] Joshua trees are known to be present within Joshua tree woodland communities and have a high potential to occur within desert grassland and scrub habitats within the Palmdale and Central Subsections of the habitat study area."[9] The EIR/EIS does not provide a discussion of the Project's impact on western Joshua tree even though the Project could impact the species (also see page 3-9 in the P-B Draft Biological Assessment). Accordingly, the EIR/EIS currently does not provide complete disclosure of the Project's potential impact on western Joshua tree.

The Project may remove western Joshua trees. Impacts could occur from ground disturbance (e.g., excavation, vegetation removal, grading, and earth-moving activities); encroachment, compaction, trampling, or disturbance of the root zone and seedbank by heavy equipment, vehicles, or foot traffic; and increased dust, water, and wind erosion during construction. In addition, any permanent changes to on-site hydrology, such as landscaping and irrigation, increased impervious surfaces, and surface runoff, could potentially result in permanent impacts on western Joshua tree, seedbank, and habitat if the surface runoff from within the Project site flows into off-site areas where western Joshua trees occur. Finally, new perimeter walls or fencing, sidewalks, roads, or other structures could require western Joshua trees to be removed or cut; encroach onto western Joshua trees, root zones, and seedbank; as well as completely or partially shade western Joshua trees. Shade could affect photosynthesis and recruitment of western Joshua tree seedlings.

Evidence impact would be significant: Western Joshua tree is a species designated as candidate for listing as threatened pursuant to CESA (Fish & G. Code, § 2050 *et seq.*). Take of western Joshua tree is defined as any activity that results in the removal of a western Joshua tree, or any part thereof, or impacts the seedbank surrounding one or more western Joshua trees (CDFW 2022a). Western Joshua tree is granted full protection of a threatened species under CESA. Take of any endangered, threatened, candidate species that results from the Project is prohibited, except as authorized by State law (Fish & G. Code, §§ 86, 2062, 2067, 2068, 2080, 2085; Cal. Code Regs., tit. 14, § 786.9). The Project's impact on western Joshua tree has yet to be mitigated. Accordingly, the Project continues to have a substantial adverse

[9] Please note that data submission to the California Natural Diversity Database (CNDDB) is voluntary. The lack of occurrence for western Joshua tree does not mean the species does not occur in a given area.

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effect, either directly or through habitat modifications, on a species identified as a candidate, sensitive, or special-status species by CDFW.

Recommended Potentially Feasible Mitigation Measure(s):

Recommendation #14: Discuss Project Impacts on Western Joshua Tree – Prior to finalizing the EIR/EIS, CDFW recommends the Authority conduct a focused western Joshua tree mapping survey. The Authority should update Section 3.7 Biological and Aquatic Resources to include a discussion of the Project's impact on western Joshua tree (see Recommendation #4 regarding CEQA for issuance of an ITP).

Mitigation Measure #18: The Authority should fully avoid impacts on western Joshua trees The Authority should implement a minimum 300-foot buffer. Temporary protective fencing and signage should be installed to demarcate the 300-foot buffer. No work or access should occur within the buffer. The temporary fencing should be removed only after all Project construction is complete.

Mitigation Measure #19: If the Authority is unable to avoid impacts on western Joshua tree, the Authority should obtain take authorization from CDFW [pursuant to Fish & Game Code, § 2081(b)]. The Authority should submit a CESA ITP Application to CDFW that provides the following information (at a minimum):

1) An analysis of individual western Joshua trees (clonal and non-clonal) and western Joshua tree seedbank that would be impacted both within the Project site and within 300 feet of the Project site;

2) An analysis of the acres of natural communities supporting western Joshua trees that would be impacted both within the Project site and within 300 feet of the Project site provided according to alliance and/or association-based natural community names. The Manual of California Vegetation should be used to inform this mapping and assessment as well as CDFW's Protocols for Surveying and Evaluating Impacts to Special-status Native Plant Populations and Sensitive Natural Communities (CDFW 2018).

3) A map of the Project's site plan overlaid on location of western Joshua trees and natural communities; and

4) A hydrologic analysis of how water would be transported across the Project site and adjacent areas after Project build-out.

Mitigation Measure #20: The Authority should provide compensatory mitigation for the Project's impact on western Joshua trees at no less than 2:1 or as required in a CESA ITP for western Joshua trees issued by CDFW. Mitigation lands should be protected in perpetuity under a conservation easement dedicated to a local land conservancy or other appropriate entity that has been approved to hold and manage mitigation lands. An appropriate non-wasting endowment should be provided for the long-term management of mitigation lands. A conservation easement and endowment funds should be fully acquired, established, transferred, or otherwise executed by the Authority prior to any Project-related ground-disturbing activities.

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4512-10547

Comment #5: Crotch Bumble Bee

Issue: The Project may impact Crotch bumble bee (*Bombus crotchii*).

Specific Impacts: The Project may result in temporal or permanent loss of suitable nesting and foraging habitat. Project ground-disturbing activities may cause death or injury of adults, eggs, and larva; burrow collapse; nest abandonment; and reduced nest success.

Why impact would occur: According to page 3.7-146 in Section 3.7 Biological and Aquatic Resources, "Crotch bumble bee would be directly affected by damage to suitable habitat, including grassland and scrub habitats. Direct effects also include the permanent conversion of occupied habitat to project infrastructure or changes to micro/local hydrology. Indirect effects on Crotch bumble bee during construction would include the accumulation of fugitive dust resulting in degradation of habitat for these invertebrates. In addition, changes to local runoff would have negative effects on the health and vigor of plants that make up suitable habitat."

The Project proposes BIO-MM#39, 47, 50, and 53 to mitigate for the Project's impact. However, the Project's impact on Crotch's bumble bee has yet to be mitigated below a level of significance. BIO-MM#39 pertains to fairy shrimp, not Crotch bumble bee. BIO-MM#47 would provide mitigation for impacts on aquatic resources and has no nexus to Crotch bumble bee. BIO-MM#50 only discusses how to avoid impacts to Crotch bumble bee during off-site mitigation implementation. Finally, BIO-MM#53 does not provide performance criteria or action(s) to meet those performance criteria to compensate for the loss of Crotch bumble bee habitat (CEQA Guidelines, § 15126.4).

Evidence impact would be significant: The California Fish and Game Commission accepted a petition to list Crotch bumble bee as endangered under CESA, determining the listing "may be warranted" and advancing the species to the candidacy stage of the CESA listing process. Crotch bumble bee is granted full protection of a threatened species under CESA. Take of any endangered, threatened, candidate species that results from the Project is prohibited, except as authorized by State law (Fish & G. Code, §§ 86, 2062, 2067, 2068, 2080, 2085; Cal. Code Regs., tit. 14, § 786.9). In addition, Crotch bumble bee has a State ranking of S1/S2. This means that the Crotch bumble bee is considered critically imperiled or imperiled and is extremely rare (often five or fewer populations). Crotch bumble bee is also listed as an invertebrate of conservation priority under the Terrestrial and Vernal Pool Invertebrates of Conservation Priority (CDFW 2017). The Project's impact on Crotch bumble bee has yet to be mitigated. Accordingly, the Project continues to have a substantial adverse effect, either directly or through habitat modifications, on a species identified as a candidate, sensitive, or special-status species by CDFW.

Recommended Potentially Feasible Mitigation Measure(s):

Mitigation Measure #21: Prior to any ground disturbance, the Authority should conduct site-specific surveys for Crotch bumble bee in accordance with any Crotch bumble bee survey protocol provided by CDFW.

Mitigation Measure #22: Inactive small mammal burrows and thatched/bunch grasses should be avoided whenever feasible. If an inactive burrow may be disturbed by Project activities, it

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should be resurveyed for Crotch bumble bee presence within seven (7) days prior to the scheduled disturbance.

Mitigation Measure #23: If Crotch bumble bee is present, the qualified biologist should identify the location of all nests in or adjacent to the Project site. If nests are identified, 15-meter no disturbance buffer zones should be established around nests to reduce the risk of disturbance or accidental take. If Project activities may result in disturbance or potential take, the qualified biologist, in coordination with CDFW, should expand the buffer zone as necessary to prevent disturbance or take.

Mitigation Measure #24: If "take" or adverse impacts to Crotch bumble bee cannot be avoided either during Project activities or over the life of the Project, Authority should obtain appropriate take authorization from CDFW pursuant to Fish and Game Code section 2081 subdivision (b).

Mitigation Measure #25: Any floral resource associated with Crotch bumble bee that will be removed or damaged by the Project should be replaced at no less than 1:1. Floral resources should be replaced as close to their original location as is feasible. If active Crotch bumble bee nests have been identified and floral resources cannot be replaced within 200 meters of their original location, floral resources should be planted in the most centrally available location relative to identified nests. This location should be no more than 1.5 kilometers from any identified nest. Replaced floral resources may be split into multiple patches to meet distance requirements for multiple nests. These floral resources should be maintained in perpetuity and should be replanted and managed as needed to ensure the habitat is preserved.

4512-10548

Comment #6: Impacts on Monarch Butterfly

Issue: The Project may impact monarch butterfly (*Danaus plexippus*).

Specific Impacts: The Project could impact monarch butterfly by degrading or converting overwintering and/or breeding habitat.

Why impact would occur: According to page 3.7-145 in Section 3.7 Biological and Aquatic Resources, "[…] Monarch butterfly would be directly affected by damage or removal of their host plants. Removal of host plants would reduce the long-term viability of populations of these invertebrates. Direct effects also include the permanent conversion of occupied habitat to project infrastructure or changes to micro/local hydrology. Indirect effects on Monarch butterfly during construction would include the accumulation of fugitive dust on host plants […] Indirect effects would also include inadvertent introduction of nonnative invasive weeds that would out-compete host plants, reducing the availability of suitable habitat."

The Project proposes BIO-MM#53, 94, and 95 to mitigate for the Project's impact. However, the Project's impact on monarch butterfly has yet to be mitigated below a level of significance. BIO-MM#53 does not provide performance criteria or action(s) to meet those performance criteria to compensate for the loss of monarch butterfly overwintering or breeding (CEQA Guidelines, § 15126.4). BIO-MM#94 does not specify a minimum buffer distance or performance measures if monarch butterflies are observed where there are host plants. Inadequate avoidance could result in impacts to monarch butterfly and host plant. BIO-MM#95 would provide compensatory mitigation at a minimum of 1:1 for impacts to breeding and foraging habitat. The proposed mitigation may be insufficient to offset habitat loss and ensure no net loss of habitat for a

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species that has declined by over 99 percent in the past three decades (Marcum and Darst 2021) (see Additional Recommendation #18). Loss and degradation of monarch breeding habitat is thought to be one of the leading factors in the decline of the western monarch population (Fallon et al. 2015; The Center for Biological Diversity et al. 2014).

Page 2-31 in P-B SR14A, E1A, and E2A Build Alternative Supplement to BARTR states, "The CNDDB identifies several overwintering sites within 10 miles of the Palmdale to Burbank Project Section (mainly in the Los Angeles Basin). No focused presence/absence surveys have been conducted for the project section […] the monarch butterfly is considered to have a high potential to occur where host plants are present and have a moderate potential to overwinter within the Palmdale to Burbank Subsections of the habitat study area." While CDFW appreciates that the Project has provided mitigation for host plants in breeding sites, CDFW is concerned that the Project has not provided mitigation for potential impacts to overwintering sites. The most vulnerable element of the monarch annual cycle may be the overwintering stage (Xerces Society 2017). Protection of overwintering habitat is critical to supporting the migratory phenomenon and conserving the species. Overwintering groves have specific microclimatic conditions that support monarch populations (Fisher et al. 2018). Project construction and activities (e.g., demolition, grading, paving, and excavating) occurring near overwintering sites, could alter microclimatic conditions at the overwintering site by increasing levels of human presence, noise, lighting, and dust accumulating on the surface of the leaves of vegetation. Alteration of an overwintering site and surrounding areas could reduce the suitability of an overwintering site for monarchs (Weiss et al. 1991). Accordingly, the Project could potentially significantly impact monarchs by reducing overwintering habitat or altering habitat climatic conditions.

Evidence impact would be significant: The western migratory monarch population that overwinters along the California coast has declined by more than 99 percent from an estimated 4 million butterflies just twenty years ago (CDFW 2021; Marcum and Darst 2021). Habitat loss and fragmentation, including grove senescence, are among the primary threats to the population (Thogmartin et al. 2017). Given the precipitous decline of monarch butterfly, monarch butterfly is currently slated to be listed in 2024 under the Endangered Species Act (CDFW 2021). Monarch butterfly is included on CDFW's Terrestrial and Vernal Pool Invertebrates of Conservation Priority list and identified as a Species of Greatest Conservation Need in California's State Wildlife Action Plan (CDFW 2017; CDFW 2015). Additionally, Fish and Game Code section 1002 prohibits the take or possession of wildlife for scientific research, education, or propagation purposes without a valid Scientific Collection Permit issued by CDFW. This applies to handling monarch butterfly, removing them from the wild, or otherwise taking them for scientific or propagation purposes, including captive rearing. Fish and Game Code section 1021 directs CDFW to take feasible actions to conserve monarch butterfly and the habitats they depend upon for successful migration. Lastly, Fish and Game Code section 1374 directs the Monarch Butterfly and Pollinator Rescue Program, administered by the Wildlife Conservation Board, to recover and sustain populations of monarch butterfly.

Monarch butterfly meets the CEQA definition of rare, threatened, or endangered species (CEQA Guidelines, § 15380). The reduction in the number of monarch butterfly, either directly or indirectly through habitat loss, would constitute a significant impact absent appropriate mitigation. The Project's impact on monarch butterfly has yet to be mitigated below a significant level. Accordingly, the Project continues to have a substantial adverse direct and cumulative effect, either directly or through habitat modifications, on any species identified as a candidate,

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sensitive, or special-status species in local or regional plans, policies, or regulations, or by CDFW and/or USFWS.

Recommended Potentially Feasible Mitigation Measure(s):

Mitigation Measure #26: Revise BIO-MM#94 – The Authority should revise BIO-MM#94 to state that the Authority should contact CDFW and USFWS when Project Biologists observe monarchs in hostplant habitat. In addition, BIO-MM#94 should specify a minimum 50-foot avoidance buffer from milkweed where monarch butterflies are present. The Authority should provide specific performance standards and action(s) to achieve those performance standards to avoid all impacts to monarch butterfly host plant (CEQA Guidelines, § 15126.4).

Mitigation Measure #27: Revise BIO-MM#95 – The Authority should revise BIO-MM#95 to provide no less than 2:1 compensatory mitigation for occupied breeding and foraging habitat. Instead of mitigating through BIO-MM#53, which is not specific to monarch butterfly, the Authority should provide details, performance criteria, and action(s) to achieve those performance criteria for providing compensatory mitigation for monarch habitat under BIO-MM#95.

Mitigation Measure #28: Monarch Overwintering Habitat Assessment – The Authority should retain a qualified biologist to conduct a site-specific overwintering habitat assessment prior to starting ground-disturbing activities. The qualified biologist should assess overwintering habitat following the Xerces Management Guidelines for Monarch Butterfly Overwintering Habitat (Xerces Society 2017) or other protocols with prior approval by USFWS and CDFW. A summary report should be submitted to USFWS and CDFW prior to ground disturbance.

Mitigation Measure #29: Monarch Overwintering Habitat Avoidance – A qualified biologist should identify primary roosting trees and other structural components or flora integral to maintaining microclimate conditions at overwintering habitat. These plants should be marked prior to starting ground-disturbing activities. Overwintering habitat should be avoided for the duration of the Project. A qualified biologist should assess overwintering habitat and remark/delineate overwintering habitat as needed for the duration of the Project following the Xerces Management Guidelines for Monarch Butterfly Overwintering Habitat (Xerces Society 2017).

Mitigation Measure #30: Overwintering Monarch Survey – Prior to starting Project ground-disturbing activities and vegetation removal during the overwintering period of September 15 through March 15[10], a qualified biologist should conduct multiple surveys for overwintering monarchs where overwintering habitat has been identified. Monitoring should be done as frequently as possible during the overwintering season to capture changing distributions through the season and in response to storm events.

Mitigation Measure #31: Monarch Impact Avoidance – If overwintering monarchs are present, the Authority should avoid all Project construction and activities within 100 feet of the overwintering monarchs. The Authority should immediately consult with CDFW and USFWS to determine if additional measures may be required including increasing avoidance buffers.

[10] The overwintering period is the estimated timeframe when monarchs are likely present. The overwintering period could vary by location and should be determined in coordination with a qualified biologist.

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Project construction and activities may only start after all overwintering monarchs have departed the overwintering site as determined by a qualified biologist.

Mitigation Measure #32: Overwintering Habitat Preservation – The Authority should preserve overwintering habitat. If the Authority must remove or disturb overwintering habitat and other structural components or flora integral to maintaining microclimate conditions, the Authority should immediately coordinate with CDFW and USFWS prior to starting any activities that may impact overwintering habitat. The Authority should provide no less than 2:1 compensatory mitigation to offset impacts on overwintering habitat.

Mitigation Measure #33: Overwintering Habitat Management – During Project construction, operation, and maintenance, the Authority should avoid or minimize the cutting or trimming of trees and vegetation within core overwintering habitat except for specific grove management purposes, and/or human health and safety purposes. Any management activities in overwintering habitat should be conducted between March 16 and September 14[11] in coordination with a qualified biologist. CDFW recommends the Authority consider overwintering habitat management recommendation provided by the USFWS in Western Monarch Butterfly Conservation Recommendations (USFWS 2021).

Mitigation Measure #34: Avoid Pesticide Use – During Project construction, operation, and maintenance, the Authority should avoid or minimize the use of pesticides within one mile of overwintering groves, particularly when monarchs may be present. Non-chemical weed control techniques should be used when possible. If pesticides are used, applications should be conducted from March 16 through September 14, when possible. Whenever possible, targeted application herbicide methods should be used, large-scale broadcast applications should be avoided, and precautions should be taken to limit off-site movement of herbicides (e.g., drift from wind and discharge from surface water flows). Neonicotinoids or other systemic insecticides, including coated seeds, should not be used any time of the year in monarch habitat due to their ecosystem persistence, systemic nature, and toxicity. Soil fumigants should not be used.

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Comment #7: Impacts on Special-Status Species of Amphibians

Issue: The Project may continue to have a significant impact on special-status amphibian species including California red-legged frog (*Rana draytonii*, ESA-listed), arroyo toad (*Anaxyrus californicus*. ESA-listed), southern mountain yellow-legged frog (*Rana muscosa*, ESA- and CESA-listed), and coast range newt (*Taricha tarosa*) and western spadefoot toad (*Spea hammondii*), both California Species of Special Concern (SSC) (collectively, amphibian species).

Specific Impacts: The Project may result in temporal or permanent loss of breeding and upland habitat for special-status amphibian species. Project construction could result in injury or mortality of amphibians. Frogs, toads, and newts could be trampled or crushed by equipment, vehicles, and foot traffic.

Why impact would occur: The Project would impact special-status amphibian species. Page 3.7-116 states, "Direct effects on special-status amphibian species would result from

[11] Outside of estimated timeframe when monarchs are likely present.

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construction activities in suitable upland or aquatic habitat that could kill, injure, or harass adults, eggs or egg masses, and larvae. Entrapment in open, excavated areas could also kill, injure, or harass special-status amphibians. Construction would also temporarily destroy, degrade, fill, or pollute aquatic breeding or upland nesting habitats and cause temporary loss of burrows or other upland refugia. Direct effects also include the permanent conversion or fragmentation of occupied aquatic and upland habitat resulting from installation of project infrastructure."

The Project proposes mitigation for impacts to special-status amphibian species including BIO-MM#7, 8, 32, 33, 46, 47, and 53. However, the Project's impact has yet to be mitigated below a level of significance. BIO-MM#7 would require pre-construction surveys prior to any ground disturbance. There is no description of how frequently surveys would be performed or what methods would be used to increase likelihood of detection. Amphibians are generally cryptic species that seek refuge under structures or burrows. Surveys for amphibians generally need to be time-of-day and time-of-year specific to increase probability of detection. Multiple surveys would need to be conducted to detect frogs, toads, and newts if any are present. Surveys conducted during the dry season, or a dry year could miss detections because amphibians are largely estivating below-ground. Ground-disturbing activities proceeding after a false-negative conclusion could result in injury or mortality of amphibians. BIO-MM#8 would require amphibians to be relocated; however, BIO-MM#8 does not specify where amphibians would be relocated safely out of harm's way. Also, relocation of CESA-listed candidate, threatened, or endangered species is considered take in the form of capture or the attempt to capture the species as defined under Fish and Game Code section 86. The EIR/EIS does not specify whether take authorization would be obtained to relocate species. The remaining five mitigation measures would require restoration of riparian or aquatic resources because riparian and aquatic resources "often serve as breeding and nesting habitat for special-status amphibian species." All five mitigation measures are general and not specific to replacing habitat appropriate for each impacted special-status amphibian species. Amphibian species require both breeding and upland habitat for estivation and foraging. Currently, none of the mitigation measures disclose whether the Authority would create both breeding and upland habitat that would support self-sustaining populations of impacted amphibian species.

The mitigation measures proposed currently may not satisfy the CEQA standards for deferred mitigation (CEQA Guidelines, § 15126.4). The mitigation measures proposed by the Project for special-status amphibian species have yet to adopt specific performance standards the mitigation will achieve nor identifies type of potential action(s) that can achieve those performance standards.

Evidence impact would be significant: Take of any endangered, threatened, candidate species that results from the Project is prohibited, except as authorized by State law (Fish & G. Code, §§ 86, 2062, 2067, 2068, 2080, 2085; Cal. Code Regs., tit. 14, § 786.9). Impacts on ESA-listed species and SSC requires a mandatory finding of significance under CEQA (CEQA Guidelines, § 15065). ESA-listed species are considered rare, threatened, and endangered species under CEQA Guidelines section 15380. CDFW considers impacts to ESA-listed species a significant direct and cumulative adverse effect without implementing appropriate avoidance and/or mitigation measures. Take under ESA is more broadly defined than take under CESA. Take under ESA also includes significant habitat modification or degradation that could result in death or injury to a listed species by interfering with essential behavioral patterns such as breeding, foraging, or nesting.

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An SSC is a species, subspecies, or distinct population of an animal native to California that currently satisfies one or more of the following (not necessarily mutually exclusive) criteria:

- is extirpated from the State or, in the case of birds, is extirpated in its primary season or breeding role;
- is listed as ESA-, but not CESA-, threatened, or endangered; meets the State definition of threatened or endangered but has not formally been listed;
- is experiencing, or formerly experienced, serious (noncyclical) population declines or range retractions (not reversed) that, if continued or resumed, could qualify it for State threatened or endangered status; and/or
- has naturally small populations exhibiting high susceptibility to risk from any factor(s), that if realized, could lead to declines that would qualify it for CESA threatened or endangered status (CDFW 2022b).

CEQA provides protection not only for ESA and CESA-listed species, but for any species including but not limited to SSC which can be shown to meet the criteria for State listing. These SSC meet the CEQA definition of rare, threatened, or endangered species (CEQA Guidelines, § 15380).

The Project's impact on special-status amphibians has yet to be mitigated below a significant level. Accordingly, the Project continues to have a substantial adverse effect, either directly or through habitat modifications, on a species identified as a candidate, sensitive, or special-status species by CDFW and USFWS.

Recommended Potentially Feasible Mitigation Measure(s):

Mitigation Measure #35: Revise BIO-MM#7 – CDFW recommends the Authority revise BIO-MM#7 to specify survey methods and protocols (if available) that would be implemented to adequately detect special-status amphibian species during pre-construction surveys. CDFW recommends the Authority review CDFW Survey and Monitoring Protocols and Guidelines (CDFW 2022c) and USFWS Survey Protocols and Guidelines (USFWS 2022) webpages for survey protocols. Survey protocols should be incorporated into BIO-MM#7.

Mitigation Measure #36: Provide Compensatory Mitigation – CDFW recommends the Authority revise mitigation measures or provide a specific mitigation measure addressing compensatory mitigation for amphibian habitat. Mitigation should be specific, provide performance standards, and action(s) to achieve those performance standards. For each amphibian species, the Authority should provide criteria for selecting mitigation lands appropriate for amphibians, including both pond and upland habitat; mitigation land performance criteria; a plan to monitor success of mitigation, including relocation of individuals from impact area to mitigation land; and contingency measures if mitigation does not meet performance criteria.

Mitigation Measure #37: During initial ground-disturbing activities, a qualified biologist should conduct construction activity monitoring daily for arroyo toad (August 1 to March 31), western

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spadefoot (October 1 to May 31), California red-legged frog (November 1 to March 31), and southern mountain yellow-legged frog (March 1 to May 31).

Mitigation Measure #38: A qualified biologist should prepare an Amphibian Relocation and Avoidance Plan. The Amphibian Relocation and Avoidance Plan should describe proper avoidance, handling, and relocation protocols for each species that could occur on the Project-site. The Amphibian Relocation and Avoidance Plan should include species-specific avoidance buffers and suitable relocation areas at least 200 feet outside of the Project site. The qualified biologist should submit a copy of an Amphibian Relocation and Avoidance Plan to CDFW for approval prior to any clearing, grading, or excavation work on the Project site.

Mitigation Measure #39: If the Authority must relocate CESA- or ESA-listed species, the Authority should obtain appropriate take authorization from CDFW and/or USFWS.

Mitigation Measure #40: If the Authority must relocate Species of Special Concern, only a qualified biologist with appropriate handling permits should capture, temporarily possess, and relocate wildlife to avoid harm or mortality in connection with Project construction and activities. CDFW has the authority to issue permits for the take or possession of wildlife, including mammals; birds, nests, and eggs; reptiles, amphibians, fish, plants; and invertebrates (Fish & G. Code, §§ 1002, 1002.5, 1003). Effective October 1, 2018, a Scientific Collecting Permit is required to monitor project impacts on wildlife resources, as required by environmental documents, permits, or other legal authorizations; and, to capture, temporarily possess, and relocate wildlife to avoid harm or mortality in connection with otherwise lawful activities (Cal. Code Regs., tit. 14, § 650). Please visit CDFW's Scientific Collection Permits webpage for information (CDFW 2022d). Pursuant to the California Code of Regulations, title 14, section 650, the qualified biologist should obtain or have appropriate handling permits to capture, temporarily possess, and relocate wildlife to avoid harm or mortality in connection with Project construction and activities.

Mitigation Measure #41: To compensate for permanent loss of habitat, the Authority should provide no less than 2:1 to offset impacts, or as required in a take permit authorized by USFWS for ESA-listed species or CDFW for CESA-listed species.

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Comment #8: Impacts on Western Pond Turtle

Issue: The Project may continue to have a significant impact on western pond turtle (*Emys marmorata pallida*), an SSC.

Specific Impacts: Project construction and activities occurring during the breeding season could impact western pond turtle directly or by degrading nesting habitat quality in streams or pond margins as a result of altering hydrologic conditions. Impacts to western pond turtle could result in western pond turtle avoiding an established breeding territory, disrupting, and interrupting breeding behavior, suppressing reproductive activities, or causing injury or mortality to females, eggs, or hatchlings. These impacts could result in population decline of a SSC.

Why impact would occur: The Project would impact western pond turtle. Page 6-34 in the P-B BARTR states, "Additionally, turtles were observed at Una Lake during protocol California red-legged frog surveys. Though none of the turtles were identified in-hand, photographs of the turtles were taken and were positively identified as western pond turtles by biologists; therefore,

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HSR assumes presence of western pond turtle at Una Lake. Suitable natural and constructed watercourse habitats and suitable upland habitats are present within the habitat study area. Therefore, the western pond turtle is known to occur in Arrastre Creek, is assumed to occur in Una Lake, and is considered to have a high potential to occur in suitable habitat types within the Central Subsection of the habitat study area."

The Project occurring at Una Lake and Arrastre Creek could impact western pond turtle directly or through habitat modification. According to page 3.7-158 in Section 3.7 Biological and Aquatic Resources, construction could kill, injure, or harass breeding females, eggs, or hatchlings. Construction could also permanently or temporarily destroy, degrade, fill, or pollute aquatic breeding or upland nesting habitats and cause permanent or temporary loss of other aquatic or upland refugia. These impacts could result in reduced breeding success and loss of breeding habitat.

To mitigate for the Project's impact special-status reptiles, which includes western pond turtle, the Project has proposed mitigation measure BIO-MM#7, 47, 53, and 93. However, the Project's impact has yet to be mitigated below a level of significance. BIO-MM#7 would require pre-construction surveys for special-status reptile species. As it is currently written, BIO-MM#7 does not provide specific survey methods for western pond turtle to demonstrate that pre-construction surveys would be effective to detect western pond turtle. If pre-construction surveys are ineffective to detect western pond turtle if they are present, then the Project proceeding after false-negative results could impact western pond turtle. BIO-MM#47, 53, and 93 do not address mitigation specific for western pond turtle. These mitigation measures do not provide performance criteria or action(s) to meet those performance criteria to compensate for impacts to western pond turtle habitat (CEQA Guidelines, § 15126.4). Lastly, the EIR/EIS has yet to mitigate for the Project's potential impacts on western pond turtle during the breeding season.

Evidence impact would be significant: An SSC is a species, subspecies, or distinct population of an animal native to California that currently satisfies one or more of the following (not necessarily mutually exclusive) criteria:

- is extirpated from the State or, in the case of birds, is extirpated in its primary season or breeding role;
- is listed as ESA-, but not CESA-, threatened, or endangered; meets the State definition of threatened or endangered but has not formally been listed;
- is experiencing, or formerly experienced, serious (noncyclical) population declines or range retractions (not reversed) that, if continued or resumed, could qualify it for State threatened or endangered status; and/or
- has naturally small populations exhibiting high susceptibility to risk from any factor(s), that if realized, could lead to declines that would qualify it for CESA threatened or endangered status (CDFW 2022b).

Impacts on SSC could require a mandatory finding of significance under CEQA (CEQA Guidelines, § 15065). Impacts on western pond turtle, either directly or indirectly through habitat modifications, would be a significant impact. The Project's impact on western pond turtle as yet to be mitigated below a significant level. Accordingly, the Project continues to have a substantial

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adverse effect, either directly or through habitat modifications, on a species identified as a candidate, sensitive, or special-status species by CDFW.

Recommended Potentially Feasible Mitigation Measure(s):

Mitigation Measure #42: Revise BIO-MM#7 – Surveys for western pond turtle should following established protocols including Draft USFWS Western Pond Turtle Visual Survey Protocol for the Southcoast Ecoregion (USFW 2006). Survey protocols should be incorporated into MM-BIO#7.

Mitigation Measure #43: Provide Compensatory Mitigation – CDFW recommends the Authority revise mitigation measures or provide a specific mitigation measure addressing compensatory mitigation for western pond turtle. Mitigation should be specific, provide performance standards, and action(s) to achieve those performance standards. The Authority should provide criteria for selecting mitigation lands appropriate for western pond turtle, including both aquatic and upland habitats; mitigation land performance criteria; a plan to monitor success of mitigation; and contingency measures if mitigation does not meet performance criteria.

Mitigation Measure #44: During the western pond turtle breeding season, a no-disturbance buffer of 475 feet should be implemented to protect nesting areas[12]. This distance should be measured from the outside edge of wetland habitat suitable for the species within the Project site. No work should occur until after the breeding season.

Mitigation Measure #45: Outside of the breeding season, if the Authority must relocate western pond turtles, a qualified biologist should prepare a Western Pond Turtle Relocation Plan. The qualified biologist should submit a copy of a Western Pond Turtle Relocation Plan to CDFW for approval prior to any clearing, grading, or excavation work on the Project site. The Western Pond Turtle Relocation Plan should identify that only a qualified biologist with appropriate handling permits should capture, temporarily possess, and relocate wildlife to avoid harm or mortality in connection with Project construction and activities.

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Comment #9: Impacts on Burrowing Owl

Issue: The Project may continue to have a significant impact on burrowing owl (*Athene cunicularia*) an SSC.

Specific Impacts: Project construction and activities may result in injury or mortality of burrowing owl, disrupt natural burrowing owl breeding behavior, and reduce reproductive capacity. Also, the Project may impact breeding, wintering, and foraging habitat for the species. Habitat loss could result in local extirpation of the species and contribute to local, regional, and State-wide declines of burrowing owl.

Why impact would occur: The Project would impact burrowing owl. Page 3.7-128 states,

[12] CDFW is recommending a 475-foot buffer since female pond turtles can move overland for up to 325 feet to find suitable sites for egg-laying. In addition to avoiding a minimum of 325 feet from the edge of a water feature, CDFW recommends an additional 150 foot beyond the 325-foot overland travel range to protect nests and nesting sites from direct and indirect Project disturbance.

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"Burrowing owls extensively use open landscapes with suitable natural or artificial burrows. Vibration from construction equipment along with increased vehicular traffic could collapse inhabited burrows." To mitigate for the Project's impact on burrowing owl, the Project proposes mitigation measures BIO-MM#21 and 44. However, the Project's impact has yet to be mitigated below a level of significance. BIO-MM#21 would require 600-foot no-work buffers around occupied burrowing owl burrows both during the nesting season and outside breeding season and if buffers are not feasible, burrowing owl would be relocated citing CDFW's Staff Report on Burrowing Owl Mitigation (CDFW 2012). However, 600 feet (182 meters) could be an insufficient buffer from occupied burrows and adjacent foraging grounds given the types of disturbance associated with the Project. Burrowing owls could react to low level disturbances such as surveys, drive by, or minimal ground disturbance/excavation (Environment Canada 2009). A buffer of 656 feet (200 meters) is recommended for low level disturbances (Environment Canada 2009). The Project is proposing a buffer that may be more suitable for low level disturbances; however, the Project could generate noise and ground vibrations more consistent with medium to high level disturbance. Project construction would generate noise and ground vibrations during daytime and nighttime earthmoving activities, demolition, tunneling, spoils hauling, and operation of large machinery. A 600-foot buffer from occupied burrows during these types of disturbances could result in burrowing owls abandoning active nests, potentially causing loss of eggs or developing young, and noise could cause birds to avoid suitable nesting habitat. In addition, 90 percent of burrowing owl activity during the nesting season is within 600 meters (1,968 feet) of a nest. A 600-foot buffer would not protect important foraging habitat during burrowing owl nesting season.

In addition, implementation of buffer "to the extent feasible" does not ensure that buffers will be required, which means that the mitigation proposed is not an enforceable requirement. Furthermore, CDFW's Staff Report on Burrowing Mitigation does not support relocating breeding burrowing owls as mitigation, which is why relocating/translocating is not a measure in the Staff Report on Burrowing Mitigation. Finally, CDFW does not issue permits for the take of nesting birds, nests, or eggs. BIO-MM#44 requires compensatory mitigation for loss of active burrowing owl burrows and habitat. BIO-MM#44 points to BIO-MM#53 for preparing a Compensatory Mitigation Plan. BIO-MM#53 is not specific to burrowing owl and does not provide any performance standards suitable for successfully mitigating impacts on burrowing owl habitat. The mitigation measure proposed in the EIR/EIS may not satisfy the CEQA standards for deferred mitigation (CEQA Guidelines, § 15126.4).

Evidence impact would be significant: An SSC is a species, subspecies, or distinct population of an animal native to California that currently satisfies one or more of the following (not necessarily mutually exclusive) criteria:

- is extirpated from the State or, in the case of birds, is extirpated in its primary season or breeding role;
- is listed as ESA-, but not CESA-, threatened, or endangered; meets the State definition of threatened or endangered but has not formally been listed;
- is experiencing, or formerly experienced, serious (noncyclical) population declines or range retractions (not reversed) that, if continued or resumed, could qualify it for State threatened or endangered status; and/or,

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- has naturally small populations exhibiting high susceptibility to risk from any factor(s), that if realized, could lead to declines that would qualify it for CESA threatened or endangered status (CDFW 2022b).

CEQA provides protection not only for ESA and CESA-listed species, but for any species including but not limited to SSC which can be shown to meet the criteria for State listing. These SSC meet the CEQA definition of rare, threatened, or endangered species (CEQA Guidelines, § 15380). In addition, migratory nongame native bird species are protected by international treaty under the Federal Migratory Bird Treaty Act (MBTA) of 1918 (Code of Federal Regulations, Title 50, § 10.13). Sections 3503, 3503.5, and 3513 of the California Fish and Game Code prohibit take of all birds and their active nests including raptors and other migratory nongame birds (as listed under the Federal MBTA). It is unlawful to take, possess, or needlessly destroy the nest or eggs of any raptor.

The Project's impact on burrowing owl has yet to be mitigated below a significant level. Accordingly, the Project continues to have a substantial adverse effect, either directly or through habitat modifications, on a species identified as a candidate, sensitive, or special-status species by CDFW.

Recommended Potentially Feasible Mitigation Measure(s):

Mitigation Measure #46: Revise BIO-MM#21 – CDFW recommends the Authority increase 600 feet to 1,650 feet no-work buffer to avoid impacts on occupied burrowing owl burrows during the nesting and non-nesting seasons (CDFW 2012). The Authority should remove "to the extent feasible." The Authority should also remove relocation as mitigation under BIO-MM#21 and refer to CDFW's Staff Report on Burrowing Owl Mitigation to propose alternative means to mitigation for impacts on burrowing owl.

Mitigation Measure #47: Revise BIO-MM#53 – CDFW recommends the Authority revise mitigation measure BIO-MM#53 or provide a specific mitigation measure addressing compensatory mitigation for burrowing owl habitat. Mitigation should be specific, provide performance standards, and action(s) to achieve those performance standards. The Authority should provide criteria for selecting mitigation lands appropriate for burrowing owl; mitigation land performance criteria; a plan to monitor success of mitigation; and contingency measures if mitigation does not meet performance criteria.

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Comment #10: Impacts on Bats

Issue: The Project may continue to have a significant impact on the following species of bats (collectively, bats), which includes some SSC (except for Yuma myotis):

- pallid bat (*Antrozous pallidus*)
- Townsend's big-eared bat (*Corynorhinus townsendii*)
- western mastiff bat (*Eumops perotis californicus*)
- western red bat (*Lasiurus blossevillii*)
- western yellow bat (*Lasiurus xanthinus*)
- Yuma myotis (*Myotis yumanensis*)

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Specific Impacts: Project construction and activities may result in direct and indirect impacts to bats. Direct impacts include removal of trees and structures occupied by roosting bats. This could result in injury or mortality to bats as well as loss of roosting habitat. Indirect impacts to bats and roosts could result from increased noise disturbances, human activity, dust, vegetation clearing, ground-disturbing activities (e.g., staging, mobilizing, excavating, and grading), and vibrations caused by heavy equipment.

Why impact would occur: Page 3.7-150 states, "Direct effects on special-status bats would include mortality of individuals during construction and temporary disturbance from noise, dust, and ultrasonic vibrations from construction equipment. Direct effects also include permanent conversion or fragmentation of occupied roosting and foraging habitat to project infrastructure, which would interfere with seasonal movement and dispersal of special-status bats. Ground disturbing activities, such as excavation, vegetation removal, construction of the railbed, placement of temporary structures and staging areas, and equipment operation, would result in noise, dust, or vibration disturbance. These disturbances would indirectly disrupt breeding or roosting activity or result in the temporary loss of foraging habitat."

To mitigate for the Project's impact on bats, the Project proposes mitigation measures BIO-MM#25, 26, and 27. However, the Project's impact has yet to be mitigated below a level of significance. BIO-MM#25 would require pre-construction surveys for bats prior to the removal of structures modeled as bat habitat. It is unclear what "structures modeled as bat habitat" means and therefore where within the Project site would bat surveys be performed. Site-specific, focused surveys are necessary to determine if bats and roosts are present in a variety of natural and human-made environments that modeling may have missed. These environments include caves, rocky crevices, cliffs, abandoned mines, barns, buildings, culverts, and bridges. In addition, BIO-MM#25 states that surveys would be conducted "to the extent possible" during favorable weather conditions. "To the extent possible" suggests that this mitigation measure is not enforceable. Bat presence, when informed by surveys conducted during unfavorable weather conditions, could result in false negatives. Insufficient bat surveys could result in injury or mortality of undetected bats and loss of bat roosts.

BIO-MM#26 and 27 would require avoidance or relocation of active hibernacula or maternity roosts "guided by accepted exclusion and deterrent techniques." The EIR/EIS does not state what those "accepted exclusion and deterrent techniques" would be or from where they were derived. Accordingly, it is unclear how the mitigation measure would avoid or relocate active hibernacula or maternity roosts. BIO-MM#27 states that bats in active maternity roosts would not be evicted "if feasible", and if not feasible, active maternity roosts would be relocated. Relocating or evicting bats in maternity roosts could result in reduced fecundity or injury and mortality of reproductive female bats and pups. Maternity colonies that are affected by temporarily reduced fecundity or mortality may require multiple years to recover following a disturbance event (H.T. Harvey & Associates 2019). Accordingly, the Project and mitigation measures proposed by the Project could result in a population decline of an SSC.

Finally, no compensatory mitigation is proposed in the EIR/EIS. The Project could result in loss of roosting habitat. Relocating or evicting active hibernacula or maternity roosts is not mitigating for loss of habitat that would occur.

Evidence impact would be significant: Bats are considered non-game mammals and are afforded protection by State law from take and/or harassment (Fish & G. Code, § 4150; Cal.

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Code of Regs, § 251.1). Several bat species are considered SSC. An SSC is a species, subspecies, or distinct population of an animal native to California that currently satisfies one or more of the following (not necessarily mutually exclusive) criteria:

- is extirpated from the State or, in the case of birds, is extirpated in its primary season or breeding role;
- is listed as ESA-, but not CESA-, threatened, or endangered; meets the State definition of threatened or endangered but has not formally been listed;
- is experiencing, or formerly experienced, serious (noncyclical) population declines or range retractions (not reversed) that, if continued or resumed, could qualify it for State threatened or endangered status; and/or
- has naturally small populations exhibiting high susceptibility to risk from any factor(s), that if realized, could lead to declines that would qualify it for CESA threatened or endangered status (CDFW 2022b).

Impacts on SSC could require a mandatory finding of significance under CEQA (CEQA Guidelines, § 15065). Impacts on bats, either directly or indirectly through disturbances to roosts and loss of habitat, would be a significant impact. The Project's impact on bats has yet to be mitigated below a significant level. Accordingly, the Project continues to have a substantial adverse effect, either directly or through habitat modifications, on a species identified as a candidate, sensitive, or special-status species by CDFW.

Recommended Potentially Feasible Mitigation Measure(s):

Mitigation Measure #48: Revise BIO-MM#25 – CDFW recommends the Authority revise BIO-MM#25 to state that site-specific field surveys should be conducted to determine presence of daytime, nighttime, wintering (hibernacula), and maternity roost sites. The Authority should conduct bat surveys during favorable weather conditions only (instead of "to the extent possible"). In addition, the Authority should incorporate the following recommendation to BIO-MM#25:

> "Two spring surveys (April through June) and two winter surveys (November through January) shall be performed by qualified biologists. Each survey shall consist 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. Surveys shall be conducted within one 24-hour period. Visual inspections shall focus on the identification of bat sign (i.e., individuals, guano, urine staining, corpses, feeding remains, scratch marks and bats squeaking and chattering). Bat detectors, bat call analysis, and visual observation shall be used during all dusk emergence and pre-dawn re-entry surveys."

Mitigation Measure #49: Revise BIO-MM#26 – CDFW recommends the Authority specify the exclusion and deterrent techniques referenced in BIO-MM#26. In addition, BIO-MM#26 should be revised to state:

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"If active hibernacula or maternity roosts are identified in the work area or 500 feet extending from the work area during pre-construction surveys, ~~they will be avoided to the extent feasible~~, for maternity roosts, Project construction will only between October 1 and February 28, outside of the maternity roosting season when young bats are present but are yet ready to fly out of the roost (March 1 to September 30). Maternity roosts shall not be evicted, excluded, removed, or disturbed.

A minimum 500-foot no-work buffer shall be provided around hibernacula. The buffer shall not be reduced. Project-related construction and activities shall not occur within 500 feet of or directly under or adjacent to hibernacula. Buffers shall be left in place until the end of Project construction and activities or until a qualified bat biologist determines that the hibernacula are no longer active. Project-related construction and activities shall not occur between 30 minutes before sunset and 30 minutes after sunrise. Hibernacula roosts shall not be evicted, excluded, removed, or disturbed.

If avoidance of a hibernacula is not feasible, the Project Biologist will prepare a relocation plan to remove the hibernacula and provide for construction of an alternative bat roost outside of the work area. A bat roost relocation plan shall be submitted for CDFW review prior to construction activities. The Project Biologist will implement the relocation plan and new roost sites shall be in place before the commencement of any ground-disturbing activities that will occur within 500 feet of the hibernacula. New roost sites shall be in place prior to the initiation of Project-related activities to allow enough time for bats to relocate. Removal of roosts will be guided by accepted exclusion and deterrent techniques."

Mitigation Measure #50: The Authority should compensate no less than 2:1 for permanent impacts to roosting habitat.

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Comment #11: Impacts on Special-Status Plants and Sensitive Natural Communities

Issue: The Project may continue to have a significant impact on CESA and/or ESA-listed plants, and Sensitive Natural Communities.

Specific Impacts: The Project could result in the loss of individuals and populations of rare, threatened, and endangered plants and natural communities including, but not limited to Brunton's milkvetch (*Astragalus brauntonii*, ESA-listed), Nevin's barberry (*Berberis nevinii,* ESA- and CESA-listed), and slender-horned spineflower (*Dodecahema leptoceras*, ESA- and CESA-listed); and 41 rare plant species. In addition, the Project could result in loss of acreage of six Sensitive Natural Communities. Sensitive Natural Communities impacted would include California sycamore (*Platanus racemosa*) woodlands, Fremont cottonwood (*Populus fremontii*) forest, coast live oak (*Quercus agrifolia*) woodland, black willow (*Salix nigra*) thickets, and California walnut (*Juglans californica*) woodland.

Why impact would occur: The Project would impact special-status plants and Sensitive Natural Communities during surface construction and tunnel construction. Direct impacts on special-status plant species and habitat and Sensitive Natural Communities would result from the removal of vegetation for the installation of permanent infrastructure. Section 3.7 Biological and Aquatic Resources states, "Impacts would also result from construction vehicles and

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personnel disturbing vegetation through trampling, covering, undercutting, unearthing, crushing, or damaging the roots of individual plants; or clearing, excavating, or grubbing suitable potential habitat for special-status plant species. Soil compaction and placement of fill would directly affect special-status plant species by causing decreased fitness or death by root compaction." Tunnel construction could result in localized changes of groundwater level, potentially having temporary indirect effects on the hydrology of groundwater-dependent surface water features, including springs, seeps, and perennial streams that provide habitat for special-status plants and special-status plant communities.

To mitigate for the Project's impact, the Project proposes mitigation measures BIO-MM#1, 2, and 38. However, the Project's impact has yet to be mitigated below a level of significance. BIO-MM#1 would require pre-construction surveys for Special-Status Plant Species and Special-Status Plant Communities. Those resources would then be flagged and mapped. BIO-MM#1 does not describe how the survey information would be used to avoid or minimize impacts. BIO-MM#2 would require preparation of a plan to salvage and relocate special-status plant seed and material, including topsoil, to "mitigation sites, refuges, reserves, federal or state lands, and public/private mitigation banks." BIO-MM#2 may not satisfy the CEQA standards for deferred mitigation (CEQA Guidelines, § 15126.4). BIO-MM#2 has yet to adopt specific performance standards the mitigation will achieve nor identifies type of potential action(s) that can achieve those performance standards. For example, there is no information on what criteria would be used to select relocation site(s) that would be appropriate for each species impacted, survivorship goals, minimum maintenance requirements, monitoring plants, or contingency measures if relocation fails. BIO-MM#38 would require compensatory mitigation at a 1:1 ratio for ESA and CESA-listed plants. Compensatory mitigation proposed is not sufficient to offset the loss of an endangered or threatened species, or species that is declining regionally. In addition, 1:1 does not address the likelihood of temporal loss that would occur. Many species of rare plants are unlikely to be successfully salvaged, relocated, or planted. This is because relocation is typically experimental in nature and rare plants are habitat specialists that require specific habitat conditions to exist and persist. For example, a species of rare plant may require a particular soil type, set of pollinators, mycorrhizal fungi, associate plant species, microclimate. Until mitigation is successful in establish self-sustaining populations, there would be prolonged temporal impacts on rare plants. The compensatory mitigation proposed does not yet mitigate for this temporal loss.

Finally, the Project has yet to provide compensatory mitigation for impacts on Sensitive Natural Communities. The Project would impact State ranked S1 and S3 natural communities. While oak woodlands by definition (S4 ranking) is not a Sensitive Natural Community, CDFW considers impacts to oak woodlands to be significant. Oak woodlands have higher levels of biodiversity than any other terrestrial ecosystem in California. Over 330 species of birds, mammals, reptiles, and amphibians depend on oak woodlands in California at some stage in their life cycle (CalPIF 2002). Large oak trees in oak woodland habitats are important for cover, nesting sites for cup nesting species and cavity nesting species, as well as caching sites for birds storing acorns (CalPIF 2002). Oak woodlands also serve several important ecological functions important within an ecosystem such as protecting soils from erosion and land sliding, regulating water flow in watersheds, and maintaining water quality in streams and rivers.

Evidence impact would be significant: Take of any endangered, threatened, candidate species that results from the Project is prohibited, except as authorized by State law under CESA (Fish & G. Code, §§ 86, 2062, 2067, 2068, 2080, 2085; Cal. Code Regs., tit. 14, § 786.9).

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In addition, take under ESA is more broadly defined than take under CESA. Take under ESA also includes significant habitat modification or degradation that could result in death or injury to a listed species by interfering with essential behavioral patterns such as breeding, foraging, or nesting.

Plants with a California Rare Plant Rank (CRPR) of 1B and 2B meets the definition of endangered, rare, or threatened species under CEQA (CEQA Guidelines, § 15380; CNPS 2022). Plants with a CRPR of 4 may meet the definition of endangered, rare, or threatened species. Impacts on rare plants could require a mandatory finding of significance. Sensitive Natural Communities are communities that are of limited distribution State-wide or within a county or region and are often vulnerable to environmental effects of projects. CDFW considers plant communities, alliances, and associations with a State ranking of S1, S2, and S3 as sensitive and declining at the local and regional level. An S3 ranking indicates there are 21 to 100 viable occurrences of this community in existence in California, S2 has six to 20 occurrences, and S1 has fewer than six viable occurrences (Sawyer et al. 2009). Impacts to Sensitive Natural Communities should be considered significant under CEQA unless they are clearly mitigated below a level of significance.

CDFW considers coast live oak woodlands to be a sensitive plant community, especially oak riparian forests. Only 5 to 10 percent of California's original riparian habitat exists today and much of the remaining habitat is in a degraded condition. Oak trees and woodlands are protected by the Oak Woodlands Conservation Act (pursuant under Fish and Game Code sections 1360-1372) and Public Resources Code section 21083.4 due to the historic and on-going loss of these resources. Moreover, CDFW's Areas of Conservation Emphasis - Significant Habitats dataset includes oak woodlands as a Terrestrial Significant Habitat based on its priority for conservation and acquisition planning for some counties, local jurisdictions, and the Wildlife Conservation Board (CDFW 2019).

The Project's impact on special-status plants and Sensitive Natural Communities has yet to be mitigated below a significant level. Accordingly, the Project continues to have a substantial adverse effect, either directly or through habitat modifications, on a species identified as a candidate, sensitive, or special-status species by CDFW or USFWS.

Recommended Potentially Feasible Mitigation Measure(s):

Recommendation #15: The EIR/EIS should discuss how BIO-MM#1 would avoid or minimize impacts on special-status plants and Sensitive Natural Communities.

Recommendation #16: Revise Table 3.7-4 – CDFW recommends the Authority revise Table 3.7-4 in Section 3.7 Biological and Aquatic Resources to provide affected natural community names based on the Manual of California Vegetation (CNPS 2022).

Mitigation Measure #51: Revise BIO-MM#1 – CDFW recommends the Authority provide requirements that would effectively avoid impacts on special-status plants and Sensitive Natural Communities if those resources are present.

Mitigation Measure #52: Revise BIO-MM#2 – CDFW recommends the Authority provide minimum requirements for ensuring that plant salvage and relocation would be successful. The Authority should at a minimum:

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- Relocate plants to areas where there would be no impact on in-situ populations of rare, endangered, or threatened plants;
- Provide at least five (5) years of monitoring;
- Provide a supplemental watering plan;
- Provide a weed management plan;
- Ensure that relocated plants are self-sustaining, with at least two (2) years of no supplemental watering;
- Achieve zero percent cover of non-native, invasive species listed as High or Moderate by the California Invasive Plant Council; and
- Provide contingency measures if relocation fails.

Mitigation Measure #53: Revise BIO-MM#38 – CDFW recommends the Authority revise BIO-MM#38 to provide no less than 2:1 ratio to offset direct impacts on ESA and CESA-listed species unless a higher ratio is required pursuant to regulatory authorizations.

Additional Comments and Recommendations

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Recommendation #17: Fully Protected Birds – Fully Protected species may not be taken or possessed at any time, and no licenses or permits may be issued for their take except for collecting these species for necessary scientific research, relocation of the bird species for the protection of livestock, or if they are a covered species whose conservation and management is provided for in a Natural Community Conservation Plan. CDFW recommends the Authority revise the mitigation measures below in order to sufficiently avoid impacts on Fully Protected birds.

- *Bald Eagle (Haliaeetus leucocephalus) and Golden Eagle (Aquila chrysaetos) (Eagles)*. The EIR/EIS provides BIO-MM#66 and 67 to address the Project's impact on eagles. Under BIO-MM#66, the Authority should specify that a 1-mile line-of-sight and 0.5-mile no line-of-sight no-work buffer is the minimum. Currently BIO-MM#66 allows this buffer to be reduced; however, the Authority should revise this to ensure that under no circumstances should buffers be reduced. Under BIO-MM#67, the Authority should include CDFW as a regulatory agency that should be consulted if the Authority needs to develop a nest relocation or replacement plan[13].

- *California Condor (Gymnogyps californianus)*. The EIR/EIS provides BIO-MM#16, 71, and 72 to address the Project's impact on California condor. Under BIO-MM#16, the Authority should include CDFW as a regulatory agency that should be notified if the Authority becomes aware of or finds roosting California condors. Under BIO-MM#71, the Authority should include CDFW as a regulatory agency that should be notified prior to use of helicopters during construction where condors are present. Under BIO-MM#72, the Authority should provide criteria and thresholds it would use to determine, and how it would determine, whether Project-related nighttime lighting is posing a risk, disturbing, or harming. Then, the Authority should provide specific action(s) it would take to address those risks, disturbances, or harm. Mitigation is only effective if there are actions to address risks, disturbances, or harm to California condors. Finally, the Authority should

[13] The Authority should not overlook that CDFW has jurisdiction over fully protected species of birds, mammals, amphibians, reptiles, and fish pursuant to Fish and Game Code sections 3511, 4700, 5050, and 5515.

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provide details for how it would monitor whether mitigative action(s) are effective.

- *White-Tailed Kite (Elanus leucurus)*. The EIR/EIS provides BIO-MM#68 to address the Project's impact on white-tailed kite. Under BIO-MM#68, the Authority should increase a 0.25-mile no-work buffer to 0.5-mile no-work buffer as the minimum, and under no circumstances should buffers be reduced.

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Recommendation #18: Swainson's Hawk (*Buteo swainsonii*) – The EIR/EIS provides BIO-MM#43 to address the Project's impact on Swainson's hawk, a CESA-listed species. BIO-MM#43 would require compensatory mitigation for impacts to foraging habitat at 1:1 for primary foraging habitat, 0.75:1 for active secondary foraging habitat, and 0.5:1 for tertiary foraging habitat. While CDFW appreciates that the Authority would compensate for loss of foraging habitat, CDFW is concerned that BIO-MM#43 as it is currently proposed is insufficient to mitigate for loss of foraging habitat for a CESA-listed species.

Breeding pairs of Swainson's hawks are critical to conserving the species and preventing the population to become less than self-sustaining (CEC and CDFG 2010). The most recognized threat to Swainson's hawks is the loss of their native foraging and breeding grounds (CDFW 2016; CEC and CDFG 2010). As important foraging areas are converted to urban landscapes or other unsuitable habitat, the aptitude for the landscape to support breeding pairs decreases. In the Antelope Valley, the small number of breeding Swainson's hawks and the potential isolation from other Swainson's hawk populations makes the Antelope Valley population particularly susceptible to extirpation (CEC and CDFW 2010). Given the importance of foraging habitat to breeding pairs, impacts on foraging habitat in the Antelope Valley could significantly impact the Antelope Valley population. Significant effects on Swainson's hawk through habitat modifications and loss should be mitigated to reduce effects to less than significant.

The Project may continue to have a significant impact on Swainson's hawk given BIO-MM#43 as it is currently proposed. BIO-MM#43 would result in net loss of functional foraging habitat. habitat (i.e., 0.75:1 and 0.5:1) when there should be no net loss of habitat. In addition, 1:1 preservation may not be sufficient mitigation to ensure there is no net loss. For example, given five acres of foraging habitat in a landscape, one acre is developed. Of those four acres remaining, one acre is preserved to mitigate at 1:1. Still, that would leave four acres of foraging habitat instead of five acres, which would result in net loss. Given this example, the Project's proposal of 1:1 would result in net loss of important foraging habitat for Swainson's hawk. Accordingly, CDFW recommends the Authority revise BIO-MM#43 to provide a minimum of 2:1 compensatory mitigation so that there is no net loss of foraging habitat for Swainson's hawk. CDFW recommends 1:1 preservation and 1:1 creation/restoration for a net gain in foraging habitat. In addition, the Authority should provide the following information in the EIR/EIS to demonstrate that mitigation would be effective through adoption of performance standards:

1) Specific data and analyses that will be used to determine whether replacement habitat would provide functional foraging habitat and the quality of potential replacement habitat;

2) Definitions for "primary", "secondary", and "tertiary" foraging habitat;

3) Explanation of how mitigation ratios were developed, especially if replacement habitat has yet to be identified and habitat functionality and quality at those locations has yet to

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be determined;

4) Explanation of how the Authority would determine if replacement habitat is similar to the acres of functional foraging habitat impacted; and

5) Explanation of how the Authority would assess the performance of functional replacement habitat and use by Swainson's hawk.

4512-10556

Recommendation #19: Special-Status Passerine Birds – The Project proposes the following mitigation measures to address impacts on special-status species of passerine birds:

- BIO-MM#79 would require surveys for coastal California gnatcatcher (*Polioptila californica californica*), an ESA-listed species, implementation of a 300-foot no-work buffer, and reduction of the buffer after consultation only with USFWS if 300 feet is not feasible.

- BIO-MM#80 would require surveys for least Bell's vireo (*Vireo bellii pusillus*), an ESA-listed and CESA-listed species, implementation of a 300-foot no-work buffer, and reduction of the buffer after consultation only with USFWS if 300 feet is not feasible.

- BIO-MM#81 would require surveys for southwestern willow flycatcher (*Empidonax traillii extimus*), an ESA-listed and CESA-listed species, implementation of a 300-foot no-work buffer, and reduction of the buffer after consultation only with USFWS if 300 feet is not feasible.

- BIO-MM#82 would require surveys for western yellow-billed cuckoo (*Coccyzus Americanus occidentalis*), an ESA-listed and CESA-listed species, implementation of a 300-foot no-work buffer, and reduction of the buffer after consultation only with USFWS if 300 feet is not feasible.

CDFW advises that the mitigation measures currently proposed may result in take of an ESA-listed and CESA-listed species. A 300-foot buffer is insufficient to avoid potential take of special-status passerine birds. A reduction in the buffer distance would further increase the potential for take and could result in the Project needing take authorization under CESA and ESA.

To sufficiently avoid impacts on special-status passerine birds, CDFW recommends the Authority increase avoidance buffers from 300 feet to 500 feet under BIO-MM#79 through 82. If the Authority is unable to avoid impacts on these listed species, the Authority should consult with CDFW and/or USFWS to determine if take authorization may be needed. Obtaining take authorization should be written into BIO-MM#79 and 82 as a requirement if impacts cannot be avoided. In addition, the Authority should revise BIO-MM#80, 81, and 82 to state that CDFW would also be consulted if the Project is unable to avoid impacts on least Bell's vireo, southwestern willow flycatcher, and western yellow-billed cuckoo.

In addition, compensatory mitigation has yet to be provided for the Project's potential impact on these species as a result of habitat loss. The temporary exclusion of Project activities within nesting buffers during nesting season may not constitute effective mitigation for the purposes of offsetting Project impacts associated with the loss of breeding and nesting habitat. Effective mitigation for impacts to nesting habitat for birds and raptors requires structurally (e.g., ground

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cover, subshrubs, shrubs, and trees) and species diverse vegetation as part of habitat restoration. CDFW recommends the Authority provide compensatory mitigation for impacts on habitat. Please note that referencing BIO-MM#53 for the purposes of compensatory mitigation for special-status species habitat may be deferred mitigation.

4512-10557

Recommendation #20: Tricolored Blackbird (*Agelaius tricolor*) Nest Colonies – Tricolored blackbird is a CESA-listed species. The Project proposes BIO-MM#69 to avoid impacts on active tricolored blackbird nest colonies. BIO-MM#69 would require 300-foot no-work buffers "to the extent practicable." Buffers may be reduced by the Project Biologist. In addition, if a new nesting colony is observed, a Project Biologist would establish buffers or sound curtains.

CDFW advises that BIO-MM#69 as it is currently proposed may result in take of a CESA-listed species. Tricolored blackbird aggregate and nest colonially, forming colonies of up to 100,000 nests that can expand over time. Adequate surveys are needed to identify the full extent of a nesting colony. Implementation of an insufficient buffer or reducing a buffer may be inadequate to avoid the entire nesting colony. Installing a sound curtain during the nesting season to adjust for survey shortfalls can disturb a nesting colony and result in population decline. Nesting can occur synchronously, with all eggs laid within one week. Depending on timing, disturbance to nesting colonies can cause abandonment, significantly impacting tricolored blackbird populations. CDFW recommends the Authority revise BIO-MM#69 as follows:

"[…] If construction is initiated near suitable habitat during the nesting season, three surveys will be conducted ~~within 15~~ no more than 10 days prior to construction, with one of the surveys within 5 days prior to the start of construction. If active tricolored blackbird nesting colonies are identified, construction activities will be avoided within 300 feet of the nesting colonies during the breeding season (March 15 through July 31) to the extent practicable and consistent with the CDFW's *Staff Guidance Regarding Avoidance of Impacts on Tricolored Blackbird Breeding Colonies on Agricultural Fields* (2015). ~~This minimum buffer may be reduced in areas with 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 from excessive noise or visual disturbance as determined by a Project Biologist experienced with tricolored blackbird. If tricolored blackbirds colonize habitat adjacent to construction after construction has been initiated, the Authority will reduce disturbance through establishment of buffers or sound curtains, as determined by the Project Biologist~~." The 300-foot minimum no-work buffer shall 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. The Project Biologist shall reassess the nesting colony on a reoccurring basis to determine the extent of the breeding colony within 10 days of Project initiation. The Project Biologist shall immediately modify the 300-foot buffer to capture the entire colony if the extent increases."

"In the event that a tricolored blackbird or their nesting colony is detected during surveys, the Authority shall consult with CDFW to discuss how to implement the Project and avoid take, or if avoidance is not feasible, to acquire an ITP, pursuant to Fish and Game Code section 2081(b), prior to any ground-disturbing activities."

4512-10558

Recommendation #21: BIO-IAMF#12: Design the Project to be Bird Safe – Electrical components of the HSR system (e.g., the overhead quaternary system, upgraded power distribution poles, etc.) have the potential to result in electrocution and strike hazards for birds.

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BIO-IAMF#12 requires the Project be designed to be "bird safe." On January 19, 2021, the Overhead Contact System Bird Electrocution Configuration Working Group (Working Group) prepared a memo to the Authority. The memo summarizes an extensive investigation by the Working Group to develop design recommendations to avoid avian electrocution as required by BIO-IAMF#12. On February 18, 2021, CDFW provided extensive comments and recommendations on designing the Project to be bird safe. The Authority has not addressed our concerns. Until CDFW's concerns are addressed, CDFW does not believe that the Project would be designed to be bird safe. Accordingly, the Project continues to have a significant impact on birds, including special-status species and Fully Protected species.

The EIR/EIS currently does not provide adequate disclosure as to how the Project has been designed to be bird safe from the standpoint of electrocution. CDFW strongly recommends the Authority address CDFW's concerns provided in our review of the memo. Then, the Authority should revise the EIR/EIS to discuss how the Project has been designed to be bird safe. The Authority should recirculate the EIR/EIS so the public and agencies may have necessary information to review and comment on the Project's long-term impact on birds.

4512-10559

Recommendation #22: Deferred Mitigation – Many of the mitigation measures proposed by the Project, BIO-MM#1 through 101, contain the following language: "to the extent feasible." It should be noted that aspects of mitigation measures may not be enforceable given that caveat. Those mitigation measures may not meet the standards for deferred mitigation under CEQA Guidelines section 15126.4. CDFW recommends the Authority revise all mitigation measures so that they are enforceable in order to adequately mitigate for the Project's impact on biological resources.

4512-10560

Recommendation #23: BIO-MM#14: Conduct Pre-construction Surveys and Delineate Active Nest Buffers Exclusion Areas for Breeding Birds – Migratory nongame native bird species are protected by international treaty under the Federal Migratory Bird Treaty Act (MBTA) of 1918 (Code of Federal Regulations, Title 50, § 10.13). Sections 3503, 3503.5, and 3513 of the California Fish and Game Code prohibit take of all birds and their active nests including raptors and other migratory nongame birds (as listed under the Federal MBTA). It is unlawful to take, possess, or needlessly destroy the nest or eggs of any raptor. Please note that CDFW does not issue permits for take of nests, eggs, or chicks.

BIO-MM#14 would require a 75-foot no-work buffer around active nests. A 75-foot buffer may result in incidental loss of fertile eggs or nestlings, or otherwise lead to nest abandonment. The Project would significantly increase ground and vegetation disturbance, noise levels, and human presence. These disturbances occurring within 75 feet of nesting birds could result in birds abandoning their nests, resulting in loss of fertile eggs or chicks. Accordingly, the Project may continue to have a significant impact on nesting birds. In order for the Project to minimize its impact on nesting birds, CDFW advises the Authority to implement a 300-foot minimum buffer for all non-listed passerine species and 500-foot buffer for all non-listed raptors.

4512-10561

Recommendation #24: BIO-MM#53: Prepare a CMP for Species and Species Habitat – Per BIO-MM#53, the Authority will prepare a Conservation Management Plan that "that sets out the compensatory mitigation that will be provided to offset permanent and temporary impacts on federal and state-listed species and their habitat, fish and wildlife resources regulated under Section 1600 et seq. of the Fish and Game Code, and certain other special-status species." CDFW is concerned that BIO-MM#53 as written is not specific to any species. Because the

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4512-10561

CMP has yet to be developed, the public and reviewing agencies are unable to evaluate whether mitigation would be provided for all special-status species significantly impacted by the Project and whether mitigation could be successful and appropriate for each species. CDFW recommends the Authority provide a compensatory mitigation measure for each significantly impacted special-status species and their habitat. Mitigation measures should be specific, quantifiable, and enforceable. Mitigation measures should have specific goals to replace requisite habitat for each species in order to support self-sustaining populations.

4512-10562

Recommendation #25: BIO-MM#56: Conduct Monitoring of Construction Activities – CDFW recommends the Authority specify that a Project Biologist be on site daily during initial ground disturbing activities. After the area has been cleared, the Project Biologist should remain on site once a week or once every two weeks to continue to verify compliance with mitigation measures.

4512-10563

Recommendation #26: BIO-MM#61: Establish and Implement a Compliance Reporting Program – BIO-MM#61 states, "If agency personnel visit the construction footprint in accordance with BIO-IAMF#2, the Project Biologist will prepare a memorandum within one day of the visit that memorializes the issues raised during the field meeting. This memorandum will be submitted to the Authority via Environmental Mitigation Management and Assessment. Any issues regarding regulatory compliance raised by agency personnel will be reported to the Authority and the contractor." CDFW recommends the Authority specify that issues raised by agencies will be addressed immediately. All related construction and activities should be temporarily halted until the Project Biologist/Authority resolves agency concerns. The Authority should ensure that agency concerns are resolved.

4512-10564

Recommendation #27: BIO-MM#76: Implement Wildlife Rescue Measures – BIO-MM#76 states, "The Project Biologist will follow all relevant guidelines for federal and state listed species." CDFW recommends the Authority state what "guidelines" is being referenced.

4512-10565

Recommendation #28: Una Lake – CDFW appreciates that the Authority developed SR14A, E1A, and E2A Build Alternatives to avoid Una Lake. CDFW recommends that the Authority revise the EIR/EIS to clarify whether avoidance of Una Lake by 300 feet includes all Project components (i.e., double tracks, disturbance areas, staging areas, rights-of-way, drainage basins, roadways, and utility easements).

4512-10566

Recommendation #29: Alternatives – Page 8-7 in Section 8 Preferred Alternative and Station Sites states, "The Authority identified the Preferred Alternative [SR14A] by balancing the adverse and beneficial impacts of the project on the human and natural environment. There was no single determining factor in identifying the Preferred Alternative because of the multitude of issues considered and the varied input received from stakeholders on each of the six Build Alternatives. Furthermore, many impacts on the natural environment and community resources would be the same, or very similar, across each of six Build Alternatives and, therefore, do not always provide enough meaningful information to distinguish between the relative merits of the alternatives." In addition, Table 8-2 on page 8-15 only summarizes impacts on special-status plant species, waters, and riparian habitat. It does not weigh impacts on wildlife movement, established corridors, mountain lion, and special-status wildlife species for each alternative.

CDFW does not agree that the Project's impacts on biological resources would be the same or similar across all six Build Alternatives. Alignments that more strictly following the State Route

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14 freeway corridor would result in impacts on wildlife connectivity that the other alternatives may not (see Comment #1 in this letter). CDFW recommends the Authority consider CDFW's comments and perform additional analyses prior to finalizing the EIR/EIS and selecting a preferred alternative.

4512-10567

Recommendation #30: Project Design Changes – The Project description includes several design features to avoid or minimize impacts to biological resources. For instance, specific lengths and locations for viaducts, walls, and embankments are identified in the Project description in the EIR/EIS. These Project design features should not change at the site-level during construction. Changes to design features after the CEQA review process is complete (e.g., from viaducts to full embankments, longer embankments reducing viaducts, additional walls, new features) could result in additional significant impacts not identified and analyzed in the current EIR/EIS (CEQA Guidelines, § 15162). This may result in the need for additional CEQA review. The Authority should conduct additional environmental review if Project design features change from what was described in the EIR/EIS. Otherwise, any such changes that may need to be incorporated into a LSA Agreement and/or CESA permitting processes may require CDFW to act as the lead agency and this may result in significant permit issuance delays. The Authority should incorporate site-specific review and consultation before construction to verify the extent/magnitude of impacts and mitigation are consistent with the EIR/EIS analysis.

4512-10568

Recommendation #31: Mitigating for Impacts within Region – Throughout CDFW consultation on the Project, we have continued to emphasize the need for the Authority to generally mitigate impacts within Los Angeles County or CDFW Region 5 when feasible. Mitigation should occur within Los Angeles County or CDFW Region 5 in order to ensure no net loss of biological resources within the area where the Project would occur (see Additional Recommendation #18 for an explanation of no net loss).

4512-10569

Recommendation #32: Site-Specific Surveys – Impacts associated with the Project are primarily estimated using coarse-level predictive habitat modeling without having site-specific surveys to supplement the modeling effort. In addition, the EIR/EIS consistently defaults to the lack of CNDDB occurrence to conclude whether a species is present. Please note that modeling and CNDDB is not a substitute for site-specific, focused species surveys. Reporting data to the CNDDB is voluntary, and it was only recently that entry of data became strongly recommended or required for candidate species like mountain lion, western Joshua tree, and Crotch bumble bee. Areas without records should not be treated as areas where species do not occur.
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, primarily due to 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 only predictive modeling to evaluate species presence and to quantify project-specific impacts could miss marginal or atypical habitat usage, especially by highly mobile species. Also, using only predictive modeling could impose a risk of unauthorized take. In addition, some areas not ranked as suitable have not been surveyed recently or have never been surveyed.

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4512-10569

- 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; or have distributions that can be analyzed statistically but not be predicted precisely. For example, opportunistic species can have dynamic ranges and use areas that are not identified or ranked by current model 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. This 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 CESA-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 Fully Protected bird species not known to nest or breed in the Project site (e.g., white-tailed kite 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 CDFW's analysis when it comes to permitting. 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 the impact of the taking analyses necessary for CESA and issuance of an ITP. 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 may need to err on the side of assuming presence in the Project footprint where suitable habitat is present.

CDFW has continually emphasized the need for site-specific, focused species surveys. The Authority will need to provide site-specific biological assessments to support any LSA Notifications and/or CESA take authorization applications required for the Project.

4512-10570

Recommendation #33: 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, which could cause construction delays. Having at least two years of site-specific surveys 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).

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Because CDFW must determine an estimate of take and impact analysis for CESA-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.

4512-10571

Recommendation #34: Reporting Data – CEQA requires that information developed in environmental impact reports and negative declarations be incorporated into a database (e.g., CNDDB) which may be used to make subsequent or supplemental environmental determinations [Pub. Resources Code, § 21003, subd. (e)]. The Authority should submit information on special-status species to the CNDDB by completing and submitting CNDDB Field Survey Forms (CDFW 2022e). Information on special-status native plant populations and sensitive natural communities, the Combined Rapid Assessment and Relevé Form should be completed and submitted to CDFW's Vegetation Classification and Mapping Program (CDFW 2022f).

4512-10572

Recommendation #35: Mitigation Measures – CDFW recommends the Authority revise the Project's proposed Biological Resources Mitigation Measures and condition the environmental document to include mitigation measures recommended in this letter. CDFW provides comments to assist the Authority in developing mitigation measures that are specific, detailed (i.e., responsible party, timing, specific actions, location), enforceable through permit conditions, agreements, or other legally-binding instruments [CEQA Guidelines, § 15126.4(a)(2)], and clear for a measure to be fully enforceable and implemented successfully via a mitigation monitoring and/or reporting program (CEQA Guidelines, § 15097; Pub. Resources Code, § 21081.6). The Authority is welcome to coordinate with CDFW to further review and refine the Project's mitigation measures.

Per Public Resources Code section 21081.6(a)(1), CDFW has provided the Authority with a summary of our suggested mitigation measures and recommendations in the form of an attached Draft Mitigation and Monitoring Reporting Plan (MMRP; Attachment E).

4512-10573

Filing Fees

The Project, as proposed, would have an impact on fish and/or wildlife, and assessment of filing fees is necessary. Fees are payable upon filing of the Notice of Determination and serve to help defray the cost of environmental review by CDFW. Payment of the fee is required 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).

4512-10574

Conclusion

We appreciate the opportunity to comment on the Project to assist the Authority in adequately analyzing and minimizing/mitigating impacts to biological resources. We look forward to continuing to work with the Authority, both as State agencies, to address the Project's impacts to biological resources. CDFW sincerely hopes that the Authority takes our comments and recommendations into consideration and that the Authority may address our outstanding concerns. CDFW requests an opportunity to review and comment on any response that the Authority has to our comments and to receive notification of any forthcoming hearing date(s) for the Project [CEQA Guidelines, § 15073(e)].

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If you have any questions or comments regarding this letter, please contact Ruby Kwan-Davis, Senior Environmental Scientist, at (562) 619-2230 or by email at Ruby.Kwan-Davis@wildlife.ca.gov.

Sincerely,

DocuSigned by:
Edmund Pert

Edmund Pert
Regional Manager
South Coast Region

Enclosure(s):

Attachment A: CDFW's comments on the first administrative draft EIR/EIS for the Palmdale to Burbank segment of the High-Speed Rail (February 26, 2021)
Attachment B: CDFW's comments for the Santa Clara River Crossing (Soledad Canyon) – Data Request for the SR-14 Alternative Alignment of the High-Speed Rail – Palmdale to Burbank (August 15, 2018)
Attachment C: Gabion-like structures in Santa Clara River near the proposed Santa Clara River Crossing.
Attachment D: High-Speed Rail Proposed Wildlife Crossings
Attachment E: Mitigation Monitoring and Reporting Plan (MMRP)

ec: CDFW
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4512-10575

COMMENT & RESPONSE LOG

Project: CHSR – Palmdale - Burbank - P-B | **Updated:** 02/21/21 | **WBS: 7.3.2**

Submittal: Admin Draft EIR/EIS for Cooperating Agency Review

Agency Comments					Responses				
Comment #	Section # / Page # (e.g., 3.7-1)	Comment	Reviewer's Name	Date	Disposition	Response	Responder's Name	Date	Verification
G1	General: Opening	CDFW offers the following general comments for the P-B aligment to assist the Authority in adequately identifying and/or mitigating significant, or potentially significant, direct, and indirect impacts on fish and wildlife (biological) resources.	CDFW-Megan Evans	2/26/2021					
G2	General: Project Design Elements	The P-B alignment includes several design features to avoid or minimize impacts to biological resources including viaducts, crossings, and embankments that are identified in the project description of the first administrative draft EIR/EIS. These Project design features are important to reaching certain significant conclusions in the EIR/EIS and should not change at the site-level during construction (e.g., from crossings to embankments, viaducts to embankments, longer embankments, reduced viaducts, additional walls, new features). If changes do occur at the construction level, it could result in additional significant impacts not identified and analyzed in the current EIR/EIS triggering the need for additional CEQA review (CEQA Guidelines §15162). If this occurs, any additional environmental review should be conducted by the Authority. Otherwise, any such changes that may need to be incorporated into the Lake and Streambed Alteration Agreement and/or CESA permitting processes may require CDFW to act as the lead agency and this may result in significant permit issuance delays.	CDFW-Megan Evans	2/26/2021					
G3	General: Mitigating Impacts within Region	Throughout CDFW consultation on the P-B section, we have continued to emphasize the need to generally mitigate species impacts within the CDFW region or county that they occur when feasible. CDFW encourage the Authority to continue discussions on potential mitigation for the P-B alignment that could support permitting.	CDFW-Megan Evans	2/26/2021					
G4	General: Wildlife Connectivity	Impacts from construction and operation of P-B to wildlife connectivity continue to be a significant concern for CDFW considering the length of the Project, the impermeability of the track system, duration of construction activity, and long-term operation.	CDFW-Megan Evans	2/26/2021					
G5	General: Site-specific Surveys	Impacts from P-B are primarily estimated using habitat suitability modeling. CDFW continues to recommend for all alignments that the EIR/EIS include a measure to require site-specific biological assessments to validate the modeled site-specific potential for impacts to sensitive species once access is secured. It is important to be able to verify that the extent/magnitude of impacts and mitigation for the P-B at the site-level are consistent with the EIR/EIS analysis. This type of assessment will be needed to support any Lake or Streambed Alteration Agreement and/or CESA Incidental Take Permit required for the Project.	CDFW-Megan Evans	2/26/2021					
G6	General: Impacts to Streams	CDFW believes the extent of impacts to streams may be underestimated due to the lack of access to the Project corridor to conduct field surveys. This lack of current, site-specific information necessary to accurately quantify the extent of impacts to streams may affect the accuracy of a Notification pursuant to the Lake or Streambed Alteration Agreement process. We recommend field evaluations be conducted to confirm impacts to streams for the Project once ROW is secured.	CDFW-Megan Evans	2/26/2021					
G7	**General: CESA-Listing**	The regulatory status for several species known to occur in the Project area have changed. These species include western Joshua tree (*Yucca brevifolia*), mountain lion (*Puma concolor*) and Crotch's bumble bee (*Bombus crotchii*). CDFW recommends the EIR/EIS include an analysis of potential impacts to these species and identify appropriate mitigation similar to the approach taken for the Supplemental Environmental Impact Report for the San Jose to Merced section of **HSR, If the current document lacks such supporting information, subsequent environmen**tal review **may be needed to support Lake or Streambed Alteration and/or CESA permitting.**	CDFW-Megan Evans	2/26/2021					

Submission 4512 (Ruby Kwan-Davis, California Department of Fish and Wildlife, South Coast Region 5, Habitat Conservation Planning Program, December 1, 2022) - Continued

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Project: CHSR – Palmdale - Burbank - P-B | **Updated:** 02/21/21 | **WBS: 7.3.2**

Submittal: Admin Draft EIR/EIS for Cooperating Agency Review

Agency Comments					Responses				
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G8	General: UTS	Unarmored Three-spine Stickleback (UTS). UTS is a State of California fully protected species located within the P-B alignment. Pursuant to Fish and Game Code (Fish and Game Code Sections 3511, 4700, 5050 and 5515), fully protected species may not be taken or possessed at any time and no licenses or permits may be issued for their take except for collecting these species for necessary scientific research, relocation of the bird species for the protection of livestock, or if they are a covered species whose conservation and management is provided for in a Natural Community Conservation Plan (NCCP). The Authority previously consulted with CDFW on potential methods to avoid impacts to UTS for construction and operation including modeling efforts for flood events for Santa Clara River, location of pilings and wetted channel conditions. The EIR/EIS should clearly demonstrate how construction and operation of the Soledad Canyon crossing would avoid impacts to UTS.	CDFW-Megan Evans	2/26/2021					
1	Summary/S-21	Paralleling stations would be required at approximately 5-mile intervals between the switching stations and the TPSSs. The paralleling stations would need to be approximately 9,600 square feet (120 feet by 80 feet). Each station would include an approximately 450-square-foot (18 feet by 25 feet) control room. Permanent emergency standby generators are anticipated to be located at passenger stations and terminal lay-up/storage and the Maintenance Facility. Electrical interconnections and infrastructure are included in the Build Alternative footprints evaluated in this Draft EIR/EIS. The ultimate electrical interconnections and infrastructure locations will be selected from the options evaluated in this Draft EIR/EIS during final design of the Preferred Alternative, after the issuance of the Authority's ROD and NOD. Comment: CDFW requests inclusion in the final approval. although the EIR/EIS states the footprints are included in the alternatives; impacts do not appear to be fully evaluated and the protocol for determining how the adits will be chosen is not provided.	CDFW - Megan Evans	1/25/2021					
2	Summary/S- 2	Several intermediate window locations are also identified for each of the Build Alternatives. An intermediate window is a vertical shaft that can provide access, water, power, ventilation, and other support to tunnel construction areas. After construction is complete, a small structure for permanent access, and possibly ventilation equipment, would remain at the surface. This Draft EIR/EIS evaluates multiple options for adit and intermediate window sites for each Build Alternative. The ultimate adit and intermediate window facility locations will be selected from the options evaluated in this Draft EIR/EIS during final design of the Preferred Alternative, after the issuance of the Authority's ROD and NOD. Comment: CDFW requests inclusion in the final approval. although the EIR/EIS states the alternatives have been evaluated the protocol for determining how the adits will be chosen is not provided.	CDFW-Megan Evans	1/25/21					
3	Summary/S-3	Table S-3 TRA-MM#12 Identifies the LOS after mitigation as less than significant with mitigation but in the Mitigation Measure column it states:" However, there is no guarantee that these measures would adequately reduce impacts on transit services during spoils hauling." and the footnote states "* Indicates an impact that would be significant and unavoidable at the project level and during cumulative conditions". Please clarify if the measure will reduce impacts or will not reduce impacts.	CDFW-Megan Evans	1/27/21					
4	Summary/S-3 Overall	Table S-3 N&V-MM defer plans to the construction phase making it impossible to properly analyze impacts and assess the effectiveness of the proposed measure. No protocols for determining how well the measure performs is listed so we are unable to properly comment on ways to improve the measures or protect biological resources. Please provide measurable information in the draft document so CDFW can provide thorough comments,	CDFW-Megan Evans	1/27/21					

Submission 4512 (Ruby Kwan-Davis, California Department of Fish and Wildlife, South Coast Region 5, Habitat Conservation Planning Program, December 1, 2022) - Continued

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COMMENT & RESPONSE LOG

Project: CHSR – Palmdale - Burbank - P-B | **Updated:** 02/21/21 | **WBS: 7.3.2**

Submittal: Admin Draft EIR/EIS for Cooperating Agency Review

Agency Comments					Responses				
Comment #	Section # / Page # (e.g., 3.7-1)	Comment	Reviewer's Name	Date	Disposition	Response	Responder's Name	Date	Verification
5	Summary/ S-3	Table S-3 identifies installation of signs as mitigation for noise impacts to domestic animals. The table state: Noise impacts on wildlife and domestic animals (Refined SR14 and E2 Build Alternatives only). N&V-MM#8: The Authority will post signage at equestrian facilities near the Refined SR14 and E2 Build Alternative corridors, reducing noise impacts on domestic animals to less than. Comment: N&V-MM#8 does not include language that will be included on the sign making it difficult to properly assess how posting signs will mitigate the impacts or provide comments on the effectiveness of the signs. Posting signs does not bring the LOS to less than significant it attempts to removes the receptor. Please include more information in the measure and identify other possible measures that can mitigate for this impact.	CDFW-Megan Evans	1/27/21					
6	Summary/S-21	The document states: Paralleling stations would be required at approximately 5-mile intervals between the switching stations and the TPSSs. The paralleling stations would need to be approximately 9,600 square feet (120 feet by 80 feet). Please provide details of how this is included in the tunnels. Please include impacts in the discussion.	CDFW-Megan Evans	1/27/21					
7	Summary/S-24	After construction is completed, a small permanent structure and facilities for emergency egress, maintenance, and ventilation would be installed at the adit locations.... The ultimate adit and intermediate window facility locations will be selected from the options evaluated in this Draft EIR/EIS during final design of the Preferred Alternative, after the issuance of the Authority's ROD and NOD. Comment: Ventilation and adits can pose a threat to wildlife based on their design. Because the final location and design will not be determined until after the NOD please provide a mechanism for thorough evaluation of impacts.	CDFW-Megan Evans	1/27/21					
8	Summary	Overall comment: The S14A Alternative was not the Alternative with the lowest number of impacts overall but was still the Alternative chosen. Although the document does state a variety of factors contributed to this Alternative being chose the reasoning is not included in every subsection the S14A Alternative had higher impacts than others. This is not true with every subsection. In subsection 8.4.1.9 Socioeconomics and Communities identified why the Alternative with the least impacts was not chosen. We suggest you include this reasoning in each subsection that SR14A had higher impacts but was still deemed the preferred Alternative or why the option with fewer impacts was not considered. The document states: overall, the Preferred Alternative provides the environmentally superior alternative by best meeting environmental regulatory requirements and best minimizing impacts on the natural environment, farmland, and communities.(page 25) but does not provide clear evidence that statement is true. Review of the chart and subsections indicate it is not the Environmentally Superior alternative. CDFW recommends this section be reviewed for consistency and updated to provide conclusions.	CDFW-Megan Evans	1/27/21					
9	Summary/S-50	Table S-3 TrA-MM#12 Identifies the LOS after mitigation as less than significant with mitigation but in the Mitigation Measure column it states:" However, there is no guarantee that these measures would adequately reduce impacts on transit services during spoils hauling." and the footnote states "* Indicates an impact that would be significant and unavoidable at the project level and during cumulative conditions". Comment: Please clarify if the measure will reduce impacts or will not reduce impacts.	CDFW-Megan Evans	1/27/21					
10	Summary/S-50	Table S-3 N&V-MM defer plans to the construction phase making it impossible to properly analyze impacts and assess the effectiveness of the proposed measure. Comment: No protocols for determining how well the measure performs is listed so we are unable to properly comment on ways to improve the measures or protect biological resources. As written this measure isn't measurable or enforceable. Please update.	CDFW-Megan Evans	1/27/21					

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Comment #	Section # / Page # (e.g., 3.7-1)	Comment	Reviewer's Name	Date	Disposition	Response	Responder's Name	Date	Verification
11	Summary/S-53	Noise impacts on wildlife and domestic animals (Refined SR14 and E2 Build Alternatives only). N&V-MM#8: The Authority will post signage at equestrian facilities near the Refined SR14 and E2 Build Alternative corridors, reducing noise impacts on domestic animals to less than... Comment: N&V-MM#8 does not include language that will be included on the sign making it difficult to properly assess how posting signs will mitigate the impacts or provide comments on the effectiveness of the signs. Posting signs does not bring the LOS to less than significant it attempts to removes the receptor. Please include more information in the measure and identify other possible measures that can mitigate for this impact.	CDFW-Megan Evans	1/27/21					
12	S.8.2.1/S-71	The document states: The Refined SR14 and SR14A Build Alternative alignments would continue through ANF, in areas with no known or mapped seeps or springs. Comment: Please identify if the area has not been mapped historically or if the lack of features due to no ground surveys being done as part of this document preparation. CDFW recommends surveys be completed prior to the release of the draft EIR/EIS	CDFW-Megan Evans	2/1/21					
13	S.8.2.1/S-73	In the Agricultural Farmland and Forest Land subheading: the document states the permit will mitigate impacts if it is followed. This is specific to a Forest Service Special Use Permit so it might not be my place to comment. The EIR/EIS should identify what elements of the referenced permit would help to offset the impact identified.	CDFW-Megan Evans	2/9/21					
14	Summary/General	Overall comment: It appears that no mitigation is currently proposed for impacts from noise on wildlife. The document determined wildlife avoiding the area due to changes in noise levels was not an impact. CDFW recommends identifying measures to reduce impacts to wildlife that does not put the responsibility on the wildlife.	CDFW-Megan Evans	2/9/21					
15	3.4/3.4-39	Table 3.4-15 Page 3.4-39 through Figure 3.4 – 13 and 3.4-14 page 3.4-42 It appears noise monitors were placed near roads and freeways to establish baseline conditions and measure impacts from the project. Placement of these monitors within existing built transportation corridors could provide an elevated baseline that is not representative of all areas of the alignment and not capture the real change in areas where roads do not currently exist. For instance, noise monitors could have been installed at tunnel entrance and exit points, along equestrian trails, and away from the roadways to capture the full range of baseline conditions along the alignment and used to provide a more rebust analysis of changes in noise leves would have on wildlife. CDFW recommends the full range of baseline conditions along the alignment be included in the DEIR/EIS and used to calculate impacts and identify mitigation.	CDFW-Megan Evans	2/9/21					
16	3.4/3.4-71	"The subsections below describe each phase of construction, including duration, anticipated construction noise levels, and construction noise levels at the nearest sensitive receivers. " Comment: CDFW recommends increase the standard buffers and include monitors on-site during work to monitor noise levels during work. The DEIR/EIR needs to be updated to identify alternatives for work impacting wildlife.	CDFW-Megan Evans	2/9/21					

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17	3.4/3.4-122	CEQA Conclusion page 3.4-122 Mitigation Measure N&V-MM#8 (discussed in Section 3.4.7, Mitigation Measures) would reduce startle effects by requiring warning signs to be posted along the Pacific Crest Trail and in the Hansen Dam Recreation Area. These signs would be posted to warn users of an upcoming train crossing and the approximate time for the crossing. Users accompanied by domestic animals would have appropriate warning to prevent a startle effect. With implementation of N&VMM#8, noise impacts on domestic animals would be less than significant under CEQA after mitigation. Comment: This conclusion relies on the public having enough time to move out of the area once they have seen the sign. Signage will help people determine if they need to move but will not help domestic animals nearby that cannot move or wildlife. CDFW does not agree with the findings based on the information given. Also included in this section is "Additionally, due to the intermittent nature of the train operations in any given location, it is expected that the noise environment would only be affected for short periods of time and would not affect animal species' communications." Comment: CDFW requests studies used to reach this conclusion. Impacts of noise on finding a mate and terristory establishment have been studied and may conflict with this finding.	CDFW-Megan Evans	2/9/2021					
18	3.4/3.4-123	Wildlife within 50 feet of the California HSR System trackway at viaduct crossing locations could periodically experience noise levels that exceed the applicable FRA thresholds for wildlife noise exposure. Where the California HSR System trackway is on a viaduct, wildlife can approach the trackway and cross under it, allowing wildlife to get within 50 feet. However, unconfined wildlife would have the ability to avoid ground-borne noise levels by moving away from the track as trains approach, and noise from pass-byes would be short. Therefore, noise impacts on wildlife would be less than significant." Comment: Not all wildlife in the area can move out of the way when the train approaches. We recommend the analysis include impacts from peak and average noise levels. Analysis of short bursts of sound on wildlife does not appear to be discussed in detail to support the conclusions impacts would be less than significant. It is the short, loud bursts of sound that can often result in disturbance to nesting and breeding behavior. CDFW does not agree with the analysis and conclusion as currently presented.	CDFW-Megan Evans	2/9/21					
19	Section 3.4/General	Vibration impacts on wildlife was not discussed. Comment: CDFW recommends analysis of HSR caused vibration to wildlife be included in the DEIR/EIS.	CDFW-Megan Evans	2/9/21					
		Volume 2, Appendix 2-E, Project Impact Avoidance and Minimization Features.							
20	Appendix 2-E/General	Features in this section appear to conflict with what is included in Section 3.7. These sections should be revised to achieve internal consistency. CDFW recommends the features be written in full the first time they appear in Secion 3.7 of the EIR/EIS to avoid confusion.	CDFW-Megan Evans	2/16/21					

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21	pendix 2-E/P-2-E-6; Bio 3.7/3.7-	BIO-IAMF#1 The feature specifies the General Biological Monitor will report directly to a Designated Biologist or to the Project Biologist. However, this sentence indicates the Project Biologist can be the General Biological Monitor and the Designated Biologist. The feature creates confusion as to what the reporting structure is. Comment: CDFW recommends the term Project Biologist be used to describe a specific position with distinct roles and responsibilities. CDFW recommends this feature be rewritten to remove conflicting information.	CDFW-Megan Evans	2/16/21					
22	Appendix 2-E/P-2-E-6; Bio 3.7/3.7-18	BIO-IAMF#2 This feature is presented as reducing environmental impacts. Please identify how this adds to environmental analysis or lessens impacts.	CDFW-Megan Evans	2/16/21					
23	Appendix 2-E/P-2-E-7; Bio 3.7/3.7-18	BIO-IAMF#3: Prepare WEAP Training Materials and Conduct Construction Period WEAP Training As written this feature does not include all workers on site during Projects activities or all restrictions to work within the Project footprint. CDFW recommends trainings include all persons entering the Project footprint; training be provided before initiation of any project activities, not just ground disturbance activities; and trainings provide more information including, but not limited to, identification of no entry buffers; identification of environmentally sensitive areas; identification of work area; and definition of established roadways, work hours, and work windows. All terms with the potential to have a different meaning in different trades need to have the environmental definition provided. Maps need to be available to all workers.	CDFW-Megan Evans	2/16/21					
24	Appendix 2-E/P-2-E-7; Bio 3.7/3.7-18	BIO-IAMF#4: This feature does not include all personnel involved in O&M activities, only O&M staff. Other divisions are often included in O&M activities and are on-site during O&M work. Trainings need to include all persons on-site during O&M work. It is recommended O&M staff understand the environmental approval process and recognize sensitive habitats and key species to ensure crews do not do work without authorization. Verification of attendance should be submitted as part of the annual report. CDFW recommends this feature be expanded.	CDFW-Megan Evans	2/16/21					
25	Appendix 2-E/P-2-E-8; Bio 3.7/3.7-18	BIO-IAMF#5: Prepare and Implement a Biological Resource Management Plan-Who ensures the compliance and tracking of measures that are included in this Plan? The plan should be in place before any Project relvted activity, not just ground desturbance activities. Please update the documents to provide these details.	CDFW-Megan Evans	2/16/21					
26	Appendix 2-E/P-2-E-8; Bio 3.7/3.7-18	BIO-IAMF#6 As written this feature does not require the contractor or O&M staff to use and install acceptable or recommended material. The feature also appears to allow the Project biologist to approve plastic monofilament material to be used in urban areas. Although urban areas appear void of wildlife many species exist within urban settings and deserve the same protection as their wildland counterparts. Also, stormwater from urban areas often flow directly to rivers and streams. Degraded plastic then ends up in inland streams and ultimately the Pacific Ocean. Please develop this measure so it is enforceable and protects urban wildlife or evaluates the impacts of plastic waste released by the project.	CDFW-Megan Evans	2/16/21					
27	Appendix 2-E/P-2-E-9; Bio 3.7/3.7-18	BIO-IAMF#7: Prevent Entrapment in Construction Materials and Excavations. We recommend including routine inspection of uncovered holes and trenches throughout the day to prevent injury or death to wildlife that becomes trapped during work hours to minimize/prevent entrapment in holes or trenches that are inactive during the workday but are uncovered. Please also more information/specifics on how trenches and holes will be covered overnight that prevents covers from coming loose or animals from burrowing under them.	CDFW-Megan Evans	2/16/21					

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Agency Comments					**Responses**				
Comment #	Section # / Page # (e.g., 3.7-1)	Comment	Reviewer's Name	Date	Disposition	Response	Responder's Name	Date	Verification
28	Appendix 2-E/P-2-E-9; Bio 3.7/3.7-18	BIO-IMF#8 Delineate Equipment Staging Areas and Traffic Routes: This feature states "Staging areas (including any temporary material storage areas) will be located in areas that would be occupied by permanent facilities, where practicable." Please define what situations would not be practicable. CDFW recommends the inclusion of characteristics of sites to be chose. For example, existing turnouts, compact areas with no vegetation. Please include the requirement to avoid impacts or fully evaluate the cumulative impacts of choosing sites along each route if sensitive species cannot be avoided.	CDFW-Megan Evans	2/16/21					
29	Appendix 2-E/P-2-E-9; Bio 3.7/3.7-19	BIO-IAMF#9: Dispose of Construction Spoils and Waste. The full description in Appendix 2-states material "in areas at or near construction sites within the project footprint." While Section 3.7 states "in areas at or near construction sites within the Build Alternative footprint." The project footprint is a larger area and may include areas of temporary impacts while the Build Alternative footprint implies areas that will experience permanent impacts. CDFW recommends material storage be in areas that will be permanently impact by the project. If this is impartible CDFW recommends specific characteristics for site selection be required to minimize impacts.	CDFW - Megan Evans						
30	Appendix 2-E/P-2-E-9; Bio 3.7/3.7-19	Please identify where the cleaning locations will be stationed, for example within material storage yards, and include when and how material will be removed from the site.	CDFW-Megan Evans	2/16/21					
31	Appendix 2-E/P-2-E-9; Bio 3.7/3.7-19	BIO-IAMF#11: Maintain Construction Sites: Rodenticide use and secondary poisoning to wildlife in the P-B alignment should be analyzed for impacts to species known to occur within the alignment, including its cumulative effect with strikes, electrocution, noise and other contributors.	CDFW - Megan Evans						
32	Appendix 2-E/P-2-E-10; Bio 3.7/3.7-19	BIO-IAMF#12 Design Project to be Bird Safe: CDFW appreciates the inital work to design a bird safe project the feature as presented. CDFW provided separate comments on this issue on February 18, 2021, and incorporates those by reference. In short, the proposed design approaches and measures may minimize some impacts to birds but it is reasonably foreseeable that some level of impact/take would occur during the life of the project. The EIR/EIS should include an analysis of the proposed level of impact and identify measures to offset any impacts. For example, further nanalysis could include modeling or projections from similar facilites and measures may include frequent monitoring/reporting during the first few years that is adapted thereafter based on data collected and other triggers. Data collected may be telemetry, camera stations, biological monitors to observe/count of take and other measures and could vary by segment based on the likelihood of impacts/take. We do not concur that measure BIO-IAMF#12 as currently proposed, and related memorandum and attachments, is is bird safe and would result in some level of impact that could still be futher minimized and offset.	CDFW-Megan Evans	2/16/21					
33	Appendix 2-E/P-2-E-15; Geo 3.9/3.9-7	GEO-IAMF#2 Does not provide minimization to impacts. Please identify how this avoids or minimizes impacts. Please reference standard that will be used.	CDFW-Megan Evans	2/16/21					
34	Appendix 2-E/P-2-E-15; Geo 3.9/3.9-7	GEO-IAMF#4 Abandoned mines have the potential to provide habitat for wildlife. Mitigation for impacts to wildlife due to use of abandoned mines needs to be incorporated into the EIR/EIS. CDFW request the plan be submitted to CDFW for review and comment. All comments need to be addressed to CDFW's satisfaction prior to the start of project activities.	CDFW-Megan Evans	2/16/21					
35	Appendix 2-E/P-2-E-17; Geo 3.9/3.9-7	GEO-IAMF#8: CDFW recommends the plan include evacuation plans and timeframes for when inspection will occur after an earthquake.	CDFW-Megan Evans	2/16/21					

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36	Appendix 2-E/P-2-E-24; Hyd 3.8/3.8=10	HYD-IAMF#2: Flood Protection-This section indicates elevation of bridge crossings at least 3 feet above the high-water surface elevation to provide adequate clearance for floating debris, or as required by local agencies. It is unclear how a minimum of 3 feet above the high-water surface elevation as a design standard that would minimize the effects of pier placement on floodplain and floodways.	CDFW-Megan Evans	2/16/21					
37	Appendix 2-E/P-2-E-24; Hyd 3.8/3.8-10	HYD-IAMF#3: Prepare and Implement a Construction Stormwater Pollution Prevention Plan – This section discusses the SWPPP including channel dewatering and other activities that fall under CDFW jurisdiction These plans need to be submitted to CDFW for approval during the 1600 section process. The location, extent of dewatering and discharges, and environmental impacts from these activities have not been described in the EIR/EIS, nor have they been analyzed in regards to potential special status species and habitat impacts. Since these actions may impact special status species and their associated habitats and requires the submission of a Lake and Streambed Alteration Notification to CDFW for these activities. CDFW recommends the Biological Resources section of the DEIR/EIS be revised to further describe and analyze these potential activities and related biological impacts.	CDFW-Megan Evans	2/16/21					
38	Appendix 2-E/P-2-E-25; Bio 3.7/3.7.19; Hyd 3.8/3.8-11	HYD-IAMF#5: Tunnel Boring Machine Design and Features- The feature does not provide enforceable actions or identify how the measure minimizes impact. Please update to provide a clear actions that are measurable and enforceable.	CDFW-Megan Evans	2/16/21					
39	Appendix 2-E/P-2-E-27; Bio 3.7/3.7.19; Hyd 3.8/3.8-11	HYD-IAMF#7: Grouting- CDFW recommends the language in this feature be strengthened so required steps and actions are not interpreted as optional.	CDFW-Megan Evans	2/16/21					
		Section 3.7 Biological and Aquatic Resources							
40	Bio 3.7.1/3.7-7	Aquatic Resources-The statement in this section of CDFW 1600 jurisdiction is not accurate. The definition provided in the EIR/EIS does not encompass all streams that may be impacted in the Project area; therefore, CDFW advises the definition of stream in the EIR/EIS be modified to incorporate sufficient parameters that these (eposodic?) waterways will be captured by the definition and into analyzing potential impacts to CDFW lakes and streams.	CDFW-Megan Evans	2/16/21					
41	Bio 3.7.1/3.7-11	CDFW protection of migratory birds has been updated to strengthened 3513. Changes include "as designated in the MBTA" prior to January 20, 2017. CDFW recommend the information be updated for the DEIR/EIS	CDFW-Megan Evans	2/16/21					
42	Bio 3.7/3.7-12	This section states: "Therefore, there would be no inconsistencies between the project alternatives and these federal and state laws and regulations. The California HSR System as a whole, including the Palmdale to Burbank Project Section, is consistent with all federal and state laws and implementing regulations listed in Section 3.7.2.1," Comment: There are sections within the HSR system that are shown to be under local control. Would the HSR be responsible for overseeing those sections? For example, bird safe measures in existing transportation ROW. If not have those sections been properly analyzed in this document?							
43	3.7.4.1/3.7-13	Auxiliary RSA - It should be noted that while both CNDDB/Rarefind programs are excellent tools, the databases are populated through voluntary submittal of positive detections and therefore are only as effective as the information included/submitted. Thus, areas of unsurveyed land may have undocumented occurrences of special-status species. As a result, it is expected that the outcome of the query underestimates the locations and probable detections of special status species within and adjacent to the proposed construction footprint.	CDFW-Megan Evans	2/17/21					

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44	Bio 3.7/3.7-13	Special-Status Plant RSA—The special-status plant RSA includes the Build Alternative footprint plus a 100-foot buffer around the Build Alternative footprint to evaluate impacts on special-status plant resources (including special-status plant communities / special-status plants and protected trees [e.g., Joshua trees]). Comment: CDFW recommends staging/lay down areas and spoil sites are included on the footprint and identified in the document. Built alternative imply's the final footprint. If lay down areas and spoil sites aren't included before the buffer is implimented some areas would have no buffer for plants and reduced buffers in other location (depending on sites and location of additional features).	CDFW-Megan Evans	2/16/21					
45	3.7/3.7-16	Figure 3.7-3 Please include access to the site, equipment ingress and egress, and movement around the work site in figures of the footpriont	CDFW-Megan Evans	2/16/21					
46	3.7/3.7-17	Figure 3.7-4 CDFW recommends including buffer limits. The figure is presented in a way that makes it difficult to gather important information.	CDFW-Megan Evans	2/16/21					
47	3.7.4.4/3.7-21	Field Surveys- All surveys listed discuss restricted access but don't identify what percentage of area was accessible for surveys and if they were protocol surveys. Please state the percentage to allow for an understanding that only a portion of the alignment was surveyed. It should be acknowledged that limitations in access could underestimate potential impacts.	CDFW-Megan Evans	2/17/21					
48	3.7.4.4/3.7-21	Constraints and Predictive Modeling – This section states "In regard to the special-status plant RSA, review of publicly accessible aerial imagery was conducted of the entire RSA including areas without permission to enter. Where practicable, surveyors conducted visual assessments from the public right-of-way (ROW) and adjoining properties." The EIR/EIS should identify the parameters were used to determine "practicable". For example, was there a percentage of ground visible that was required? A specific distance from the road? How were specific plants identified or were they not included in the inventory?	CDFW-Megan Evans	2/17/21					
49	3.7.4.4/3.7-22	How will this be addressed to prevent significant impacts not discussed due to lack of information from the site? How will the potential for impacts to protected species not observed due to inability to survey be addressed? How can the HSR Authority have confidence in the findings in this document are accurate? Please address these questions and provide details in the document.	CDFW-Megan Evans	2/17/21					
48	3.7.4.4/3.7-23; BARTR 5.3.7.4/5-15	Delineation of Aquatic Resources - Introduction. Aquatic features were delineated by reviewing existing background resources, analyzing aerial photographs, conducting field surveys where practicable, and performing investigations from adjacent public ROW. Please define this term. Were limits to field surveys strictly due to access? What other parameters were included to determine if field surveys were practicable? Were aerial photographs from drought years, the rainy season, or the blooming season? Please identify the limitations with the sources used. The BARTR states: "Potential CDFW jurisdictional areas were evaluated following the guidance of standard practices by CDFW personnel." But the Biological Resources section 3.7 of the EIR/EIS only discusses federal standard. CDFW recommends including specifics of how delineation of CDFW regulated areas were identified. CDFW also recommends including where the guidance came from. Was it from a staff report, during consultation, or a personal conversation with CDFW staff? Incorrect delineation underestimates the level of direct/indirect impacts to state jurisdictional features. Underestimating impacts to jurisdictional features may cause HSR Authority to reach incorrect findings and significance conclusions.	CDFW-Megan Evans	2/17/21					

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Comment #	Section # / Page # (e.g., 3.7-1)	Comment	Reviewer's Name	Date	Disposition	Response	Responder's Name	Date	Verification
49	3.7.4.4/3.7-24	Wildlife Corridor Assessment- The section states "The length of the at-grade HSR segment that traverses potentially suitable habitats of five focal species (mule deer, mountain lion, American badger, desert kit fox, and desert tortoise) to determine the proportion of the effect. These focal species represent the various geographic areas, and habitat types, and ranges of motion for different species throughout the core habitat RSA." Smaller species of mammals, reptiles and amphibians and birds should also be factored into the analysis to provide complete evalaution of potential impacts to wildlife corridors. It would be helpful to clarify is this assessment was part of the larger effort using Maxent modeling.	CDFW-Megan Evans	2/17/21					
50	3.7.4.4/3.7-24	Special-status plant – this section states "For all species determined to be groundwater dependent, the habitat suitability models developed for the project section were overlayed with the Tunnel Construction RSA and Risk Areas to review the amount of modeled suitable habitat that could be adversely affected for each species. All modeled suitable habitat within the Risk Areas was quantified and considered to be potentially affected." A summary of the methodology supporting the analysis should be brought forward into the EIR/EIS, including the detail/inputs for the modeling, with a specific reference for supporting technical data in the appendices.	CDFW - Megan Evans						
51	3.7.4.4/3.7-24	Vegetation Communities -This section states "Vegetation communities (habitats) within the RSA were evaluated to determine if they are groundwater dependent, either all or in part (Table 3.7-11). For all vegetation communities determined to be all or partially groundwater dependent, the communities were overlayed with the Tunnel Construction RSA and Risk Areas to quantify the amount of each type that could be adversely affected." Where is the documentation on the accuracy of this method? Please provide details and references in this document.	CDFW - Megan Evans						
51	3.7.4.4/3.7-25	Special-Status Wildlife- this section states "For all species determined to be groundwater dependent, the habitat suitability models developed for the project section (see Table 3.7-2) were overlaid with the Tunnel Construction RSA and Risk Areas to quantify the amount of modeled suitable habitat that could be adversely affected for each species. For species solely dependent on aquatic habitats, all modeled suitable habitat within the Risk Areas was quantified and considered to be potentially affected. For species with both aquatic and upland life cycle requirements, areas of aquatic and riparian habitat were quantified and considered to be potentially affected." Where is the documentation on the accuracy of this method? Please provide details and references in this document.	CDFW - Megan Evans						
52	3.7.5.2/3.7-27	3.7.5.2 Vegetation Communities and Landcover Types – This section states "Table 3.7-3 summarizes the types of vegetation communities between Palmdale and Burbank and lists the acreage of each affected vegetation community within each of the six Build Alternative RSAs". Earlier in the document lack of access to conduct surveys was discusses. Here It is not clear if modeling is the main way communities were identified. Due to lack of access and lack of information on if staff was able to ground truth results of the modeling there is potential for acreage amounts to be low. Is there a plan to conduct future surveys to get accurate acreage amounts? What will happen if it is discovered models were off and work will impact rare plants or sensitive communities not identified previously? Will the EIR be recirculated? Please include more details on measurable actions to be taken and information on the accuracy of the modeling used.	CDFW - Megan Evans	2/17/21					

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53	3.7.5.2/3.7-28	Joshua tree (JST) - The California Fish and Game Commission adopted emergency regulations to protect Joshua tree as a candidate threatened species under CESA on October 9, 2020. Possession or removal of any additional trees, portions or trees, and/or dead trees may require a permit under CESA. The EIR/EIS lacks analysis and mitigation for the temporal loss of Joshua tree. CDFW recommends the EIR/EIS be revised to include a thorough evaluation and discussion of impacts to, and mitigation for, Joshua trees.	CDFW - Megan Evans	2/17/21					
54	3.7/3.7-38	Figure 3.7-9 Vegetation Communities and Land Cover Types (Map 5 of 11) – The Alternative does not appear to be listed in the figure. CDFW recommends labeling all alternatives shown in the figure.	CDFW - Megan Evans	2/17/21					
55	3.7/3.7-42	Figure 3.7-13 Vegetation Communities and Land Cover Types (Map 9 of 11) – It is difficult to istinguish between roads, ridges, or desert wash based on the current symbology. CDFW recommends using symbology that clearly identifies resources so the maps easily convey information and may be more useful when evaluating project impacts.	CDFW - Megan Evans	2/17/21					
56	3.7.5.3/3.7-49	CDFW considers all subcategories of California walnut grove (Juglans californica) as a Sensitive Natural Community that are also classified by California Native Plant Society with a rarity ranking of S3.2, indicates that California walnut groves are "Moderately threatened in California (20 to 80 percent occurrences threatened / moderate degree and immediacy of threat)" (Sawyer et al. 2008). Not only are California walnut groves considered a Sensitive Natural Community, they are under an immediate threat in Southern California from local developmental pressures. The EIR/EIS should update the evaluate impacts to and mitigaiton for black walnut considering the information provided above.	CDFW - Megan Evans	2/17/21					
57	3.7.5.5/3.7-56; 3.7.6.4/3.7-109	California red-legged frog: The section states "The California Red-legged Frog Habitat Assessment and Protocol Survey (Authority 2017b) determined California red-legged frogs are unlikely to occur at these areas due lack of known populations, lack of observed individuals, and the scarcity of suitable breeding habitat " CDFW disagrees with this assessment California Red-Legged Frog - California Red-Legged Frog (CRLF) are known to occur within and in the vicinity of the Project area. CRLF require a variety of habitats including aquatic breeding habitats and upland dispersal habitats. Breeding sites of the CRLF are in aquatic habitats including pools and backwaters within streams and creeks, ponds, marshes, springs, sag ponds, dune ponds and lagoons. Additionally, CRLF frequently breed in artificial impoundments such as stock ponds (USFWS 2002). Breeding sites are generally found in deep, still or slow-moving water (greater than 2.5 feet) and can have a wide range of edge and emergent cover amounts. CRLF can breed at sites with dense shrubby riparian or emergent vegetation, such as cattails or overhanging willows, or can proliferate in ponds devoid of emergent vegetation and any apparent vegetative cover (i.e., stock ponds). CRLF habitat includes nearly any area within one to two miles of a breeding site that stays moist and cool through the summer; this includes non-breeding aquatic habitat in pools of slow-moving streams, perennial or ephemeral ponds, and upland sheltering habitat such as rocks, small mammal burrows, logs, densely vegetated areas, and even man-made structures (i.e., culverts, livestock troughs, spring-boxes, and abandoned sheds) (USFWS 2017c). Review of aerial imagery indicates that within and in the vicinity of the Project could serve as habitat to CRLF. The EIR/EIS does not appear to acknowledge the potential for CRLF to occur in the Project area and the potential for impacts. Please update impacts and evaluation of those impacts on CRLF.	CDFW - Megan Evans	2/17/21					

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58	3.7.5.8/3.7-85	Figure 3.7-38 Significant Ecological Areas within the RSA. CDFW recommends using the same terms throughout the document, especially on figures, to convey information consistently and accurately.	CDFW - Megan Evans	2/17/21					
59	3.7.5.8/3.7-86	Essential Fish Habitat - Although the term is defined on page 4, and appears throughout the document, this is the first time the anadromous fish is mentioned as requirement. CDFW recommend specifying EFH only relates to anadromous fish habitat everywhere the term appears in the EIR/EIS.	CDFW - Megan Evans	2/17/21					
60	3.7.5.9/3.7-86	Significant Ecological Areas: San Andreas Significant Ecological Area – This section states: "SR14A, E1A, and E2A Build Alternative alignments would travel approximately 300 feet east of Una Lake, thereby avoiding the lake." There are several species, including birds, where effects to nesting and other behavior could be up to 500 feet or greater. The use of the 300-feet from a SEA land use designation should not be the only metric to evaluate impacts and determine significance. CDFW recommend impacts to Una Lake be reevaluated and avoidance and minimization measures be included in the document for these alternatives.	CDFW - Megan Evans	2/17/21					
61	3.7.5.11/3.7-87	Protected Trees. This section states "However, the majority of protected trees present, besides those of unknown type, are landscape, ornamental, or nonnative trees, which are less ecologically significant because they do not provide natural habitat or are less likely to provide preservation value for native species" Please reference where this is information is from. It should be noted that non-native trees are used by Swainson's hawk (SWHA) for nesting therefore the value for compensation of a non-native nesting tree is the same as a native nesting tree species. SWHA exhibit high nest-site fidelity year after year and CDFW considers removal of known SWHA nest trees, even outside of the nesting season, a potentially significant impact under CEQA. Regardless of nesting status or tree species, if potential or known SWHA nest trees are removed, CDFW recommends they be replaced with an appropriate native tree species, planted at a ratio of 3:1, in an area that will be protected in perpetuity, to reduce impacts to SWHA from the loss of nesting habitat.	CDFW - Megan Evans	2/17/21					
62	3.7.5.12/3.7-88	Wildlife Movement Corridors- This section states: "Movement along the Palmdale to Burbank Project Section alignment is constrained around Antelope Valley to the north and the San Fernando Valley to the south because these areas are highly urbanized. Existing wildlife movement is limited in these areas, and the Palmdale to Burbank Project Section would have few impacts on the already limited wildlife movement localized to urban centers." This paragraph appears to disregard wildlife movement through urban areas and the importance of the urban/wildlands interface. Open areas within urban areas provide habitat for wildlife moving through urban areas. CDFW recommends the EIR/EIS include more supporting information on the urban/wildland interface and identify if there are possible areas within the urban setting where wildlife may be impacted. It is important to note that although restrictions to movement may exist, the project should this it would not exacerbate an existing situatin with constraints. It is noted that viaducts and features are currently proposed within urban areas that would provide some ability for movement.	CDFW - Megan Evans	2/17/21					

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63	3.7.6.3/3.7-98	Impact Bio#1: This section states "The duration of temporary impacts to special-status plants would depend on the hydrologic conditions, subsurface conditions, and amount of groundwater inflow into the tunnel, none of which can be precisely estimated at this time as discussed under Impact HWR#5 in Section 3.8, Hydrology and Water Resources." CEQA does not provide for future analysis for this type of CEQA document. Future monitoring, assessment, and proposed mitigation needs to be evaluated prior to the state of the project. This paragraph discussed temporary impacts continuing for five years. CDFW does not consider 5 years to constitute a temporary impact. CDFW recommends mitigation be proposed, and if impacts to special -status plants do not occur HSR Authority can request release from the mitigation requirements.	CDFW - Megan Evans	2/17/21					
64	3.7.6.3/3.7-107	This paragraph discusses future mitigation if needed. "Implementation of the Water Resources AMMP set forth in BIO-MM#93 would minimize impacts that occur and, if necessary, provide compensatory mitigation for unavoidable impacts to surface aquatic resources including special status plant habitat. What are the parameters to determine if it is necessary? As written, this measure dos not seem enforceable.	CDFW - Megan Evans	2/17/21					
65	3.7.6.3/3.7-107	BIO-MM#2 Relocation is not considered effective mitigation and does not have a high success rate. If avoidance can't be done compensatory mitigation will likely be required. Removal, seed collection and relocation of special-status plant species are actions of take. A permit, 2081 (a) and (b) is required.	CDFW - Megan Evans	2/17/21					
66	3.7.6.3/3.7-107	BIO-MM#4 Typically avoidance measure avoid impact not reduce impacts. Please rework this measure so it is clear if impacts will be avoided or reduced.	CDFW - Megan Evans	2/17/21					
67	3.7.6.3/3.7-107	BIO-MM#5 It is unclear what is being done in this measure. As written this measure doesn't appear to provide avoidance, minimization, or mitigation. Please rewrite this measure so there are clear actions that are enforceable.	CDFW - Megan Evans	2/17/21					
68	3.7.6.3/3.7-107	BIO-MM#6 This measure should provide some measures to evaulate its effectiveness. CDFW recommends the plan be submitted to CDFW for review and comment. As currently written, this measure does not appear to provide avoidance, minimization, or mitigation.	CDFW - Megan Evans	2/17/21					
69	3.7.6.3/3.7-107	BIO-MM#32 Restore Temporary Riparian Habitat Impacts - Please provide details of how this would be accomplished. As currently written, this measure does not identify clear actions that are enforceable and does not offset the impact identified.	CDFW - Megan Evans	2/17/21					
70	3.7.6.3/3.7-107	BIO-MM#33 Restore Aquatic Resources Subject to Temporary Impacts. Please provide details of how this will be accomplished. As currently written, this measure does not identify clear actions that are enforceable and does not offset the impact identified.	CDFW - Megan Evans	2/17/21					
71	3.7.6.3/3.7-107	BIO-MM#34 Monitor Construction Activities. Please provide details of how this will be accomplished. As currently written, this measure does not identify clear actions that are enforceable and does not offset the impact identified.	CDFW - Megan Evans	2/17/21					
72	3.7.6.3/3.7-108	BIO-MM#38 Compensate for Impacts on Listed Species. Please provide details including acreage, type of compensation. Impacts of compensation and not restoration or avoidance should be fully analyzed for this document. If the project could result in take of listed species. we recommend that the project proponent seek appropriate state and federal permit authorization.	CDFW - Megan Evans	2/17/21					

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COMMENT & RESPONSE LOG

Project: CHSR – Palmdale - Burbank - P-B | **Updated:** 02/21/21 | **WBS: 7.3.2**

Submittal: Admin Draft EIR/EIS for Cooperating Agency Review

Agency Comments					Responses				
Comment #	Section # / Page # (e.g., 3.7-1)	Comment	Reviewer's Name	Date	Disposition	Response	Responder's Name	Date	Verification
73	3.7.6.3/3.7-108	BIO-MM#50: Implement Measures to Minimize Impacts During Off-Site Habitat Restoration: These measures should be specific and address the impact. As written, this measure doesn't seem to provide avoidance, minimization, or mitigation. Please rewrite this measure so there are clear actions that are enforceable.	CDFW - Megan Evans	2/17/21					
74	3.7.6.3/3.7-108	BIO-MM#53: Prepare a Compensatory Mitigation Plan for Species and Species Habitat. Please provide details on what will be included in the plan.	CDFW - Megan Evans	2/17/21					
75	3.7.6.3/3.7-108	BIO-MM#54: Prepare and Implement an Annual Vegetation Control Plan. Please identify what impact this measure is proposed to mitigate. Information on what is included and how it will be implemented should be provided.	CDFW - Megan Evans	2/17/21					
76	3.7.6.3/3.7-108	BIO-MM#55: Prepare and Implement a Weed Control Plan. Please identify what impact this measure is proposed to mitigate. Information on what is included and how it will be implemented should be provided.	CDFW - Megan Evans	2/17/21					
77	3.7.6.3/3.7-108	BIO-MM#56: Conduct Monitoring of Construction Activities. Please rewrite this measure to identify that a qualified person will implementhe construction activities.	CDFW - Megan Evans	2/17/21					
78	3.7.6.3/3.7-108	BIO-MM#61: Establish and Implement a Compliance Reporting Program. This measure should include more detail on what the program will include and who the information will be given to. As written, this measure doesn't seem to provide any avoidance, minimization, or mitigation actions that are enforceable.	CDFW - Megan Evans	2/17/21					
79	3.7/General	Overall comment on all BIO-MM - All measures are vague and do not appear enforceable. They should clearly identify what impacts they are intended to avoid, reduce or mitigate, be enforceable, identify a reporting entity and have a timeframe for implementation.	CDFW - Megan Evans	2/17/21					
80	3.7.6.4/3.7-116	Impact BIO#2: Project Construction would Affect Special-Status Amphibian Habitat. This measures is vague and does not appear enforceable. It should clearly identify what impact it is intended to avoid, reduce or mitigate, be enforceable, identify a reporting entity and have a timeframe for implementation. Impacts to listed species, includling mountain yellow-legged frog, could result in potential take. If the project could result in take of listed species, we recommend that the project proponent seek appropriate state and federal permit authorization.	CDFW - Megan Evans	2/17/21					
81	3.7.6.4/3.7-116	BIO-MM#36: Install Aprons or Barriers within Security Fencing. Installation of aprons or barriers to prevent special-status amphibians from entering the ight-of-way (ROW) would prevent injury or death that have the potential to occur during project construction. As a result, impacts on special-status amphibian species would be reduced. Impacts to listed species from this measure could result in potential take. If the project could result in take of listed species, we recommend that the project proponent seek appropriate state and federal permit authorization.	CDFW - Megan Evans	2/17/21					
82	3.7.6.4/3.7-117	BIO-MM#63: Work Stoppage. This measure should provide more detail including will work stoppages be allowed, who will be authorized to stop work, will rge resource agencies be notified, what needs to occur before work can restart, and how will refusal to stop be addressed?	CDFW - Megan Evans	2/17/21					

Submission 4512 (Ruby Kwan-Davis, California Department of Fish and Wildlife, South Coast Region 5, Habitat Conservation Planning Program, December 1, 2022) - Continued

CALIFORNIA HIGH-SPEED RAIL PROJECT
Palmdale to Burbank Project Section

DRAFT QA/QC PLAN
APPENDIX F

4512-10575

COMMENT & RESPONSE LOG

Project: CHSR – Palmdale - Burbank - P-B | **Updated:** 02/21/21 | **WBS: 7.3.2**

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Agency Comments					Responses				
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83	3.7.6.4/3.7-117	BIO-MM#76: Implement Wildlife Rescue Measures. The Project Biologist would follow all relevant guidelines for all special-status species including special-status amphibian species, and therefore reduce impacts on special-status amphibian species. This measure should identify which guideline are to be used and who approves them. As currently written, this measure doesn't seem to provide any avoidance, minimization, or mitigation. Please rewrite this measure so there are clear actions that are enforceable.	CDFW - Megan Evans	2/17/21					
84	3.7.6.4/3.7-121-123	Impact BIO#3 Least Bell's Vireo, Southwestern Willow Flycatcher, and Tricolored Blackbird: CDFW recommends impacts within 500-1,000 feet of Lake Una be analyzed. If there are legitimate reasons the buffer is reduced (for example, topography and/or vegetation) they should be discussed and supported by scientific literature. If the project could result in take of listed species, we recommend that the project proponent seek appropriate state and federal permit authorization.	CDFW - Megan Evans	2/17/21					
85	3.7.6.4/3.7-123	Direct and Indirect Impacts; Surface Construction: Please be aware impacts during nesting season are not allowed and several of the species listed above will require HSR authority to secure an ITP.	CDFW - Megan Evans	2/17/21					
86	3.7.6.4/3.7-129	CEQA Conclusion. It is our understand the EIR/EIS intended to cover both construction and operation of the P-B portion of HSR. Please include discussion on avoidence, minimization, and mitigation for impacts to birds during operations and routine maintence.	CDFW - Megan Evans	2/17/21					
87	3.7.6.4/3.7-129	BIO-MM#16, #17, #18, #20, and #21, as currently proposed, do not appear to have any details on survey protocol, buffer distances, or other measures that can be enforced or reported on. If the project could result in take of listed species, we recommend that the project proponent seek appropriate state and federal permit authorization.	CDFW - Megan Evans	2/17/21					
88	3.7.6.4/3.7-130	SWHA, state-listed, 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 they should be replaced, through appropriate take authorization, with native tree species of proper size at a minimum ratio of 4:1 in an area that will be protected in perpetuity to reduce impacts to loss of nesting habitat.	CDFW - Megan Evans	2/17/21					
89	3.7.6.4/3.7-130	Please provide more information on CMP. For example, information on what is included, specific impacts, who will review the plan, how it will be implemented, reporting and a timeframe should be provided. Mitigation should within the region of impact unless otherwise agreed to by the resources agencies, in particular where listed species and streambed areas are involved.	CDFW - Megan Evans	2/17/21					
90	3.7.6.4/3.7-130	BIO-MM#65: Conduct Pre-Construction Surveys and Monitoring for Bald and Golden Eagles- It is unclear what the protective buffer that is being proposed in this measure. The measure mentions conducting surveys within 4 miles of any construction area for both species. The measure also states, " this mitigation measure is anticipated to be effective because it would require identification and documentation of active Golden Eagle nests within 0.4 mile of the proposed construction area, and establishes protective buffers around active nest." Would the 0.4 miles from the proposed construction area be the protective buffer area? Please provide clarification and include in your document. This measure should also identify what federal permits would be required to address potential impacts to bald and golden eagle.	CDFW - Megan Evans	2/17/21					

CALIFORNIA High-Speed Rail Authority | U.S. Department of Transportation Federal Railroad Administration

F - 15
12/28/2022

Submission 4512 (Ruby Kwan-Davis, California Department of Fish and Wildlife, South Coast Region 5, Habitat Conservation Planning Program, December 1, 2022) - Continued

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Agency Comments					**Responses**				
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91	3.7.6.4/3.7-131	BIO-MM#66: Implement Avoidance Measures for Active Eagle Nests- This measure states that the buffers around occupied nests may be reduced if the Project Biologist determines that smaller buffers would be sufficient to avoid impacts to nesting eagles. Golden Eagle and Bald Eagle are State Fully protected species, reducing buffers could result in take of the species while the nest is occupied. Fully Protected Species: CDFW has jurisdiction over fully protected species of birds, mammals, amphibians, reptiles, and fish, pursuant to Fish and Game Code sections 3511, 4700, 5050, and 5515. Take of any fully protected species is prohibited, and CDFW cannot authorize their take except under the provisions of a Natural Communities Conservation Plan (NCCP), 2081.7 or a Memorandum of Understanding for scientific purposes. This measure should also identify what federal permits would be required to address potential impacts to bald and golden eagle.	CDFW - Megan Evans	2/17/21					
92	3.7.6.4/3.7-131	BIO-MM#67: Provide Compensatory Mitigation for Loss of Eagle Nests- This measure proposes if construction surveys identify active eagle nests in permanent impacts area, the Authority in consultation with USFWS, will develop a nest relocation or replacement plan for the affected nest(s). CDFW would need to be consulted as well. Relocation of an active nest is considered take. As stated previously Bald Eagle and Golden Eagle are State Fully protected Species. CDFW has jurisdiction over actions that may result in the disturbance or destruction of active nest sites or the unauthorized take of birds. Sections of the Fish and Game Code that protect birds, their eggs and nest 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).	CDFW - Megan Evans	2/17/21					
93	3.7.6.4/3.7-131	BIO-MM#68: Avoid and minimize Impacts to White-tailed kite- This measure states that the Project Biologist will establish a 0.25 mile no disturbance buffer unless the Project Biologist determines that a smaller buffer would be sufficient. In the event that special-status raptor species are found within ½-mile of Project sites, implementation of avoidance measures is warranted. CDFW recommends that a qualified wildlife biologist be on-site during all ground-disturbing/ construction related activities and that a ½-mile no disturbance buffer be put into effect. If the ½-mile no disturbance buffer cannot feasibly be implemented, contacting CDFW to assist with providing and implementing additional avoidance measures is recommended. The EIR/EIS should demonstrate how potential impacts to this State of California Fully Protected Species would be avoided.	CDFW - Megan Evans	2/18/21					
94	3.7.6.4/3.7-131	BIO-MM#69: Conduct Surveys and Implement Avoidance Measures for active Tricolored Blackbird Nest colonies- This measure proposes construction activities will avoid the nesting colonies during breeding season (March 15-July 31) to the extent practicable within 300 feet from the colony, consistent with the CDFW's Staff Guidance Regarding Avoidance of Impacts to Tricolored Black Bird Breeding Colonies on Agricultural Fields in 2015. Any deviation to this guidance should be approved in consultation with CDFW.	CDFW - Megan Evans	2/18/21					
95	3.7.6.4/3.7-131	BIO-MM#70: Provide Compensatory Mitigation for Impacts on Tricolored Blackbird Habitat. These mitigation methods would minimize construction-related effects on tricolored blackbird nesting, roosting, and foraging habitat, such that impacts on individuals and habitat of this special-status bird species would be offset. If the project could result in take of listed species, we recommend that the project proponent seek appropriate state and federal permit authorization. Documentation on the location, extent and magnitude of the impact to listed species and the measures proposed to avoid, minimize, and fully mitigate for impacts consisent with Title 14, Section 783.2 requirements are needed for CDFW to make a determination on proposd take of listed species through an ITP.	CDFW - Megan Evans	2/18/21					

Submission 4512 (Ruby Kwan-Davis, California Department of Fish and Wildlife, South Coast Region 5, Habitat Conservation Planning Program, December 1, 2022) - Continued

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96	3.7.6.4/3.7-131	Implement Avoidance of Nighttime Light Disturbance for California Condor. These measures would minimize the use of lighting that may pose a risk or otherwise disturb or harm condors during construction, such that impacts on individuals and habitat of this fully protected bird species would be avoided. BIO-MM#72: Implement Avoidance of Nighttime Light Disturbance for California Condor- This measure proposes that the Project Biologist will be on site during nighttime light use to determine if the light proposes a risk or otherwise disturbs or harms condors. California condor is a State of California Fully Protected Species. The EIR/EIS should demonstrate how the project construction/operation and any proposed avoidance and mitigation measures would not result in take of this species. Additional detail on the timing, reporting, response if observed and monitoring locations should be included.	CDFW - Megan Evans	2/18/21					
97	3.7.6.4/3.7-131	BIO-MM#74: Implement Bird Nest and Avian Special-Status Species Avoidance Measures for Helicopter-Based Construction Activities. These avoidance measures would reduce helicopter collisions that may cause injury or death to bird species in the area, such that impacts on bird species, including special-status bird species, would be reduced. Please provide additional detail, including how actions will be implemented and permitted, frequency, timing/season, reporting, and enforcement.	CDFW - Megan Evans	2/18/21					
98	3.7.6.4/3.7-131	BIO-MM#76: Implement Wildlife Rescue Measures. This measure would reduce construction effects on individual wildlife, including special-status birds. The measure should provide additional detail on needed permitting, methodology, location of receiving site, reporting and other information.	CDFW - Megan Evans	2/18/21					
99	3.7.6.4/3.7-131	BIO-MM#79; 80; 81; and 82. Conduct Surveys for Coastal California Gnatcatcher, least Bell's vireo; Southwest willow flycatcher; and Westen yellow-billed cuckoo respectively. These measures should describe the additional federal and state permitting that are associated with these species and reference the respective protocols for each. Gnatcatcher is know to occur within the the P-B alignment, including in Bee Canyon where the crossing for Soledad Canyon would occur.	CDFW - Megan Evans	2/18/21					
100	3.7.6.4/3.7-132	The first two paragraphs appear to conflict regarding tunneling and impacts to birds that rely on habitat supported by groundwater and should be updated.	CDFW - Megan Evans	2/18/21					
101	3.7.6.4/3,7-133	Final bridge design plans were not available at the time of this analysis, but construction could require work below the ordinary high-water mark of waterbodies that support, or have the potential to support, special-status fish species. Dewatering during construction, if needed, could result in the stranding and mortality of special-status fish. Pile-driving in channels when surface water is present could lead to behavioral changes, injury, and possible death from vibrations. Comment: Unarmored threespine stickleback (UTS) is a State of California fully protected species. Pursuant to Fish and Game Code, fully protected species may not be taken or possessed at any time and no licenses or permits may be issued for their take except for collecting these species for necessary scientific research, relocation of the bird species for the protection of livestock, or if they are a covered species whose conservation and management is provided for in a Natural Community Conservation Plan (NCCP). The Authority previously consulted with CDFW on potential methods to avoid impacts to UTS for construction and operation including modeling efforts for the 25 and 50 year flood events for Santa Clara River and location of piling ans wetted channel conditions. The EIR/EIS should reflect this prior consultation and describe how construction and operation of the project from the Soledad Canyon crossing would avoid impacts to UTS.	CDFW - Megan Evans	2/18/21					

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102	3.7.6.4/3.7-138	BIO-MM#34: Monitor Construction Activities within Jurisdictional Waters.	CDFW - Megan Evans	2/18/21					
103	3.7.6.4/3.7-138	BIO-MM#50: Implement Measures to Minimize Impacts During Offsite Habitat Restoration. As currently written, this measure is vague and needs specific action and enforcement.	CDFW - Megan Evans	2/18/21					
104	3.7.6.4/3.7-139	BIO-MM#84: Implement Worker Environmental Awareness Program for Unarmored Threespine Stickleback. CDFW recommends this measure be strengthened with the inclusion on requirement, measurable actions, and planned enforcement of the required actions.	CDFW - Megan Evans	2/18/21					
105	3.7.6.4/3.7-139	BIO-MM#85: Establish Construction Zones and Environmentally Sensitive Areas.	CDFW - Megan Evans	2/18/21					
106	3.7.6.4/3.7-140	BIO-MM#89: Implement Construction Measures for unarmored threespine stickleback Avoidance.	CDFW - Megan Evans	2/18/21					
107	3.7.6.4/3.7-140	BIO-MM#90: Prepare a Construction Groundwater Dewatering Plan.	CDFW - Megan Evans	2/18/21					
108	3.7.6.4/3.7-144	Impact BIO#6 Project Construction would Affect Special-Status Mammal Habitat.: Mountain Lion - It should be noted that on June 25, 2019, a petition to list the mountain lion (Puma concolor), Southern California/Central Coast Evolutionarily Significant Unit (ESU) in Southern and Central California as Threatened or Endangered pursuant to CESA (Fish & G. Code §§ 2050 et seq.) was submitted to the California Fish and Game Commission. Specifically, the petitioners requested listing as a "threatened species" for the ESU comprised of the following recognized mountain lion subpopulations: 1) Santa Ana Mountains; 2) Eastern Peninsular Range; 3) San Gabriel/San Bernardino Mountains; 4) Central Coast South (Santa Monica Mountains); 5) Central Coast North (Santa Cruz Mountains); and 6) Central Coast Central. On April 16, 2020 the Fish and Game Commission determined that the petitioned action "may be warranted" and established mountain lion within the proposed ESU as a candidate species under CESA. As a candidate species, mountain lion within the proposed ESU now has all the protections afforded to an endangered species under CESA. CDFW advises including and referencing recent linkage studies on mountain lion that includes these six subpopulations of mountain lions in California. The Project alignment transects the Southern California ESU and two of the genetically distinct mountain lion subpopulations (San Gabriel/San Bernardino and Eastern Peninsular Range). Therefore, CDFW advises analyzing Project impacts to the subpopulations, including issues with connectivity and fragmentation of habitat. Based on this analysis, CDFW recommends the EIR/EIS include analysis of impacts and identification of feasible avoidance, minimization, and mitigation measures to reduce impacts to mountain lion to less than significant. CDFW recommends the EIR/EIS include an update for mountain lion and include an updated analysis of impacts and proposed mitigation measures similar to the approach taken for the Supplemental Environmental Impact Report for the San Jose to Merced section of HSR.	CDFW - Megan Evans	2/18/21					
109	3.7.6.4/3.7-152	BIO-MM#96: Conduct Pre-Construction Surveys and Implement Avoidance and Minimization Measures for Mountain Lion Dens. These measures would avoid or minimize disturbance from construction to mountain lion individuals. Please include more details on measurable actions to avoid and minimize impacts to mountain lion. CDFW recommends the EIR/EIS include an update for mountain lion and include an updated analysis of impacts and proposed mitigation measures similar to the approach taken for the Supplemental Environmental Impact Report for the San Jose to Merced section of HSR.	CDFW - Megan Evans	2/18/21					
110	3.7.6.4/3.7-185	Permanent High-Speed Rail Infrastructure The Palmdale to Burbank Project Section: Wildlife Corridor Assessment Report (Authority 2019c). This section discusses existing barriers to wildlife movement.	CDFW - Megan Evans	2/18/21					

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111	3.7.6.4/3.7-185	Tunnels and viaducts provide essentially unimpeded connectivity for wildlife and would have no impact on wildlife movement and connectivity. This statement should be clarified to address wildlife entering tunnels, train strikes in tunnels, wildlife trapped in tunnels.	CDFW - Megan Evans	2/18/21					
112	3.7.6.4/3.7-186	The second paragraph concludes that as long as there is a viaduct / tunnel / at-grade transition and / or drainage structure within this interval length, wildlife movement would not be impeded. These locations should be clearly mapped and include monitoring and reporting to evaluate effectiveness during the life of the project. Conditions when drainage structures are unavailable due to rain events or other events where structures are flooded or plugged should also be factored into the analysis and design of facilities intended to serve wildlife movement. Wildlife connectivity impacts continue to be a significant concern for CDFW considering the length of the Project, the impermeability of the track system, duration of construction activity, and long-term operation. The EIR/EIS project description includes several design features to avoid or minimize impacts to biological resources for the P-B section including specific lengths and locations for viaducts, walls, and embankments. Changes to design features after the CEQA review process such as site-level changes from viaducts to full embankments, longer embankments, reducing viaducts, and additional walls, could result iadditional significant impacts not identified and analyzed in the EIR/EIS (CEQA Guidelines §15162).	CDFW - Megan Evans	2/18/21					
113	3.7.6.4/3.7-189	Figure 3.7-50 WCA Impermeability Map: SR14A Build Alternative (applies to all Alternatives). The urban/open space boundary still provides some habitat for wildlife and can include pockets of open space within the urban area that is so important for wildlife moving through built environments from one open space to another. Wildlife connectivity impacts continue to be a significant concern for CDFW considering the length of the Project, the impermeability of the track system, duration of construction activity, and long-term operation.	CDFW - Megan Evans	2/18/21					
114	3.7.6.4/3.7-190	E1 Segment 2 and E1 Segment 3 would not benefit from wildlife crossings as they would be adjacent to existing constraints, making crossing opportunities neither feasible nor beneficial. However, there is one potential wildlife crossing (at E1 Segment 1) that is feasible and would improve the permeability of the alignment. An existing drainage culvert would be modified to accommodate wildlife movement. CDFW recommends that any such modifications to existing drainage culverts within the P-B alignment allow wildlife movement during rain/storm events.	CDFW - Megan Evans	2/18/21					
115	3.7.6.4/3.7-195	Fencing or steep riprap would be used to guide or funnel wildlife toward the crossing entrance. Is there risk of entanglement/entrapment if wildlife tries to go over or under?	CDFW - Megan Evans	2/18/21					
116	3.7.6.4/3.7-196	BIO-MM#58: Establish Environmentally Sensitive Areas and Nondisturbance Zones. Please include details how these areas would be identified and specifics of what support special-status species means. For example, is it habitat-based or do species need to be observed, what steps does the biologist need to take/follow, does it apply to ongoing maintenance and repair work?	CDFW - Megan Evans	2/18/21					

Submission 4512 (Ruby Kwan-Davis, California Department of Fish and Wildlife, South Coast Region 5, Habitat Conservation Planning Program, December 1, 2022) - Continued

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117	3.7.6.4/3.7-196	BIO-MM#64: Establish Wildlife Crossings. Implementation of wildlife crossings along impermeable portions of the alignment would ensure that movement along wildlife movement corridors is not constrained. Therefore, impacts on wildlife movement corridors would be reduced. Wildlife connectivity impacts continue to be a significant concern for CDFW considering the length of the Project, the impermeability of the track system, duration of construction activity, and long-term operation. The EIR/EIS project description includes several design features to avoid or minimize impacts to biological resources for the P-B section including specific lengths and locations for viaducts, walls, and embankments. Changes to design features after the CEQA review process such as site-level changes from viaducts to full embankments, longer embankments, reducing viaducts, and additional walls, could result iadditional significant impacts not identified and analyzed in the EIR/EIS (CEQA Guidelines §15162).	CDFW - Megan Evans	2/18/21					
118	3.7.6.4/3.7-196	BIO-MM#77: Implement Wildlife Height Requirements for Enhanced Security Fencing. The EIR/EIS should include information on the location, height and type of fencing along the project corridor to demonstrate how it would be implemented, monitored and reporting. This information could be combined with culverts, viaducts, wildlife crossings and other types of movement areas to help support decision making on wildlife movement during construction and operation.	CDFW - Megan Evans	2/18/21					
119	3.7.6.4/3.7-196	BIO-MM#78: Install Wildlife Jump-outs. This measure should include more details on the spacing and crossing specifications. Wildlife connectivity impacts continue to be a significant concern for CDFW considering the length of the Project, the impermeability of the track system, duration of construction activity, and long-term operation.	CDFW - Megan Evans	2/18/21					
120	3.7.6.4/3.7-196	BIO-MM#83: Measures Intended to Reduce, Avoid, and Minimize Effects on Animal Movement. This isn't mitigation or avoidance. This measure doesn't change anything or direct work. This is strictly informative of what HSR Authority hopes to accomplish.	CDFW - Megan Evans	2/18/21					
121	3.7.6.4/3.7-196	Collectively, the above mitigation measures would provide avoidance, minimization, and compensatory mitigation for the impact such that it would no longer result in substantial adverse effects on wildlife movement corridors. As a result, this impact would be less than significant for all six Build Alternatives. Wildlife connectivity impacts continue to be a significant concern for CDFW considering the length of the Project, the impermeability of the track system, duration of construction activity, and long-term operation. The EIR/EIS identifies a few undercrossing facilities (e.g., viaducts, culverts, other features) that can be utilized by some wildlife species. However, CDFW continues to believe the Authority needs to address significant wildlife connectivity issues in the EIR/EIS.	CDFW - Megan Evans	2/18/21					
122	3.7.6.4/3.7-210	BIO-MM#27. Based on the information currently provided in the EIR/EIS, CDFW does not agree with this measure as currently proposed. It should be updated to reflect that active maternity roosts or hibernacula be protected until all young are able to fly and are no longer dependant on their mother and afterwards features are replaced.	CDFW - Megan Evans	2/18/21					

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Comment #	Section # / Page # (e.g., 3.7-1)	Comment	Reviewer's Name	Date	Disposition	Response	Responder's Name	Date	Verification
123	3.7.6.4/3.7-210	BIO-MM#25 Pre-construction bat surveys - CDFW recommends the Authority conduct pre-construction surveys to establish areas of occupancy the year prior to the start of construction in each construction area and that surveys be conducted by a minimum of two CDFW qualified biologists and consist of: • Two spring surveys (April through June) and two winter surveys (November through January). Each survey consists of one dusk emergence survey (start one hour before sunset and last for three hours), followed by one pre-dawn re entry survey (start one hour before sunrise and last for two hours), and one daytime visual inspection of all potential roosting habitat on the Project site. Conduct each survey within one 24-hour period. Focus visual inspections on the identification of bat sign (i.e., individuals, guano, urine staining, corpses, feeding remains, D28 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.	CDFW - Megan Evans	2/18/21					
124	3.7.6.4/3.7-210	BIO-MM#26 Implimentation of bat avoidance. The EIR/EIS should clearly identify when avoidance would not be feasible and provide more information to support why it would not be feasible. Based on the information currently provided, CDFW is unlikely to agree to disturbance and relocation of any maternity roosts. Surveys for bats should be initiated far enough away from start of work to evaluate if maternity roosts are present within the footprint and buffer to allow for bats to migrate out of the area on their own. This typically would require surveys one to two years in advance of project activities.	CDFW - Megan Evans	2/18/21					
125	3.7.6.4/3.7-212	BIO-MM#38: Compensate for Impacts on Listed Plant Species. CDFW is unlikely to agree to a 1:1 ratio for impacts to statee-listed plants.	CDFW - Megan Evans	2/18/21					
126	3.7.6.4/3.7-213	BIO-MM#43: Compensatory Mitigation for Impacts on Habitat for Loss of Swainson's Hawk Nesting trees. This measure does not propose mitigation ratios to offset the removal of nesting trees. It should be noted that non-native trees are used by Swainson's hawk for nesting therefore the value for compensation of a non-native nesting tree is the same as a native nesting tree species. SWHA exhibit high nest-site fidelity year after year and CDFW considers removal of known SWHA nest trees, even outside of the nesting season, a potentially significant impact under CEQA. Regardless of nesting status or tree species, if potential or known SWHA nest trees are removed, CDFW recommends they be replaced with an appropriate native tree species, planted at a ratio of 3:1, in an area that will be protected in perpetuity, to reduce impacts to SWHA from the loss of nesting habitat	CDFW - Megan Evans	2/18/21					
127	3.7.6.4/3.7-213	Due to the nature of riparian habitats CDFW will evaluate species and life histories to determine the best mitigation rations. HSR should prepare for higher ratios in some areas. Who decides how mitigation will be addressed? Will the regulatory agency with jurisdiction determine which mitigation option is chosen? Please reword to make this measure identify how the decision will be made. Conflicts could create difficulties during permitting.	CDFW - Megan Evans	2/18/21					

Submission 4512 (Ruby Kwan-Davis, California Department of Fish and Wildlife, South Coast Region 5, Habitat Conservation Planning Program, December 1, 2022) - Continued

4512-10575

COMMENT & RESPONSE LOG

Project: CHSR – Palmdale - Burbank - P-B | **Updated:** 02/21/21 | **WBS: 7.3.2**

Submittal: Admin Draft EIR/EIS for Cooperating Agency Review

Agency Comments					Responses				
Comment #	Section # / Page # (e.g., 3.7-1)	Comment	Reviewer's Name	Date	Disposition	Response	Responder's Name	Date	Verification
128	3.7.6.4/3.7-214	The following ratios will be used for compensatory mitigation unless a higher ratio is required pursuant to regulatory authorizations issued under Section 404 of the CWA and / or the PorterCologne Act:. Please include CDFW jurisdiction, 1600, special status species, fish impacts in this measure.	CDFW - Megan Evans	2/18/21					
129	3.7.6.4/3.7-214	BIO-MM#47: Prepare and Implement a CMP for Impacts: CDFW recommend the Authority begin the process of identifying mitigation sits and securing credits. CDFW provided input to the Authority on potential locations for conservation and continues to emphasize the preference to mitigate species impacts within the CDFW region or county that they occur.	CDFW - Megan Evans	2/18/21					
130	3.7.6.4/3.7-215	BIO-MM#52: Conduct Blainville's Horned Lizards, San Joaquin Coachwhip, and Silvery Legless Lizards Monitoring, and Implement Avoidance and Minimization Measures. Please identify what protocols or established practices will be used as part of this measure. CDFW continues to recommend that the EIR/EIS include a measure to require site-specific biological assessments to validate the modeled potential for impacts to CEQA sensitive species (CEQA Guidelines Sections 15380, 15063 and 15065).	CDFW - Megan Evans	2/18/21					
131	3.7.6.4/3.7-215	CDFW recommends any plan be reviewed by CDFW and any CDFW comments be addressed and incorporated into the final plan. BIO-MM#53: Prepare a CMP for Species and Species Habitat The Authority will prepare a CMP that sets out the compensatory mitigation that will be provided to offset permanent and temporary impacts on federal and state-listed species and their habitat,...	CDFW - Megan Evans	2/18/21					
132	3.7.6.4/3.7-216	BIO-MM#54: Prepare and Implement an Annual Vegetation Control Plan. Vegetation control plans need to address impacts to nesting birds. April 1st is within nesting birds season. CDFW cannot authorize impacts to nesting birds. Impacts to nesting birds, their eggs, and young could result in fines. Mitigation for unauthorized impacts would be required.	CDFW - Megan Evans	2/18/21					
133	3.7.6.4/3.7-218	BIO-MM#61: Establish and Implement a Compliance Reporting Program. Personnel needs to be approved prior to conducting surveys. Experience of those conducting surveys needs to be submitted to CDFW prior to the start of survey work. Please include evaluation of the effectiveness of mitigation measures and recommendations to improve protection of resources in the annual reports. Reports should include common species observed and impacts of the work on those species.	CDFW - Megan Evans	2/18/21					
134	3.7.6.4/3.7-220	BIO-MM#62: Prepare Plan for Dewatering and Water Diversions. Fully Protected species are in streams within the P-B route. Please Identify steps that will be taken to make sure an ITP is not needed for protected species.	CDFW - Megan Evans	2/18/21					
135	3.7.6.4/3.7-230	BIO-MM#94: Avoid Direct Impacts on Monarch Butterfly Host Plant. CDFW recommends avoiding host plants regardless if adults are present.	CDFW - Megan Evans	2/18/21					
136	3.7.6.4/3.7-230	BIO-MM#95: Provide Compensatory Mitigation for Impacts on Monarch Butterfly Habitat The Authority, would provide compensatory mitigation at a minimum of 1:1 ratio for occupied.	CDFW - Megan Evans	2/18/21					
137	3.7.6.4/3.7-252	BIO-MM#35: Implement Transplantation and Compensatory Mitigation Measures for Protected Trees. CDFW does not consider transplanting trees a reliable method to replace habitat in many cases and is most appropriate when combined with avoidance of mature trees and preservation of habitat.	CDFW - Megan Evans	2/18/21					

Submission 4512 (Ruby Kwan-Davis, California Department of Fish and Wildlife, South Coast Region 5, Habitat Conservation Planning Program, December 1, 2022) - Continued

4512-10575

COMMENT & RESPONSE LOG

Project: CHSR – Palmdale - Burbank - P-B | **Updated:** 02/21/21 | **WBS: 7.3.2**

Submittal: Admin Draft EIR/EIS for Cooperating Agency Review

Agency Comments					Responses				
Comment #	Section # / Page # (e.g., 3.7-1)	Comment	Reviewer's Name	Date	Disposition	Response	Responder's Name	Date	Verification
138	3.7.6.4/3.7-253	Of the remaining non-urban at-grade segments that exceed the recommended crossing interval threshold length mentioned above, none would benefit from wildlife crossings because they would be adjacent to existing constraints, making crossing opportunities neither feasible or beneficial. Wildlife connectivity impacts continue to be a significant concern for CDFW considering the length of the Project, the impermeability of the track system, duration of construction activity, and long-term operation. The EIR/EIS identifies a few undercrossing facilities (e.g., viaducts, culverts, other features) that can be utilized by some wildlife species. However, CDFW continues to believe the Authority needs to address significant wildlife connectivity issues in the P-B alignment.	CDFW - Megan Evans	2/18/21					
139	3.7.6.4/3.7-254	Special-Status Bird Habitat Suitable habitat for special-status birds associated with aquatic habitat is limited within the RSA. Impacts to special status bird habitat goes beyond tunneling. Please include all impacts to special status bird habitat in all alignments.	CDFW - Megan Evans	2/18/21					
140	3.7.6.4/3.7-256	Designated Critical Habitat. Tunnel construction and associated groundwater depletion is not expected to affect critical habitat. Critical habitat for three species, southwestern willow flycatcher, Santa Ana sucker, and arroyo toad is located within No/Low Risk Areas, however effects are expected to be negligible within these areas. No critical habitat for any species is located within the Moderate or High Risk Areas identified for all six Build Alternatives. It would be helpful to bring forward/summarize the Low Risk criteria to support why they are excluded. Impacts associated with the Project are primarily estimated using habitat suitability modeling. CDFW continues to recommend that the EIR/EIS include measures to require site-specific biological assessments to validate the modeled potential for impacts to sensitive species, especially where access was not available and surveys where not performed. This type of assessment will be needed to support any LSA or ITP for the P-B alignment.	CDFW - Megan Evans	2/18/21					
141	3.7.6.4/3.7-257	Table 3.7-35 Summary of CEQA Significance Conclusions and Mitigation Measures for Biological and Aquatic Resources Based on the information currently presented in the EIR/EIS and technical appendices, CDFW disagrees the mitigation measures proposed would reduce impacts to a level of less than signifcant. The comments provided are intended to assist in acheiving measures that are scientific, measurable, acheivable, reportable and time-bound that could reduce many impacts to less than significant.	CDFW - Megan Evans	2/18/21					
142	3.7.6.4/3.7-269	Hydrological Resources. Based on the information currently provided, CDFW does not agree groundwater impacts lasting several years can be considered temporary impacts in every case. We recommend evaluating a worst case scenario for groundwater impacts that span several years and identify appropriate mitigation which could include monitoring, reporting and preservation of habitat.	CDFW - Megan Evans	2/18/21					

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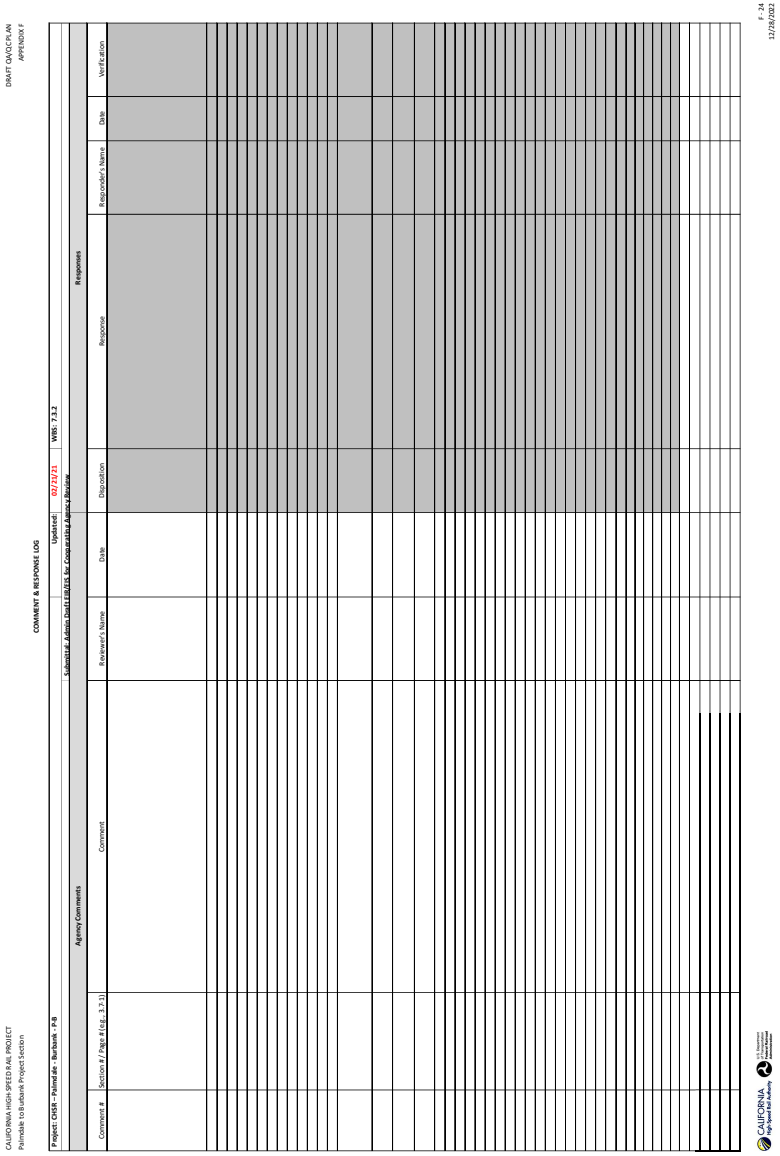

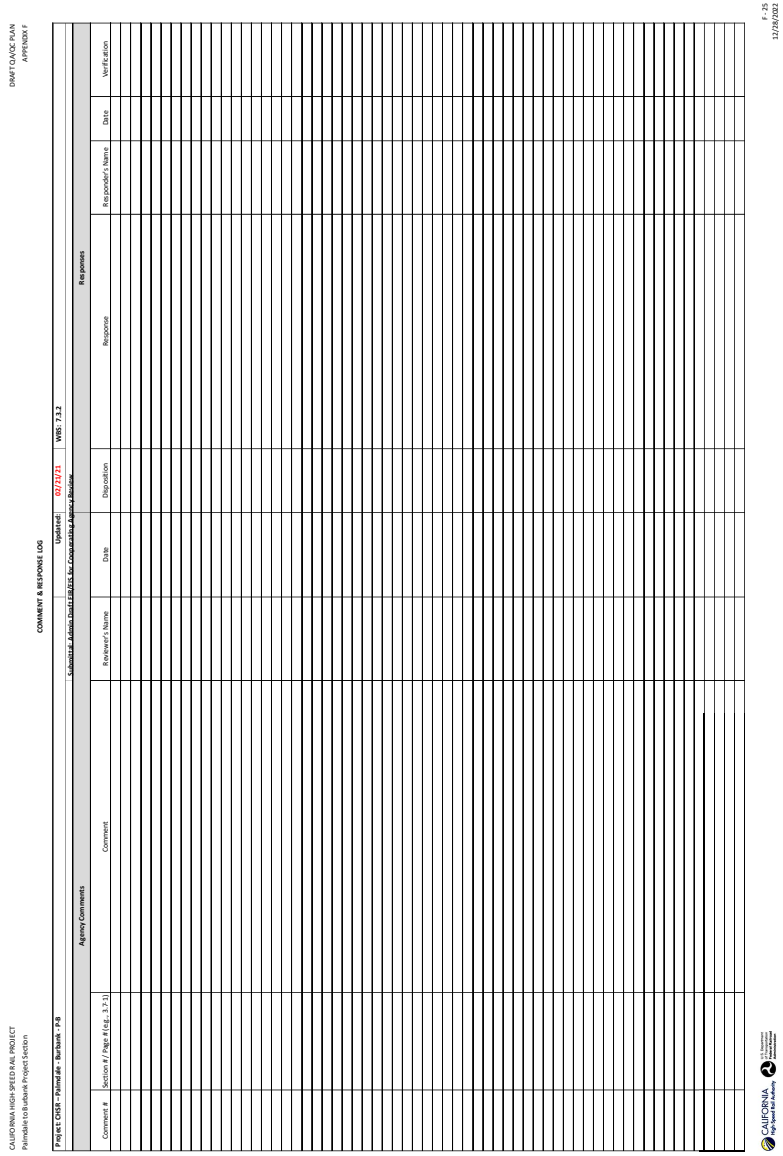

Submission 4512 (Ruby Kwan-Davis, California Department of Fish and Wildlife, South Coast Region 5, Habitat Conservation Planning Program, December 1, 2022) - Continued

CALIFORNIA HIGH-SPEED RAIL PROJECT
Palmdale to Burbank Project Section

DRAFT QA/QC PLAN
APPENDIX F

COMMENT & RESPONSE LOG

Project: CHSR – Palmdale - Burbank - P-B					Updated: 02/21/21	WBS: 7.3.2			
Submittal: Admin Draft EIR/EIS for Cooperating Agency Review									
Agency Comments						Responses			
Comment #	Section # / Page # (e.g., 3.7-1)	Comment	Reviewer's Name	Date	Disposition	Response	Responder's Name	Date	Verification

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EDMUND G. BROWN JR., Governor
CHARLTON H. BONHAM, Director

August 15, 2018

Mark McLaughlin, Director
California High-Speed Rail Authority Environmental Compliance
770 L Street, Suite 620
Sacramento, California 95814
Mark.Mcloughlin@hsr.ca.gov

4512-10576

Subject: Santa Clara River Crossing (Soledad Canyon) – Data Request for the SR-14 Alternative Alignment of High-Speed Rail – Palmdale to Burbank

Dear Mr. McLaughlin:

The Department attended a site visit for the SR-14 Alternative Alignment - Santa Clara River Crossing (Soledad Canyon) on January 25, 2017 with the High-Speed Rail Authority (Authority) and their consultants. The crossing location is currently under consideration by the Authority for the Palmdale to Burbank (P-B) segment of the High-Speed Rail (HSR). The site visit was a follow-up to the initial office meeting held on December 8, 2016. The California Department of Fish and Wildlife (CDFW) appreciates the early consultation and the ability to engage in the discussions and evaluations of any crossing. We further appreciate the opportunity to provide comments and recommendations regarding California's fish and wildlife resources, including state-fully-protected species, California Endangered Species Act (CESA) listed species, and streambed alteration that occur in the area of the proposed bridge crossing. Route and design alternatives for the P-B segment remain under consideration by the Authority; therefore, the design plans for the Santa Clara River crossing are preliminary. CDFW requests additional opportunities to consult and visit the project site once design plans reach additional milestones.

The January 2017 site visit was an important and useful first step for CDFW to view actual site conditions and begin our assessment of the area, species, and habitat concerns associated with any proposed crossing over Santa Clara River. The site visit however, was limited due to access constraints to most of the Santa Clara River crossing area that restricted the ability to conduct a complete field review. Prior to the alternative selection, 65% bridge design milestone, and bridge design selection, CDFW's engineering team and scientific staff request further evaluation of the plans and project site.

During the January 2017 site visit, the following items were discussed:

- The Authority indicated that the HEC-RAS modelling for the bridge will be submitted for Department review, but the model has not been calibrated. CDFW expressed concerns about using such a model and recommends that it be calibrated. The HEC-RAS modelling for the bridge should include the bridge and study designs; the assumptions for the designs; studies; models, and other supporting documents/studies, including use of HEC-RAS 18 to support the scour analysis.
- Studies (e.g., hydrologic, hydraulic, or scour) are needed to inform the no-water-contact construction approach necessary to completely avoid impacts to the state-fully-protected unarmored threespine stickleback *(Gasterosteus aculeatus williamsoni).* Prior studies on such construction focused on low-flow conditions in the dry summer months and only addressed constructability. The studies for the Santa Clara River crossing will need to

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address a range of flow conditions during construction as well as post-construction activities.

- The northwest segment of the bridge alignment that crosses Bee Canyon has many sensitive biological resources constraints, including but not limited to, streams and federal- and state-listed species, (e.g., slender-horned spine flower [*Dodecahema leptoceras*] and California gnatcatcher [*Polioptila californica californica*]). The bridge design and supporting documentation should include design plans for the grading required for this area.

The Department recommends the Authority provide the below requested information and studies for the bridge to demonstrate complete avoidance of the unarmored threespine stickleback:

- Detailed description of the geomorphic setting and why the bridge design is appropriate for the setting;
- Geomorphic assessment of stream bed/bank stability, including potential influence of downstream mining operations and other cultural activities on stream stability;
- Potential for debris loads or jams at bridge site;
- Sediment transport and scour analysis (cannot rely on existing non-engineered gabion-like structures);
- Hydraulic studies (including model files, boundary conditions and other model parameters) showing water surface profiles and average channel velocities for the design flows and the 50- and 100-year flows;
- Geotechnical assessment likely will be necessary to ensure project design is structurally appropriate; and,
- Design drawings showing site topography, control points, dimensions of bridge in plan, elevation, and longitudinal profile and cross-sectional views.

Thank you again for the opportunity to participate in the site visit for the SR-14 Alternative Santa Clara River Bridge crossing that is being considered by the Authority for the P-B segment of the HSR. CDFW looks forward to reviewing additional information on the crossing and providing further review and recommendations to assist the Authority.

If you have any comments or concerns regarding this correspondence, please contact Erinn Wilson, Environmental Program Manager at (562) 342-7172 or Erinn.Wilson@wildlife.ca.gov.

Sincerely,

Edmund Pert
Regional Manager
South Coast District

ec: Kavita Mehta, CHSRA Los Angeles
Steve Letterly, CHSRA Los Angeles
Randy Rodriguez, CDFW Los Alamitos
Tim Hovey, CDFW Santa Clarita
Ryan Mathis, CDFW Sacramento
John Wesling, CDFW Sacramento

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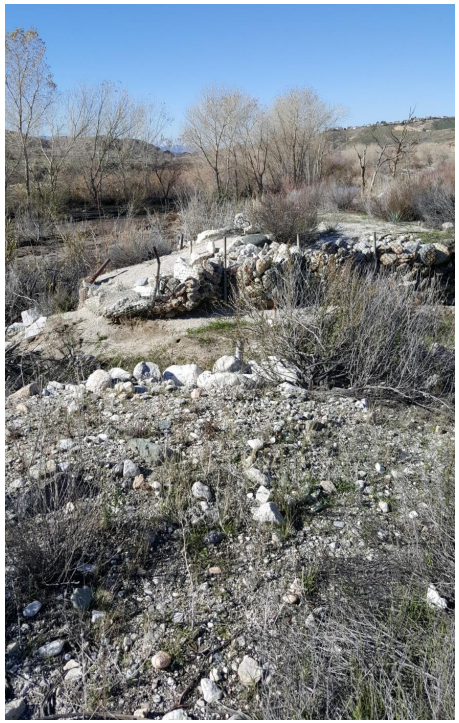
4512-10577

Attachment C: Gabion-like structures in Santa Clara River near the proposed Santa Clara River Crossing. Images captured on January 25, 2017 (images provided by the U.S Army Corp of Engineers).



Submission 4512 (Ruby Kwan-Davis, California Department of Fish and Wildlife, South Coast Region 5, Habitat Conservation Planning Program, December 1, 2022) - Continued

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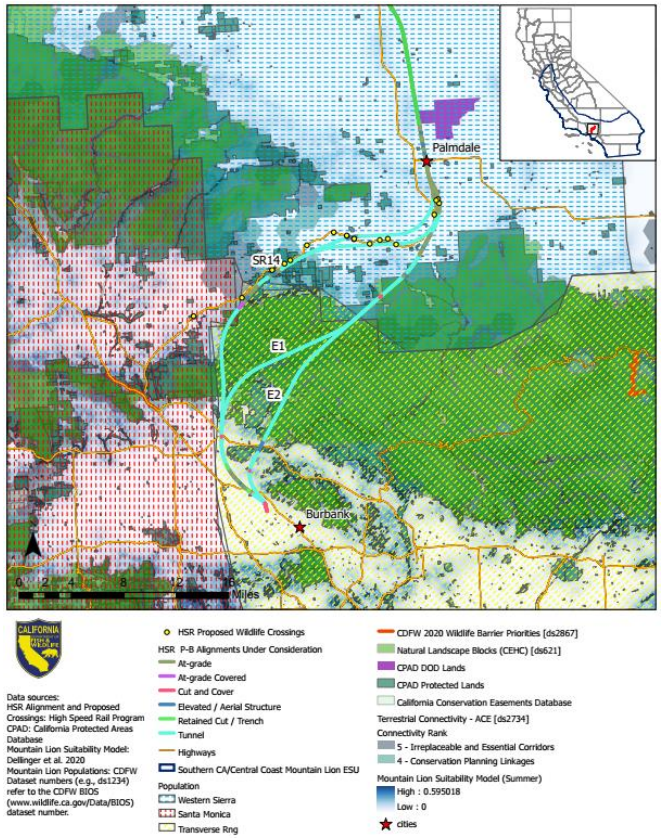
4512-10578

Attachment D: Wildlife Crossings (yellow points) CDFW proposes the High-Speed Rail Authority construct in order to mitigate for the Project's impact on wildlife connectivity.



Submission 4512 (Ruby Kwan-Davis, California Department of Fish and Wildlife, South Coast Region 5, Habitat Conservation Planning Program, December 1, 2022) - Continued

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4512-10579

Attachment E: Draft Mitigation and Monitoring Reporting Plan

CDFW recommends the following language to be incorporated into the Project's environmental document.

Biological Resources (BIO)			
Mitigation Measure (MM) or Recommendation (REC)		**Timing**	**Responsible Party**
REC #1- Impacts on Unarmored Threespine Stickleback- Consult with CDFW	The Authority should consult with CDFW regarding the Project's impact on UTS. Santa Clara River Crossing. The Authority should reinitiate consultation with CDFW and resolve CDFW's concerns regarding the Project's impact on UTS. The Authority should provide the below requested information and studies for the bridge to demonstrate complete avoidance of UTS: 1) Detailed description of the geomorphic setting and why the bridge design is appropriate for the setting; 2) Geomorphic assessment of stream bed and bank stability, including potential influence of downstream mining operations, cultural activities, and the Project's impact on Bee Canyon; 3) Potential for debris or log jams at the bridge site; 4) Sediment transport and scour analysis (which should account for the removal of the existing non-engineered gabion-like structures); 5) Hydraulic studies (including model files, boundary conditions, and other model parameters) showing water surface profiles and average channel velocities for the design flows and the 50- and 100-year flows; 6) Detailed description of potential dewatering plans;	Prior to finalizing CEQA document	California High-Speed Rail Authority (Authority)

Submission 4512 (Ruby Kwan-Davis, California Department of Fish and Wildlife, South Coast Region 5, Habitat Conservation Planning Program, December 1, 2022) - Continued

4512-10579

	7) Geotechnical assessments to ensure bridge design is structurally appropriate; and 8) Design drawings showing site topography, control points, and dimensions of bridge in plan, elevation, and longitudinal profile and cross-sectional views. The Authority should continue to collaborate with CDFW to develop a bridge design that would avoid impacts on UTS.		
REC #2-Impacts on Unarmored Threespine Stickleback-Revise and Recirculate EIR/EIS	Following consultation with CDFW, the Authority should revise the EIR/EIS to discuss how the Santa Clara River Crossing, electrical utility corridor at Lang Station Road, utility corridor along Arrastre Canyon Road, and tunnels on the south side of Santa Clara River have been designed to completely avoid impacts on UTS. In addition, the EIR/EIS should describe all activities that may occur during the construction, operation, and maintenance phases; how frequently operation and maintenance activities would occur; describe all impacts on UTS that may occur; and provide any measures to avoid impacts on UTS. The Authority should recirculate a revised EIR/EIS to provide the public an opportunity to review and comment on the Project's impact on UTS, and how the Santa Clara River Crossing, electrical utility corridor at Lang Station Road, utility corridor along Arrastre Canyon Road, and tunnels have been designed to avoid those impacts.	Prior to finalizing CEQA document	Authority
REC #3-Impacts on Unarmored Threespine Stickleback-Hydroacoustic Impacts on Fish	The Authority should revise the EIR/EIS to provide a thorough discussion of what methods the Project would use to install piles and piers, how UTS may be affected, and how those methods would avoid effects on UTS. The EIR/EIS should provide the following information: 1) A description of the driver type(s) that would be used and methodology;	Prior to finalizing CEQA document	Authority

Submission 4512 (Ruby Kwan-Davis, California Department of Fish and Wildlife, South Coast Region 5, Habitat Conservation Planning Program, December 1, 2022) - Continued

4512-10579

	2) A description of sound pressure levels and sound exposure levels; 3) An analysis of hydroacoustic impacts to nearby surface waters resulting from each bent and column as shown in the February 2021 Bridges and Elevated Structures Plans; 4) A description of injury levels for fish larger and less than two grams; 5) A discussion of whether the Project would result in injury and/or behavioral effects on fish; 6) A discussion of why driver type(s) would avoid effects to UTS; 7) A plan to attenuate sound pressure; and 8) A plan to monitor hydroacoustics. The Authority should provide additional measures to mitigate for the Project's significant impacts on fish not previously identified.		
REC #4-CESA Incidental Take Permit and CEQA	The Project's CEQA document should address all the Project's impact on CESA endangered, threatened, and/or candidate species. The Project's CEQA document should also specify a mitigation monitoring and reporting program that will meet the requirements of an ITP. Take proposed to be authorized by CDFW's ITP should be described in detail in the Project's CEQA document. Also, biological mitigation monitoring and reporting proposals should be of sufficient detail and resolution to satisfy the requirements for an ITP.	Prior to finalizing CEQA document	Authority
REC #5-Impacts on Mountain Lion and Wildlife Movement-Gene Flow	The Authority should revise Section 3.7 Biological and Aquatic Resources to discuss the Project's impact (and level of significance) on mountain lion from the standpoint of genetic exchange between the Southern California/Central Coast ESU subpopulations.	Prior to finalizing CEQA document	Authority
REC #6-Impacts on Mountain Lion	The Authority should discuss the Project's cumulative impacts on mountain lion with genetic exchange effects included as part of the discussion. The EIR/EIS should provide data to support the	Prior to finalizing	Authority

Submission 4512 (Ruby Kwan-Davis, California Department of Fish and Wildlife, South Coast Region 5, Habitat Conservation Planning Program, December 1, 2022) - Continued

4512-10579

and Wildlife Movement-Cumulative Impacts	Authority's conclusion regarding the Project's impact on mountain lion and level of significance.	CEQA document	
REC #7-Impacts on Mountain Lion and Wildlife Movement-Cumulative Impacts	If SR14 or SR14A is the preferred alternative, the Authority should minimize impacts to mountain lion and wildlife movement by modifying the at-grade segment of HSR adjacent to Bee Canyon to a tunnel or at-grade covered segment. If this alternative is not feasible or the Authority declines to adopt it, the Authority should revise the EIR/EIS to provide a meaningful evaluation and analysis as to why the Authority cannot modify the at-grade segment.	Prior to finalizing CEQA document	Authority
REC #8-Lake and Streambed Alteration Agreement and CEQA	To minimize additional requirements by CDFW pursuant to Fish and Game Code section 1600 *et seq*. and/or under CEQA, the Project's CEQA document should fully identify the potential impacts to the stream or riparian resources and provide adequate avoidance, mitigation, monitoring, and reporting commitments for issuance of an LSA Agreement.	Prior to finalizing CEQA document	Authority
REC #9-Impacts on Aquatic Resources-Field Evaluations	The Authority should conduct field evaluations to confirm impacts to streams for the Project once Right-of-Way is secured by the Authority (also see Additional Recommendation #32).	Prior to submitting an LSA Notification	Authority
REC #10-Impacts on Aquatic Resources-Impacts on Streams from Nighttime Construction Lighting	The EIR/EIS should discuss the Project's impacts on streams from the standpoint of any nighttime lighting that may be needed during construction. The EIR/EIS should provide measures to mitigate for any significant effects on streams from construction lighting.	Prior to finalizing CEQA document	Authority
REC #11-Impacts on Aquatic Resources-	The Authority should make the following revisions: 1) In Table 1 Metrics for Potential Effects Indicators, under U.S. Forest Service Standard 45, a reduction in water level	Prior to finalizing CEQA document	Authority

Submission 4512 (Ruby Kwan-Davis, California Department of Fish and Wildlife, South Coast Region 5, Habitat Conservation Planning Program, December 1, 2022) - Continued

4512-10579

Appendix 3.8-C Water Resources Adaptive Management and Monitoring Plan for Potential Hydrologic Effects within the Angeles National Forest	is not the only change that could lead to effects on aquatic resources. Therefore, the Authority should also monitor water pressure, flow, velocity, water quality, and wetted perimeter. 2) In the same Table, under U.S. Forest Service Standards 47 and 11, the Authority should reduce the trigger level from a current proposal of 20 percent. In addition, the Authority should provide location and species-specific trigger levels. Trigger levels should be set lower where there are Sensitive Natural Communities or special-status species present in order to rapidly detect and respond to tunneling impacts on those resources. Lastly, the Authority should set a trigger not only for canopy cover reduction but also species richness, density, and abundance.		
REC #12-Impacts on Aquatic Resources-Trigger Level	The EIR/EIS should discuss the new trigger level pertaining to U.S. Forest Service Standards 47 and 11 and discuss why trigger levels proposed would adequately detect and respond to impacts on aquatic resources in an efficient and effective manner.	Prior to finalizing CEQA document	Authority
REC #13-Impacts on Aquatic Resources-Appendix 3.8-D Supplemental Water Demand Analysis for Potential Impacts Within the Angeles National Forest/San Gabriel Mountains	The Authority should provide documentation that there would be supplemental water available for the Project. Documentation should be provided in the EIR/EIS and the EIR/EIS should be recirculated so the public and agencies can review the feasibility of BIO-MM#94 and HWR-MM#4.	Prior to finalizing CEQA document	Authority

Submission 4512 (Ruby Kwan-Davis, California Department of Fish and Wildlife, South Coast Region 5, Habitat Conservation Planning Program, December 1, 2022) - Continued

4512-10579

National Monument			
REC #14- Impacts on Western Joshua Tree- Discuss Project Impacts on Western Joshua Tree	The Authority should conduct a focused western Joshua tree mapping survey. The Authority should update Section 3.7 Biological and Aquatic Resources to include a discussion of the Project's impact on western Joshua tree (see Recommendation #4 regarding CEQA for issuance of an ITP).	Prior to finalizing CEQA document	Authority
Rec #15- Impacts on Special-Status Plants and Sensitive Natural Communities	The EIR/EIS should discuss how BIO-MM#1 would avoid or minimize impacts on special-status plants and Sensitive Natural Communities.	Prior to finalizing CEQA document	Authority
Rec #16- Impacts on Special-Status Plants and Sensitive Natural Communities	The Authority should revise Table 3.7-4 in Section 3.7 Biological and Aquatic Resources to provide affected natural community names based on the Manual of California Vegetation.	Prior to finalizing CEQA document	Authority
Rec #17- Fully Protected Birds-	The Authority should revise the mitigation measures below in order to sufficiently avoid impacts on Fully Protected birds. • *Bald Eagle (Haliaeetus leucocephalus) and Golden Eagle (Aquila chrysaetos) (Eagles)*. Under BIO-MM#66, the Authority should specify that a 1-mile line-of-sight and 0.5-mile no line-of-sight no-work buffer is the minimum. Currently BIO-MM#66 allows this buffer to be reduced; however, the Authority should revise this to ensure that under no circumstances should buffers be reduced. Under BIO-MM#67, the Authority should include CDFW as a	Prior to finalizing CEQA document	Authority

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	regulatory agency that should be consulted if the Authority needs to develop a nest relocation or replacement plan. • *California Condor (Gymnogyps californianus)*. Under BIO-MM#16, the Authority should include CDFW as a regulatory agency that should be notified if the Authority becomes aware of or finds roosting California condors. Under BIO-MM#71, the Authority should include CDFW as a regulatory agency that should be notified prior to use of helicopters during construction where condors are present. Under BIO-MM#72, the Authority should provide criteria and thresholds it would use to determine, and how it would determine, whether Project-related nighttime lighting is posing a risk, disturbing, or harming. Then, the Authority should provide specific action(s) it would take to address those risks, disturbances, or harm. Finally, the Authority should provide details for how it would monitor whether mitigative action(s) are effective. • *White-Tailed Kite (Elanus leucurus)*. Under BIO-MM#68, the Authority should increase a 0.25-mile no-work buffer to 0.5-mile no-work buffer as the minimum, and under no circumstances should buffers be reduced.		
Rec #18-Swainson's Hawk	The Authority should revise BIO-MM#43 to provide a minimum of 2:1 compensatory mitigation so that there is no net loss of foraging habitat for Swainson's hawk. CDFW recommends 1:1 preservation and 1:1 creation/restoration for a net gain in foraging habitat. In addition, the Authority should provide the following information in the EIR/EIS to demonstrate that mitigation would be effective through adoption of performance standards: 1) Specific data and analyses that will be used to determine whether replacement habitat would provide functional foraging habitat and the quality of potential replacement habitat; 2) Definitions for "primary", "secondary", and "tertiary" foraging	Prior to finalizing CEQA document	Authority

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	habitat; 3) Explanation of how mitigation ratios were developed, especially if replacement habitat has yet to be identified and habitat functionality and quality at those locations has yet to be determined; 4) Explanation of how the Authority would determine if replacement habitat is similar to the acres of functional foraging habitat impacted; and 5) Explanation of how the Authority would assess the performance of functional replacement habitat and use by Swainson's hawk.		
Rec #19-Special-Status Passerine Birds	The Authority should increase avoidance buffers from 300 feet to 500 feet under BIO-MM#79 through 82. If the Authority is unable to avoid impacts on these listed species, the Authority should consult with CDFW and/or USFWS to determine if take authorization may be needed. Obtaining take authorization should be written into BIO-MM#79 and 82 as a requirement if impacts cannot be avoided. In addition, the Authority should revise BIO-MM#80, 81, and 82 to state that CDFW would also be consulted if the Project is unable to avoid impacts on least Bell's vireo, southwestern willow flycatcher, and western yellow-billed cuckoo. In addition, the Authority should provide compensatory mitigation for impacts on habitat.	Prior to finalizing CEQA document	Authority
Rec #20-Tricolored Blackbird Nest Colonies	The Authority should revise BIO-MM#69 as follows: "[…] If construction is initiated near suitable habitat during the nesting season, three surveys will be conducted ~~within 15~~ no more than 10 days prior to construction, with one of the surveys within 5 days prior to the start of construction. If active tricolored blackbird nesting colonies are identified, construction activities will be avoided within 300 feet of the nesting colonies during the breeding season (March 15 through July 31) to the extent practicable and consistent with the CDFW's *Staff Guidance Regarding Avoidance*	Prior to finalizing CEQA document	Authority

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	of Impacts on Tricolored Blackbird Breeding Colonies on Agricultural Fields (2015). ~~This minimum buffer may be reduced in areas with 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 from excessive noise or visual disturbance as determined by a Project Biologist experienced with tricolored blackbird. If tricolored blackbirds colonize habitat adjacent to construction after construction has been initiated, the Authority will reduce disturbance through establishment of buffers or sound curtains, as determined by the Project Biologist~~." <u>The 300-foot minimum no-work buffer shall 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. The Project Biologist shall reassess the nesting colony on a reoccurring basis to determine the extent of the breeding colony within 10 days of Project initiation. The Project Biologist shall immediately modify the 300-foot buffer to capture the entire colony if the extent increases</u>." <u>"In the event that a tricolored blackbird or their nesting colony is detected during surveys, the Authority shall consult with CDFW to discuss how to implement the Project and avoid take, or if avoidance is not feasible, to acquire an ITP, pursuant to Fish and Game Code section 2081(b), prior to any ground-disturbing activities</u>."		
Rec #21- BIO-IAMF#12: Design the Project to be Bird Safe	The Authority should address CDFW's concerns provided in the Overhead Contact System Bird Electrocution Configuration Working Group (Working Group) memo to the Authority. Then, the Authority should revise the EIR/EIS to discuss how the Project has been designed to be bird safe. The Authority should recirculate the EIR/EIS so the public and agencies may have necessary information to review and comment on the Project's long-term impact on birds.	Prior to finalizing CEQA document	Authority

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Rec #22- Deferred Mitigation	The Authority revise all mitigation measures so that they are enforceable in order to adequately mitigate for the Project's impact on biological resources.	Prior to finalizing CEQA document	Authority
Rec #23- BIO-MM#14: Conduct Pre-construction Surveys and Delineate Active Nest Buffers Exclusion Areas for Breeding Birds	The Authority should implement a 300-foot minimum buffer for all non-listed passerine species and 500-foot buffer for all non-listed raptors.	Prior to finalizing CEQA document	Authority
Rec #24- BIO-MM#53: Prepare a CMP for Species and Species Habitat	The Authority should provide a compensatory mitigation measure for each significantly impacted special-status species and their habitat. Mitigation measures should be specific, quantifiable, and enforceable. Mitigation measures should have specific goals to replace requisite habitat for each species in order to support self-sustaining populations.	Prior to finalizing CEQA document	Authority
Rec #25- BIO-MM#56: Conduct Monitoring of Construction Activities	The Authority should specify that a Project Biologist be on site daily during initial ground disturbing activities. After the area has been cleared, the Project Biologist should remain on site once a week or once every two weeks to continue to verify compliance with mitigation measures.	Prior to finalizing CEQA document	Authority
Rec #26- BIO-MM#61: Establish and Implement a Compliance Reporting Program	The Authority should specify that issues raised by agencies will be addressed immediately. All related construction and activities should be temporarily halted until the Project Biologist/Authority resolves agency concerns. The Authority should ensure that agency concerns are resolved.	Prior to finalizing CEQA document	Authority

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Rec #27- BIO-BIO-MM#76: Implement Wildlife Rescue Measures	The Authority should state what "guidelines" is being referenced.	Prior to finalizing CEQA document	Authority
Rec #28- Una Lake	The Authority should revise the EIR/EIS to clarify whether avoidance of Una Lake by 300 feet includes all Project components (i.e., double tracks, disturbance areas, staging areas, rights-of-way, drainage basins, roadways, and utility easements).	Prior to finalizing CEQA document	Authority
Rec #29- Alternatives	The Authority should consider CDFW's comments and perform additional analyses prior to finalizing the EIR/EIS and selecting a preferred alternative.	Prior to finalizing CEQA document	Authority
Rec #30- Project Design Changes	The Authority should conduct additional environmental review if Project design features change from what was described in the EIR/EIS. The Authority should incorporate site-specific review and consultation before construction to verify the extent/magnitude of impacts and mitigation are consistent with the EIR/EIS analysis.	Prior to finalizing CEQA document/ submitting LSA Notification/ submitting CESA ITP Application	Authority
Rec #31- Mitigating for Impacts within Region	The Authority should generally mitigate impacts within Los Angeles County or CDFW Region 5 when feasible to ensure no net loss of biological resources within the area where the Project would occur.	Prior to/during Project construction	Authority
Rec #32-Site-Specific Surveys	The Authority should provide site-specific biological assessments to support any LSA Notifications and/or CESA take authorization applications required for the Project.	Prior to submitting LSA Notification/ submitting CESA ITP Application	Authority

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Rec #33- Use of Pre-Construction/ Modified Protocol Surveys	The Authority should implement a two-pronged survey approach that consists of protocol then pre-construction verification surveys at appropriate times for a given species.	Prior to submitting LSA Notification/ submitting CESA ITP Application	Authority
Rec #334 Reporting Data	The Authority should submit information on special-status species to the CNDDB by completing and submitting CNDDB Field Survey Forms. Information on special-status native plant populations and sensitive natural communities, the Combined Rapid Assessment and Relevé Form should be completed and submitted to CDFW's Vegetation Classification and Mapping Program.	Prior to finalizing CEQA document	Authority
Rec #35- Reporting Data	The Authority should revise the Project's proposed Biological Resources Mitigation Measures and condition the environmental document to include mitigation measures recommended in CDFW's letter.	Prior to finalizing CEQA document	Authority
Mitigation Measure #1- Impacts on Unarmored Threespine Stickleback- Revise BIO-MM#85	The Authority shall prevent access to the wetted channel by using temporary flagging, fencing, and signage. Methods used to prevent access shall not cause additional erosion and scouring, allow sediment and debris buildup, and impede fish passage. In addition, the Authority shall implement a buffer of 50 feet from the wetted channel in order to protect the wetted channel during Project construction and activities adjacent to UTS.	Prior to finalizing CEQA document Prior to/during ground-disturbing activities and vegetation removal	Authority
Mitigation Measure #2- Impacts on Unarmored Threespine Stickleback-	The Authority shall specify what actions would be taken if water quality is being affected by bridge and bank stabilization-related concrete pouring activities. The Authority shall require monitoring reports be submitted monthly or as directed to CDFW. A report shall provide any fish mortalities observed due to poor water quality, water quality data, and any actions implemented in response to water quality issues.	Prior to finalizing CEQA document	Authority

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Revise BIO-MM#87		During ground-disturbing activities	
Mitigation Measure #3-Impacts on Unarmored Threespine Stickleback-Revise BIO-MM#88, 89, and 92	The Authority shall implement a 50-foot buffer in order to protect the wetted channel during Project construction and activities adjacent to UTS.	Prior to finalizing CEQA document Prior to ground-disturbing activities	Authority
Mitigation Measure #4-Impacts on Unarmored Threespine Stickleback-	The Authority shall require that a Construction Groundwater Dewatering Plan be submitted to CDFW for review, and that all CDFW's comments are resolved and addressed prior to finalizing and implementing a Construction Groundwater Dewatering Plan. The Construction Groundwater Dewatering Plan shall specify the following at a minimum: 1) a biological monitor shall monitor any dewatering effects on the wetted channel, 2) a biological monitor shall have authority to halt dewatering operations; 3) what effects would warrant halting dewatering operations, and 4) response actions in the event of negative impacts on the wetted channel, which shall include consultation with CDFW, revising the Construction Groundwater Dewatering Plan as appropriate, limiting the extent of excavation dewatering, or suspending construction until such time as regional groundwater conditions are more favorable for the construction to proceed.	Prior to finalizing CEQA document Prior to ground-disturbing activities	Authority
Mitigation Measure #5-Impacts on Mountain Lion and Wildlife Connectivity-	The Authority shall require wildlife crossings be constructed. The Authority shall require crossings to be constructed south of the California Aqueduct; east of Una Lake; and under State Route 14 to connect both sides of the San Gabriel-Castaic Linkage. In addition, the Authority shall include a design that establishes specific criteria for monitoring the performance of the crossings	Prior to finalizing CEQA document Prior to ground-	Authority

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Revise BIO-MM#64	(viaducts, undercrossing, overcrossings) for routine and ongoing use by mountain lion and its prey.	disturbing activities During Project implementation	
Mitigation Measure #6- Impacts on Mountain Lion and Wildlife Connectivity- Revise BIO-MM#77 and 78	The Authority shall require the Project Biologist or contractor to obtain CDFW's review and approval of fencing and wildlife escape plans that ensure avoidance of take of mountain lion. If mountain lion could become entangled in fencing resulting in injury or death, the Authority shall obtain appropriate take authorization from CDFW pursuant to Fish and Game Code section 2081 subdivision (b).	Prior to finalizing CEQA document Prior to ground-disturbing activities	Authority
Mitigation Measure #7- Impacts on Mountain Lion and Wildlife Connectivity- Revise BIO-MM#96	If known or potential mountain lion dens are identified or observed during pre-construction surveys, mountain lion dens will be assumed to have kittens present until the Project Biologist can document that they are not present and/or that the den is not being used. A non-disturbance buffer of at least 1,970 feet will be established around the known or potential den until the Project Biologist can document and confirm that the den is not occupied. If the den is determined to be occupied, then project activities in the defined buffer area would need to halt for two (2) months and a re-survey conducted to determine if the female has abandoned the den and relocated the kittens. The Project Biologist and Authority shall immediately consult with CDFW upon detection of an active den. Construction may proceed if the Project Biologist determines that the den is not being used by mountain lions.	Prior to finalizing CEQA document Prior to/during ground-disturbing activities	Authority

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Mitigation Measure #8- Impacts on Mountain Lion and Wildlife Connectivity- Wildlife crossing and land acquisition	If SR14 or SR14A is the preferred alternative, the Authority shall consult with CDFW to identify wildlife crossing opportunities and/or opportunities for land acquisition within the San Gabriel-Castaic Linkage. Wildlife crossing opportunities shall be reviewed and approved by CDFW and incorporated into final design plans. In addition to or instead of wildlife crossings, the Authority shall acquire or fully fund the public acquisition of land within the San Gabriel-Castaic Linkage. The Authority shall consult and collaborate with CDFW to conserve areas beneficial to the Southern California/Central Coast ESU and SGSB subpopulation that may improve and maintain connectivity.	Prior to finalizing Project design plans Prior to ground-disturbing activities	Authority
Mitigation Measure #9- Impacts on Mountain Lion and Wildlife Connectivity- Compensatory mitigation	The Authority shall protect mitigation lands in perpetuity under a conservation easement dedicated to a local land conservancy or other appropriate entity that has been approved to hold and manage mitigation lands. The Authority shall provide an appropriate endowment shall be provided for the long-term management of mitigation lands. A conservation easement and endowment funds s shall be fully acquired, established, transferred, or otherwise executed by the Authority prior to any Project-related ground-disturbing activities.	Prior to ground-disturbing activities	Authority
Mitigation Measure #10- Impacts on Mountain Lion and Wildlife Connectivity- Mountain Lion Crossing Monitoring Plan	The Authority shall prepare and implement a Mountain Lion Crossing Monitoring Plan. The Authority shall consult with CDFW during the drafting of the Monitoring Plan and obtain approval of the Monitoring Plan prior to Project implementation. The Monitoring Plan shall be contingent with action-based monitoring performance objectives and be adaptive. Goals of the Monitoring Plan shall at a minimum: 1) provide data to assist in designing crossings and inform placement for future HSR segments in southern California; 2) conduct long-term population monitoring for use by the mountain lion subpopulations; 3) track progress of use; and 4) evaluate overall effectiveness of the crossings.	Prior to ground-disturbing activities	Authority

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Mitigation Measure #11-Impacts on Mountain Lion and Wildlife Connectivity-Mountain Lion Avoidance Plan	In the event that mountain lion or dens are detected during surveys per BIO-MM#96, the Authority shall prepare Mountain Lion Avoidance Plan. The avoidance plan, at a minimum, shall fully avoid nursery sites, dens, and kill sites. The Authority shall submit a Mountain Lion Avoidance Plan to CDFW for review. The Authority shall resolve CDFW's comments prior to finalizing and implementing a Mountain Lion Avoidance Plan. A Mountain Lion Avoidance plan shall be developed before construction may proceed.	Prior to finalizing and implementing a Mountain Lion Avoidance Plan Before Project ground-disturbing activities can proceed	Authority
Mitigation Measure #12-Impacts on Mountain Lion and Wildlife Connectivity-Mountain Lion Avoidance Plan	If avoidance is not feasible, the Authority shall obtain appropriate take authorization from CDFW pursuant to Fish & Game Code section 2081 subdivision (b) prior to any ground-disturbing activities.	Prior to ground-disturbing activities	Authority
Mitigation Measure #13-Impacts on Mountain Lion and Wildlife Connectivity-Buffer	During construction, the Authority shall maintain a ¼ mile buffer from movement corridors such as drainages and riparian areas to minimize impacts to mountain lion. No night work shall occur in drainages and riparian areas and areas within the ¼ mile buffer. Within the Santa Clara River, the Authority shall maintain a 50-foot buffer as prescribed under Mitigation Measure #3.	During Project construction	Authority

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Mitigation Measure #14-Impacts on Aquatic Resources-Revise BIO-MM#33, 34, and 47	The Authority shall include aquatic resources subject to Fish and Game Code section 1602.	Prior to finalizing CEQA document Prior to/during ground-disturbing activities	Authority
Mitigation Measure #15-Impacts on Aquatic Resources-Revise HWR-MM#4	Resource agencies and stakeholders shall be consulted in preparation of a Water Resources Adaptive Management and Monitoring Plan. The Authority shall convene a working group to prepare a Water Resources Adaptive Management and Monitoring Plan. The Authority shall resolve all resource agency and stakeholder comments and concerns prior to finalizing the document.	Prior to finalizing a Water Resources Adaptive Management and Monitoring Plan Prior to ground-disturbing activities	Authority
Mitigation Measure #16-Impacts on Aquatic Resources-Lake and Streambed Alteration Notification	The Authority shall notify CDFW pursuant to Fish and Game Code section 1602 for construction and activities occurring near or impacting streams and associated natural communities. The Authority shall notify CDFW prior to any ground-disturbing activities and vegetation removal, including staging, near streams. The notification to CDFW shall provide the following information: 1) A stream delineation in accordance with the U.S. Fish and Wildlife Service wetland definition adopted by CDFW; 2) Linear feet and/or acreage of streams and associated natural communities that would be permanently and/or	Prior to any ground-disturbing activities and vegetation removal near or impacting streams and associated natural communities	Authority

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	temporarily impacted by the Project. This includes impacts as a result of routine maintenance and fuel modification. Plant community names shall be provided based on vegetation association and/or alliance per the Manual of California Vegetation; 3) A discussion as to whether impacts on streams within the Project site would impact those streams immediately outside of the Project site where there is hydrologic connectivity. Potential impacts such as changes to drainage pattern, runoff, and sedimentation shall be discussed; and, 4) A hydrological evaluation of the 100-year storm event to provide information on how water and sediment is conveyed through the Project site. Additionally, the hydrological evaluation shall assess a sufficient range of storm events (e.g., 100, 50, 25, 10, 5, and 2-year frequency storm events) to evaluate water and sediment transport under pre-Project and post-Project conditions.		
Mitigation Measure #17-Impacts on Aquatic Resources-Lake and Streambed Alteration Agreement	If the Project would impact streams and associated natural communities, the Authority shall obtain an LSA Agreement prior to any ground-disturbing activities and vegetation removal, including staging, near streams.	Prior to any ground-disturbing activities and vegetation removal, including staging, near streams	Authority
Mitigation Measure #18-Impacts on Western Joshua Tree-Avoidance	The Authority shall fully avoid impacts on western Joshua trees The Authority shall implement a minimum 300-foot buffer. Temporary protective fencing and signage shall be installed to demarcate the 300-foot buffer. No work or access shall occur within the buffer. The temporary fencing shall be removed only after all Project construction is complete.	Prior to ground-disturbing activities and vegetation removal	Authority

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		During Project construction	
Mitigation Measure #19-Impacts on Western Joshua Tree-CESA Incidental Take Permit	If the Authority is unable to avoid impacts on western Joshua tree, the Authority shall obtain take authorization from CDFW [pursuant to Fish & Game Code, § 2082(b)]. The Authority shall submit a CESA ITP Application to CDFW that provides the following information (at a minimum): 1) An analysis of individual western Joshua trees (clonal and non-clonal) and western Joshua tree seedbank that would be impacted both within the Project site and within 300 feet of the Project site; 2) An analysis of the acres of natural communities supporting western Joshua trees that would be impacted both within the Project site and within 300 feet of the Project site provided according to alliance and/or association-based natural community names. The Manual of California Vegetation shall be used to inform this mapping and assessment as well as CDFW's Protocols for Surveying and Evaluating Impacts to Special-status Native Plant Populations and Sensitive Natural Communities; 3) A map of the Project's site plan overlaid on location of western Joshua trees and natural communities; and 4) A hydrologic analysis of how water would be transported across the Project site and adjacent areas after Project build-out.	Prior to ground-disturbing activities and vegetation removal	Authority

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Mitigation Measure #20-Impacts on Western Joshua Tree-Compensatory Mitigation	The Authority shall provide compensatory mitigation for the Project's impact on western Joshua trees at no less than 2:1 or as required in a CESA ITP for western Joshua trees issued by CDFW. Mitigation lands shall be protected in perpetuity under a conservation easement dedicated to a local land conservancy or other appropriate entity that has been approved to hold and manage mitigation lands. An appropriate non-wasting endowment shall be provided for the long-term management of mitigation lands. A conservation easement and endowment funds shall be fully acquired, established, transferred, or otherwise executed by the Authority prior to any Project-related ground-disturbing activities.	Prior to ground-disturbing activities and vegetation removal	Authority
Mitigation Measure #21-Impacts on Crotch Bumble Bee-Pre-construction surveys	Prior to any ground disturbance, the Authority shall conduct site-specific surveys for Crotch bumble bee in accordance with any Crotch bumble bee survey protocol provided by CDFW.	Prior to ground-disturbing activities and vegetation removal	Authority
Mitigation Measure #22-Impacts on Crotch Bumble Bee-Avoid impacts	Inactive small mammal burrows and thatched/bunch grasses shall be avoided whenever feasible. If an inactive burrow may be disturbed by Project activities, it shall be resurveyed for Crotch bumble bee presence within seven (7) days prior to the scheduled disturbance.	Prior to/during ground-disturbing activities and vegetation removal	Authority
Mitigation Measure #23-Impacts on Crotch Bumble Bee-Avoid impacts	If Crotch bumble bee is present, the qualified biologist shall identify the location of all nests in or adjacent to the Project site. If nests are identified, 15-meter no disturbance buffer zones shall be established around nests to reduce the risk of disturbance or accidental take. If Project activities may result in disturbance or potential take, the qualified biologist, in coordination with CDFW, shall expand the buffer zone as necessary to prevent disturbance or take.	Prior to/during ground-disturbing activities and vegetation removal	Authority

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Mitigation Measure #24-Impacts on Crotch Bumble Bee-CESA Incidental Take Permit	If “take” or adverse impacts to Crotch bumble bee cannot be avoided either during Project activities or over the life of the Project, Authority shall obtain appropriate take authorization from CDFW pursuant to Fish and Game Code section 2081(b).	Prior to ground-disturbing activities and vegetation removal	Authority
Mitigation Measure #25-Impacts on Crotch Bumble Bee-Compensatory mitigation	Any floral resource associated with Crotch bumble bee that will be removed or damaged by the Project shall be replaced at no less than 1:1. Floral resources shall d be replaced as close to their original location as is feasible. If active Crotch bumble bee nests have been identified and floral resources cannot be replaced within 200 meters of their original location, floral resources shall be planted in the most centrally available location relative to identified nests. This location shall be no more than 1.5 kilometers from any identified nest. Replaced floral resources may be split into multiple patches to meet distance requirements for multiple nests. These floral resources shall be maintained in perpetuity and shall be replanted and managed as needed to ensure the habitat is preserved.	Prior to/during ground-disturbing activities and vegetation removal	Authority
Mitigation Measure #26-Impacts on Monarch Butterfly-Revise BIO-MM#94	The Authority shall contact CDFW and USFWS when Project Biologists observe monarchs in hostplant habitat. In addition, the Authority shall specify a minimum 50-foot avoidance buffer from milkweed where monarch butterflies are present.	Prior to/during ground-disturbing activities and vegetation removal	Authority
Mitigation Measure #27-Impacts on Monarch Butterfly-Revise BIO-MM#95	The Authority shall provide no less than 2:1 compensatory mitigation for occupied breeding and foraging habitat.	Prior to/during ground-disturbing activities and vegetation removal	Authority

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Mitigation Measure #28- Impacts on Monarch Butterfly- Monarch Overwintering Habitat Assessment	The Authority shall retain a qualified biologist to conduct a site-specific overwintering habitat assessment prior to starting ground-disturbing activities. The qualified biologist shall assess overwintering habitat following the Xerces Management Guidelines for Monarch Butterfly Overwintering Habitat or other protocols with prior approval by USFWS and CDFW. A summary report shall be submitted to USFWS and CDFW prior to ground disturbance.	Prior to ground-disturbing activities and vegetation removal	Authority
Mitigation Measure #29- Impacts on Monarch Butterfly- Monarch Overwintering Habitat Avoidance	A qualified biologist shall identify primary roosting trees and other structural components or flora integral to maintaining microclimate conditions at overwintering habitat. These plants shall be marked prior to starting ground-disturbing activities. Overwintering habitat shall be avoided for the duration of the Project. A qualified biologist shall assess overwintering habitat and remark/delineate overwintering habitat as needed for the duration of the Project following the Xerces Management Guidelines for Monarch Butterfly Overwintering Habitat.	Prior to ground-disturbing activities and vegetation removal During Project construction	Authority
Mitigation Measure #30- Impacts on Monarch Butterfly- Monarch Overwintering Monarch Survey	Prior to starting Project ground-disturbing activities and vegetation removal during the overwintering period of September 15 through March 15, a qualified biologist shall conduct multiple surveys for overwintering monarchs where overwintering habitat has been identified. Monitoring shall be done as frequently as possible during the overwintering season to capture changing distributions through the season and in response to storm events.	Prior to ground-disturbing activities and vegetation removal during the overwintering period of September 15 through March 15	Authority

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Mitigation Measure #31- Impacts on Monarch Butterfly- Monarch Impact Avoidance	If overwintering monarchs are present, the Authority shall avoid all Project construction and activities within 100 feet of the overwintering monarchs. The Authority shall immediately consult with CDFW and USFWS to determine if additional measures may be required including increasing avoidance buffers. Project construction and activities may only start after all overwintering monarchs have departed the overwintering site as determined by a qualified biologist.	Prior to/during Project construction and activities	Authority
Mitigation Measure #32- Impacts on Monarch Butterfly- Overwintering Habitat Preservation	The Authority shall preserve overwintering habitat. If the Authority must remove or disturb overwintering habitat and other structural components or flora integral to maintaining microclimate conditions, the Authority shall immediately coordinate with CDFW and USFWS prior to starting any activities that may impact overwintering habitat. The Authority shall provide no less than 2:1 compensatory mitigation to offset impacts on overwintering habitat.	Prior to ground-disturbing activities and vegetation removal	Authority
Mitigation Measure #33- Impacts on Monarch Butterfly- Overwintering Habitat Management	During Project construction, operation, and maintenance, the Authority shall avoid or minimize the cutting or trimming of trees and vegetation within core overwintering habitat except for specific grove management purposes, and/or human health and safety purposes. Any management activities in overwintering habitat shall be conducted between March 16 and September 14 in coordination with a qualified biologist. The Authority shall consider overwintering habitat management recommendation provided by the USFWS in Western Monarch Butterfly Conservation Recommendations.	During Project construction, operation, and maintenance	Authority
Mitigation Measure #34- Impacts on Monarch Butterfly- Avoid Pesticide Use	During Project construction, operation, and maintenance, the Authority shall avoid or minimize the use of pesticides within one mile of overwintering groves, particularly when monarchs may be present. Non-chemical weed control techniques shall be used when possible. If pesticides are used, applications shall be conducted from March 16 through September 14, when possible. Whenever possible, targeted application herbicide methods shall be used, large-scale broadcast applications shall be avoided, and	During Project construction, operation, and maintenance	Authority

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	precautions shall be taken to limit off-site movement of herbicides (e.g., drift from wind and discharge from surface water flows).		
Mitigation Measure #35-Impacts on Special-Status Species of Amphibians-Revise BIO-MM#7	The Authority shall implement survey protocols to adequately detect special-status amphibian species during pre-construction surveys, including protocols found CDFW's Survey and Monitoring Protocols and Guidelines and USFWS's Survey Protocols and Guidelines webpages for survey protocols.	Prior to ground-disturbing activities and vegetation removal	Authority
Mitigation Measure #36-Impacts on Special-Status Species of Amphibians-Compensatory Mitigation	The Authority shall provide compensatory mitigation for loss of amphibian habitat. For each amphibian species, the Authority shall provide criteria for selecting mitigation lands appropriate for amphibians, including both pond and upland habitat; mitigation land performance criteria; a plan to monitor success of mitigation, including relocation of individuals from impact area to mitigation land; and contingency measures if mitigation does not meet performance criteria.	Prior to ground-disturbing activities and vegetation removal	Authority
Mitigation Measure #37-Impacts on Special-Status Species of Amphibians-Daily construction activity monitoring	During initial ground-disturbing activities, a qualified biologist shall conduct construction activity monitoring daily for arroyo toad (August 1 to March 31), western spadefoot (October 1 to May 31), California red-legged frog (November 1 to March 31), and southern mountain yellow-legged frog (March 1 to May 31).	Daily, during initial ground-disturbing activities and vegetation removal	Authority
Mitigation Measure #38-Impacts on Special-Status Species of Amphibians-	A qualified biologist shall prepare an Amphibian Relocation and Avoidance Plan. The Amphibian Relocation and Avoidance Plan shall describe proper avoidance, handling, and relocation protocols for each species that could occur on the Project-site. The Amphibian Relocation and Avoidance Plan shall include species-specific avoidance buffers and suitable relocation areas at least	Prior to ground-disturbing activities and vegetation removal	Authority

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Daily construction activity monitoring	200 feet outside of the Project site. The qualified biologist shall submit a copy of an Amphibian Relocation and Avoidance Plan to CDFW for approval prior to any clearing, grading, or excavation work on the Project site.		
Mitigation Measure #39-Impacts on Special-Status Species of Amphibians-Take Authorization	If the Authority must relocate CESA- or ESA-listed species, the Authority shall obtain appropriate take authorization from CDFW and/or USFWS.	Prior to ground-disturbing activities and vegetation removal	Authority
Mitigation Measure #40-Impacts on Special-Status Species of Amphibians-Take Authorization	If the Authority must relocate Species of Special Concern, only a qualified biologist with appropriate handling permits shall capture, temporarily possess, and relocate wildlife. The qualified biologist shall obtain or have appropriate handling permits to capture, temporarily possess, and relocate wildlife to avoid harm or mortality in connection with Project construction and activities.	Prior to/during ground-disturbing activities and vegetation removal	Authority
Mitigation Measure #41-Impacts on Special-Status Species of Amphibians-Compensatory Mitigation	To compensate for permanent loss of habitat, the Authority shall provide no less than 2:1 to offset impacts, or as required in a take permit authorized by USFWS for ESA-listed species or CDFW for CESA-listed species.	Prior to ground-disturbing activities and vegetation removal	Authority
Mitigation Measure #42-Impacts on Western Pond Turtle-Surveys	Surveys for western pond turtle shall following established protocols including Draft USFWS Western Pond Turtle Visual Survey Protocol for the Southcoast Ecoregion.	Prior to ground-disturbing activities and vegetation removal	Authority

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Mitigation Measure #43-Impacts on Western Pond Turtle-Compensatory Mitigation	The Authority shall provide compensatory mitigation for loss of western pond turtle habitat. For each amphibian species, the Authority shall provide criteria for selecting mitigation lands appropriate for western pond, including both pond and upland habitat; mitigation land performance criteria; a plan to monitor success of mitigation; and contingency measures if mitigation does not meet performance criteria.	Prior to ground-disturbing activities and vegetation removal	Authority
Mitigation Measure #44-Impacts on Western Pond Turtle- No-disturbance buffer	During the western pond turtle breeding season, a no-disturbance buffer of 475 feet shall be implemented to protect nesting area. This distance shall be measured from the outside edge of wetland habitat suitable for the species within the Project site. No work shall occur until after the breeding season.	Prior to ground-disturbing activities and vegetation removal	Authority
Mitigation Measure #45-Impacts on Western Pond Turtle-Relocate out of harm's way	Outside of the breeding season, if the Authority must relocate western pond turtles, a qualified biologist shall prepare a Western Pond Turtle Relocation Plan. The qualified biologist shall submit a copy of a Western Pond Turtle Relocation Plan to CDFW for approval prior to any clearing, grading, or excavation work on the Project site. The Western Pond Turtle Relocation Plan shall identify that only a qualified biologist with appropriate handling permits shall capture, temporarily possess, and relocate wildlife to avoid harm or mortality in connection with Project construction and activities.	Prior to ground-disturbing activities and vegetation removal	Authority
Mitigation Measure #46-Impacts on Burrowing Owl-No-disturbance buffer	The Authority shall implement a no-disturbance buffer of 1,650 feet to avoid impacts on occupied burrowing owl burrows during the nesting and non-nesting seasons.	Prior to/during ground-disturbing activities and vegetation removal	Authority
Mitigation Measure #47-Impacts on Burrowing Owl-	The Authority shall provide compensatory mitigation for loss of burrowing owl habitat. The Authority shall provide criteria for selecting mitigation lands appropriate for burrowing owl; mitigation land performance criteria; a plan to monitor success of mitigation;	Prior to ground-disturbing activities and	Authority

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Compensatory mitigation	and contingency measures if mitigation does not meet performance criteria.	vegetation removal	
Mitigation Measure #48-Impacts Bats-Surveys	The Authority shall conduct site-specific field surveys to determine presence of daytime, nighttime, wintering (hibernacula), and maternity roost sites. The Authority shall conduct bat surveys during favorable weather conditions only Two spring surveys (April through June) and two winter surveys (November through January) shall be performed by qualified biologists. Each survey shall consist 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. Surveys shall be conducted within one 24-hour period. Visual inspections shall focus on the identification of bat sign (i.e., individuals, guano, urine staining, corpses, feeding remains, scratch marks and bats squeaking and chattering). Bat detectors, bat call analysis, and visual observation shall be used during all dusk emergence and pre-dawn re-entry surveys.	Prior to Project ground-disturbing activities and vegetation removal	Authority
Mitigation Measure #49-Impacts Bats-No-work buffer	If active hibernacula or maternity roosts are identified in the work area or 500 feet extending from the work area during pre-construction surveys, for maternity roosts, Project construction will only between October 1 and February 28, outside of the maternity roosting season when young bats are present but are yet ready to fly out of the roost (March 1 to September 30). Maternity roosts shall not be evicted, excluded, removed, or disturbed. A minimum 500-foot no-work buffer shall be provided around hibernacula. The buffer shall not be reduced. Project-related construction and activities shall not occur within 500 feet of or directly under or adjacent to hibernacula. Buffers shall be left in place until the end of Project construction and activities or until a qualified bat biologist determines that the hibernacula are no	Prior to/during Project ground-disturbing activities and vegetation removal	Authority

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	longer active. Project-related construction and activities shall not occur between 30 minutes before sunset and 30 minutes after sunrise. Hibernacula roosts shall not be evicted, excluded, removed, or disturbed. If avoidance of a hibernacula is not feasible, the Project Biologist will prepare a relocation plan to remove the hibernacula and provide for construction of an alternative bat roost outside of the work area. A bat roost relocation plan shall be submitted for CDFW review prior to construction activities. The Project Biologist will implement the relocation plan and new roost sites shall be in place before the commencement of any ground-disturbing activities that will occur within 500 feet of the hibernacula. New roost sites shall be in place prior to the initiation of Project-related activities to allow enough time for bats to relocate. Removal of roosts will be guided by accepted exclusion and deterrent techniques.		
Mitigation Measure #49-Impacts Bats-No-work buffer	The Authority shall compensate no less than 2:1 for permanent impacts to roosting habitat.	Prior to ground-disturbing activities and vegetation removal	Authority
Mitigation Measure #50-Impacts on Special-Status Plants and Sensitive Natural Communities-Revise BIO-MM#1	The Authority shall provide requirements that would effectively avoid impacts on special-status plants and Sensitive Natural Communities if those resources are present.	Prior to finalizing CEQA document Prior to/during Project ground-disturbing activities and vegetation removal	Authority

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Mitigation Measure #52- Impacts on Special-Status Plants and Sensitive Natural Communities- Revise BIO-MM#2	The Authority shall provide minimum requirements for ensuring that plant salvage and relocation would be successful. The Authority shall at a minimum: • Relocate plants to areas where there would be no impact on in-situ populations of rare, endangered, or threatened plants; • Provide at least five (5) years of monitoring; • Provide a supplemental watering plan; • Provide a weed management plan; • Ensure that relocated plants are self-sustaining, with at least two (2) years of no supplemental watering; • Achieve zero percent cover of non-native, invasive species listed as High or Moderate by the California Invasive Plant Council; and • Provide contingency measures if relocation fails.	Prior to finalizing CEQA document Prior to/during/after Project construction and activities	Authority
Mitigation Measure #53- Impacts on Special-Status Plants and Sensitive Natural Communities- Revise BIO-MM#38	The Authority shall provide no less than 2:1 ratio to offset direct impacts on ESA and CESA-listed species unless a higher ratio is required pursuant to regulatory authorizations.	Prior to finalizing CEQA document Prior to ground-disturbing activities and vegetation removal	Authority

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The commenter, the California Department of Fish and Wildlife (CDFW), provides an overview of the CDFW and its roles as California's Trustee Agency for fish and wildlife resources and as a Responsible Agency under CEQA for this project. The Authority would like to thank the CDFW for their comments on the Draft EIR/EIS and the multiple-year history of consultation on the Palmdale to Burbank project section and looks forward to further conversations and opportunities to address the agency's concerns. The Authority will continue to coordinate with CDFW and obtain the appropriate authorizations for any take that is unavoidable and necessary.

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The commenter is summarizing information presented in the EIR/EIS. The comment does not address the technical analysis included in the Draft EIR/EIS nor suggest edits to the document. No change has been made to the document in response to this comment.

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The commenter, the California Department of Fish and Wildlife (CDFW), provides an overview of the CDFW and its roles as trustee agency and responsible agency under CEQA. The CDFW also provides a summary of the proposed project and states the letter includes comments and recommendations to address potential project impacts to biological resources. Responses to CDFW comments and recommendations are provided for each subsequent comment.

The Authority would like to thank the CDFW for their comments on the Draft EIR/EIS and the multiple-year history of consultation on the Palmdale to Burbank project section and looks forward to further coordination and opportunities to address the agency's concerns.

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As noted by CDFW, the Draft EIR/EIS discloses construction activities at the Santa Clara River and installation of utility corridors at Lang Station Road. Section 3.7.6 of the Draft EIR/EIS provides an impact analysis for unarmored three-spined stickleback (UTS) that discloses the impacts to the species associated with the HSR Build Alternatives. CDFW expresses a concern that adverse and unmitigated impacts would occur to UTS. CDFW is concerned that removal of gabion-like structures could widen the wetted channel and expose the channel to project activities when UTS might be present. Finally, CDFW expresses concern that project activities would adversely affect UTS if work were performed in the wetted channel and that permanent structures in the channel would alter the flow of the Santa Clara River and have further adverse effects on UTS.

BIO-MM#86 (identified in the Draft EIR/EIS) does not allow work in the wetted channel even if the wetted channel is widened through removal of gabion-like structures or changes overtime. The utility line in proximity to Lang Station Road would pose no impediment to fish passage and would not affect UTS whatsoever. The Authority has provided a comprehensive discussion of project-related impacts to UTS in the Draft EIR/EIS. Specifically, potential impacts to UTS and its habitat are described in the following sections: Impact BIO#4: Project Construction Effects on Special-Status Fish Habitat, Impact BIO#9: Project Construction Effects on Fish and Wildlife Resources Projected by Fish and Game Code Section 1600 et seq., Impact BIO#10: Project Construction Effects on Federally Designated Critical Habitat, Impact BIO#14: Project Operation Effects on Habitat for Special-Status Species individuals and Communities, Impact BIO#16: Indirect Effects on Fish and Wildlife Resources Protected by Fish and Game Code 1600 et seq., and Impact BIO#17: Project Operation Effects on Designated Critical Habitat.

The Authority is aware that UTS is a fully protected species, and no take of individuals is permitted. Mitigation measures (MMs) have been provided to avoid take of individuals and loss of habitat, and to mitigate for any unavoidable loss of habitat. As noted by CDFW, MMs are provided in the EIR/EIS to avoid, minimize, and mitigate impacts to UTS and its habitat. Mitigation measures are provided in detail in Section 3.7.7 of the Final EIR/EIS. Specifically, BIO-MM#33, BIO-MM#34, BIO-MM#36, BIO-MM#46, BIO-MM#47, BIO-MM#50, BIO-MM#53, BIO-MM#56, BIO-MM#58, BIO-MM#61, BIO-

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MM#62, BIO-MM#63, BIO-MM#84, BIO-MM#85, BIO-MM#86, BIO-MM#87, BIO-MM#88, BIO-MM#89, BIO-MM#90, BIO-MM#92, and BIO-MM#93 would be implemented for UTS. In their comment, CDFW provides three recommendations and four mitigation measure revisions to help address their concerns.

In Recommendation #1, CDFW requests that the Authority consult with CDFW to resolve their concerns with regards to Project impacts on UTS at the Santa Clara River crossing. As discussed in the Draft EIR/EIS, impacts to special-status fish species, including UTS would be less than significant with implementation of the mitigation measures identified for avoidance, minimization, and compensation for direct and indirect surface construction impacts (see Impact BIO#4). In their comment letter, CDFW provides a list of eight information items they are requesting from the Authority, consistent with their comments in 2018. The Authority acknowledges the list of requested information and is actively working on preparing the items for submittal to CDFW. The information is dependent on design-detail that would not be available until after a decision is made on project alternatives and engineering design is advanced but will be provided as soon as it is available. As part of CDFW's request, the Authority provided CDFW the HEC-RAS model on April 28, 2023.

In Recommendation #2, CDFW requests that the Authority revise and recirculate the Draft EIR/EIS following consultation with CDFW. The Draft EIR/EIS fully discloses the impacts to UTS, CDFW has not provided information of greater impacts than disclosed, and the information necessary to inform the reader of potential impacts associated with each Build Alternative is available and set out in the Draft EIR/EIS. As such, there is no basis for recirculating a Draft EIR/EIS.

In Recommendation #3, CDFW notes that the Draft EIR/EIS does not provide an explanation as to why or how the vibratory pile driving method avoids impacts to UTS. As required by BIO-MM#89, construction activities in areas susceptible to winter flood flows will be conducted from May 1 through November 30, when winter flood flows do not occur in the Santa Clara River. By performing construction outside of the winter flood flows, impacts associated with pile driving would avoid impacts to UTS. Further, the Authority has revised Mitigation Measure BIO-MM#89 in the Final EIR/EIS to prepare a hydroacoustic analysis once there is sufficient information about the installation of piles

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and piers to conduct that kind of study. This study would also confirm the buffer distances needed to minimize potential hydroacoustic impacts.

Under CDFW's heading of Mitigation Measure #1, CDFW recommends revisions to BIO-MM#85 to include use of temporary flagging, fencing, or signage as a public barrier fence instead of K-rail and thereby avoiding potential erosion, scour, or debris build up during a sudden storm event. The Authority had included the use of K-rail because this is an effective method for keeping construction crews away from habitat. However, the Authority revised MM-BIO#85 in the Final EIR/EIS to use alternative methods consistent with the preference of CDFW. Please see Section 3.7.7 of the Final EIR/EIS for these changes.

Under CDFW's heading of Mitigation Measure #2, the CDFW recommends revisions to BIO-MM#87 to specify what actions would be taken if water quality is being affected by bridge and bank stabilization-related concrete pouring activities. The measures proposed in the Draft EIR/EIS provide protection to water quality. The Draft EIR/EIS provides MMs and design features specific to water quality, which are detailed in the Hydrology and Water Resources Section 3.8 (HWR-MM#1, HWR-MM#2, HWR-MM#3, and HWR-MM#4) and in the Appendix 2-E Impact Avoidance and Minimization Features (HYD-IAMF#1, HYD-IAMF#2, HYD-IAMF#3, and HYD-IAMF#4). Under design feature HYD-IAMF#3, a Construction Stormwater Pollution Prevention Plan will be prepared and implemented prior to ground disturbing activity. Specifically, practices to capture and provide proper off-site disposal of concrete washwater, including isolation of runoff from fresh concrete during curing to prevent it from reaching the local drainage system, and possible treatments (e.g., dry ice) will be implemented.

Under CDFW's heading of Mitigation Measure #3, CDFW recommends revisions to BIO-MM#88, BIO-MM#89, and BIO-MM#92 to increase work buffers 10 feet to 50 feet to protect the Santa Clara River wetted channel during project construction and activities adjacent to UTS habitat. The Draft EIR/EIS provides design features and MMs specific to UTS in Appendix 2-E (HYD-IAMF#5, HYD-IAMF#6, and HYD-IAMF#7) and in Section 3.7.7 (BIO-MM#47, BIO-MM#56, BIO-MM#61, BIO-MM#62, BIO-MM#93). Specifically, under BIO-MM#85 it states that the ESA will be installed a minimum of 10 feet from the wetted channel and that the K-rail (now identified as public barrier fence) approximately

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10 feet from the ESA to the extent practicable, this will ensure that construction occur at least 20 feet from the Santa Clara wetted channel is adhered to. Nonetheless, Mitigation Measures BIO-MM#88, BIO-MM#89, and BIO-MM#92 have been revised in the Final EIR/EIS to indicate that buffer distances may be updated based on the results of the hydroacoustic analysis.

Under CDFW's heading of Mitigation Measure #4, CDFW recommends the Authority revise BIO-MM#90 to require that a Construction Groundwater Dewatering Plan be prepared and be submitted to CDFW for approval. During the detailed design phase of the project prior to initiation of construction, the Authority would submit notifications, as needed, for LSA Agreements and is committed to continued consultation with CDFW regarding submittal and approval of the Construction Groundwater Dewatering Plan at that time.

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Refer to Standard Response PB-Response-BIO-3: Wildlife Movement Corridors.

The commenter expresses concern that the project would have a significant impact on the Southern California/Central Coast Evolutionary Significant Unit (ESU) subpopulation of mountain lion by further constraining wildlife connectivity in the Angeles National Forest (ANF). The commenter is concerned about the length and impermeability of the track system, duration of construction activity, and long-term high-speed rail operations. The commenter notes specifically that the Refined SR14 and SR14A Build Alternatives would introduce a new barrier to mountain lion connectivity adjacent to the ANF that did not previously exist, and would include:

- habitat loss;
- fragmentation;
- increased impermeability within the San Gabriel-Castaic Linkage;
- potential to worsen existing gene flow disruption; and
- disruption of wildlife movement corridors.

The commenter is concerned about the project's potential to worsen existing gene flow disruption for mountain lion in southern California; disrupt wildlife movement corridors that are already hindered by existing obstacles; create long stretches of impediments; and further narrow areas of low or compromised permeability that are already threatening the continued viability of wildlife. The commenter states that the impacts on gene flow for mountain lion is the larger concern when contrasted with individual take. Isolation of subpopulations limits the genetic exchange of populations, prevents recolonization of suitable habitats following local extirpation, and ultimately puts the species at risk of local extirpation or extinction.

The Authority agrees that the isolation of subpopulations and the impact on gene flow is the primary concern. The analysis in the Draft EIR/EIS thoroughly evaluates the potential impacts to individual mammals and habitat in Impact BIO#6, whereas the focus of Impact BIO#13 is on impacts to movement opportunities that could affect subpopulations or populations. Based on the results of the analysis in the Wildlife Corridor Assessment (WCA) and WCA Supplement, the Authority disagrees that the project would have adverse effects on gene flow for mountain lion. This is because post-project movement opportunities are similar to existing baseline conditions as a result of project tunnel and viaduct segments being aligned with the wildlife movement

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opportunities across the SR 14 freeway at the existing undercrossings.

The commenter notes that the at-grade segments would cause habitat loss and fragmentation within the range of San Gabriel/San Bernardino Mountains (SGSB) mountain lion subpopulation, and that the SGSB subpopulation exhibits extremely low genetic diversity and effective population size, likely indicating a high risk of extinction (Center for Biological Diversity 2019). The commenter notes that the cause of low genetic diversity and population size is habitat fragmentation and patterns of isolation due to roads and development creating movement barriers. The Authority recognizes that the at-grade segments represent a new barrier. Nonetheless, the Build Alternatives provide extensive opportunities for wildlife crossings at tunneled segments, viaduct segments, and at two dedicated wildlife crossings near Una Lake and the California Aqueduct to maintain gene flow and prevent habitat fragmentation and species extinction.

The viaducts and tunnels associated with the SR14A and Refined SR14 Build Alternatives provide for unimpeded movement across the alignment and align with the existing bridge crossing opportunities underneath the SR 14 freeway. The extensive series of tunnels and viaducts that maintain wildlife movement opportunities are listed in Table 6-6 in the WCA and Table 2-13 of the WCA Supplement. Figure 5-4 in the WCA identifies the existing bridges on the SR 14 freeway that provide wildlife crossing opportunities that align with tunnel and viaduct segments to facilitate wildlife movement in a manner that closely approximates existing conditions.

The primary barrier to mountain lion movement is the SR 14 freeway, for which movement opportunities are generally limited to several bridge undercrossings. Potential crossing opportunities across the SR 14 freeway include the following locations and photographs of these locations are provided in Appendix C in the WCA:

- California Aqueduct undercrossing of the SR 14 freeway
- SR 14 undercrossing south of California Aqueduct
- Sierra Highway-SR 14 undercrossing
- Mountain Springs Road-SR 14 overcrossing
- Sierra Highway-SR 14 overcrossing
- Santiago Road-SR 14 undercrossing
- Crown Valley Road-SR 14 undercrossing
- Red Rover Mine Road-SR 14 undercrossing

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- Culvert under SR 14 near Red Rover Mine Road
- Ward Road-SR 14 undercrossing
- Culvert under SR 14 near Ward Road
- Puritan Mine Road-SR 14 undercrossing
- Escondido Canyon Road-SR 14 overcrossing
- Pacific Crest Trail SR 14 undercrossing
- Culvert under SR 14 near Vasquez Rocks
- Agua Dulce Canyon Road-SR 14 undercrossing
- Culvert under SR 14 near Agua Dulce Canyon Road
- Stone Crest Road-SR 14 undercrossing
- Soledad Canyon Road-SR 14 undercrossing

Furthermore, Figure 4-5 in the WCA shows the spatial relationship between these wildlife crossing opportunities at the existing bridges on the SR 14 freeway and the tunnel and viaduct segments of the alignment and how the existing wildlife movement opportunities are maintained as a result. Figures 1 and 2 below further illustrate how existing wildlife movement opportunities across the SR 14 freeway line up with the adjacent permeable tunnel and viaduct segments for the SR14A Build Alternative to maintain wildlife movement and gene flow.

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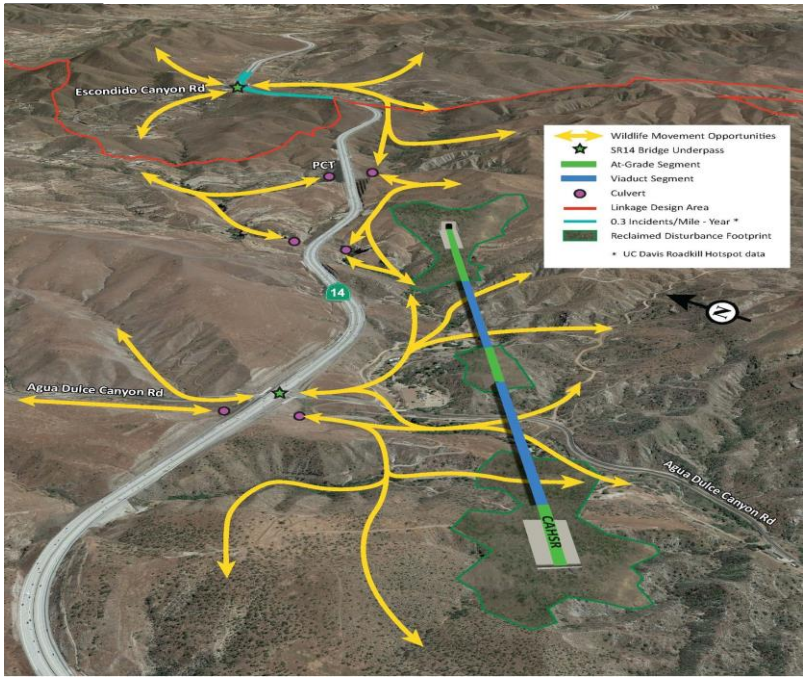

Figure 1 –Aerial photograph showing wildlife movement opportunities, looking north from Agua Dulce Canyon Road, through the Linkage Design, across the SR 14 freeway corridor with UC Davis Wildlife-Vehicle Conflict Hotspots identified.

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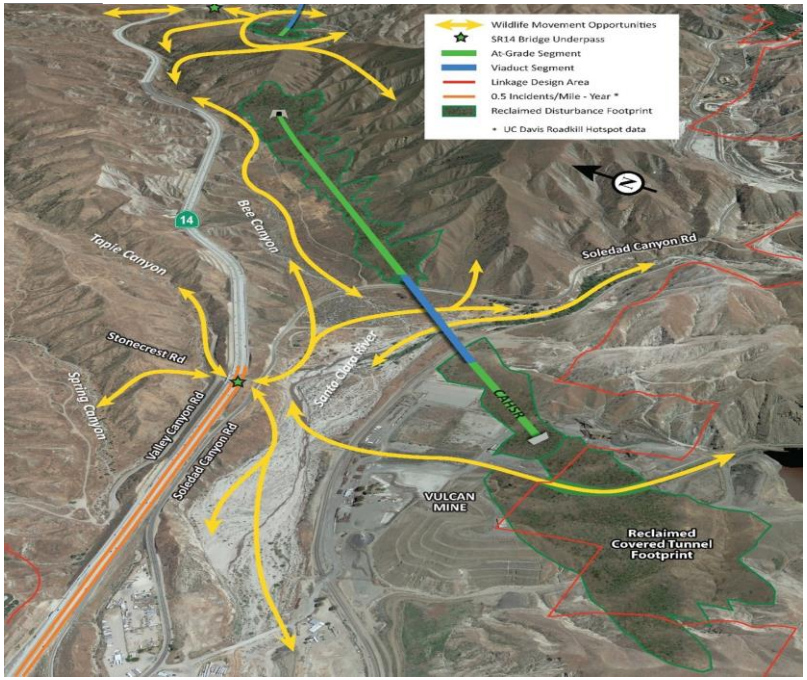

Figure 2 –Aerial photograph showing wildlife movement opportunities, looking north from Stonecrest Road, through the Linkage Design, across the SR 14 freeway corridor with UC Davis Wildlife-Vehicle Conflict Hotspots identified.

The commenter expresses concern about the almost 1-mile-long, 1,000-foot-wide barrier adjacent to the ANF and within the Linkage along Bee Canyon that would result from the track corridor, grading footprint, and detention basins (noting that there is substantial permanent and temporary grading and disturbance on both sides of the track shown in Appendix 3.1-A Palmdale to Burbank: Footprint Mapbook, Maps 21 and 22). Although the temporary grading footprint may extend to 1,000 feet in some areas, these areas will be restored to native habitat that will be available for wildlife use and movement, pursuant to BIO-MM#6. With respect to the barrier, the project has extensive

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tunnel and viaduct sections that allow unimpeded wildlife movement and these tunnel and viaduct segments align well with the existing wildlife movement opportunities across the SR 14 freeway.

The commenter also quotes portions of the WCA, specifically page 6-5, which states "approximately 46 percent (6.31 miles) of the San Gabriel-Castaic Linkage Design would be obstructed by nine fenced at-grade segments associated with the Refined SR14 alignment." This statistic was misreported because it included tunnel and viaduct segments. The correct number of miles of the at-grade segments in the Linkage Design is 2.55 miles.

The commenter states the project would have an individual and cumulative impact on mountain lion and wildlife connectivity and that no mitigation is provided. The Authority respectfully disagrees. BIO-MM#96 will ensure that impacts are avoided and minimized and BIO-MM#97 will offset impacts through compensatory mitigation. Based on Table 3.7-20 and the supporting text on page 3.7-149 and the applicable mitigation ratios in the Draft EIR/EIS, the Authority would provide protection and long-term management for up to 1,391 acres of mountain lion habitat. Other mitigation measure that would minimize impacts to the species but are not specific to mountain lion are included in Section 3.7.7, BIO-MM#37, BIO-MM#50, BIO-MM#53, BIO-MM#56, BIO-MM#58, BIO-MM#60, BIO-MM#63, BIO-MM#64, BIO-MM#78, BIO-MM#83, BIO-MM#99, and BIO-MM#100.

The commenter highlights that the Draft EIR/EIS acknowledges significant impacts but asserts that no mitigation is proposed for the Refined SR14 and SR14A Build Alternatives. The commenter provides a quote from the Draft EIR/EIS: "Adding a crossing structure to segments that align with the SR 14 freeway would be impractical as wildlife movement is already constrained in these areas […] there are no at-grade segments of the Refined SR14 Build Alternative that exceed the recommended threshold lengths that would benefit from wildlife crossings." In context, this sentence is describing the value and effectiveness of adding a wildlife crossing in the HSR at-grade segment in Bee Canyon that would funnel wildlife toward a section of the SR 14 freeway that represents a complete barrier. The commenter characterizes the Draft EIR/EIS as concluding that SR 14 is an existing barrier to connectivity and any mitigation provided by the project would not benefit wildlife connectivity. It is correct that the Authority concluded, based on a thorough review of wildlife movement opportunities across SR 14, that an undercrossing in Bee Canyon would be unlikely to provide any benefit. However, the Authority determined that two dedicated wildlife crossings described in

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BIO-MM#64 would be required to minimize wildlife movement impacts. In other areas where the train is at-grade, additional dedicated wildlife crossings were not required because the segments were less than one mile and were punctuated by tunnel and viaduct segments that maintain wildlife permeability at locations adjacent to the SR 14 freeway where there are existing crossing opportunities.

The commenter suggests BIO-MM#64 should require crossings to be constructed south of the California Aqueduct; east of Una Lake; and under State Route 14 to connect both sides of the San Gabriel-Castaic Linkage (see Attachment D). The Authority acknowledges Attachment D: 16 Wildlife Crossings (yellow points) that CDFW suggests the High-Speed Rail Authority construct to mitigate the Project's impact on wildlife connectivity, as an attachment to Submission PB-4512. The suggested CDFW wildlife crossings are listed from north to south, below.

- Sierra Highway at the California Aqueduct
- Sierra Highway, 0.4 miles southeast of the California Aqueduct
- SR 14 Freeway 0.5 miles north of the Sierra Highway interchange
- SR 14 Freeway at Santiago Road
- SR 14 Freeway near Action Canyon Road
- SR 14 Freeway near Wisconsin Street
- SR 14 Freeway at Crown Valley Road
- SR 14 Freeway at Red Rover Mine Road
- SR 14 Freeway at Ward Road
- SR 14 Freeway at Puritan Mine Road
- SR 14 Freeway at Escondido Canyon Road
- SR 14 Freeway at the Pacific Crest Trail
- SR 14 Freeway south of Vasquez Rock
- SR 14 Freeway at Agua Dulce Canyon Road
- SR 14 Freeway at Stonecrest Road
- SR 14 Freeway at Soledad Canyon Road

Except for where the suggested wildlife crossing coincides with the planned SR14A Build Alternative wildlife crossing at the California Aqueduct, the CDFW suggested crossing locations are all outside of the proposed project footprint along the SR 14 freeway or the Sierra Highway. These crossings would be located outside of the Authority's jurisdiction, making it infeasible for the Authority to decide to incorporate new

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wildlife crossings. Those kinds of decisions would need to be made by Caltrans, as the agency with jurisdiction over these roadways. As explained in this response, the Authority has identified mitigation requiring new wildlife crossings within areas that are within the Authority's jurisdiction. Furthermore, these suggested CDFW wildlife crossings align with wildlife movement opportunities at tunnels, viaducts, and planned wildlife crossings on the Refined SR14 and SR14A Build Alternatives. In other words, at these locations, the SR14A and Refined SR14 Build Alternatives would allow for wildlife movement through these tunnels, viaducts, and planned wildlife crossings. The Authority reviewed and considered the crossings identified in Attachment D, as discussed in response to CDFW's comments on Mountain Lion and Wildlife Connectivity and found that the suggested measures outside of the Authority's jurisdiction would be infeasible.

The commenter states the existence of the SR 14 freeway does not have a bearing on the project's individual impact on wildlife connectivity. The Authority agrees that as a preliminary matter, the individual impact of the project should be evaluated and disclosed separately from existing barriers to movement such as the SR 14 freeway, and that is in fact how the analysis in the WCA was conducted. The local permeability analysis did not factor the SR 14 freeway into the calculations of reduced permeability; if it had done so, the result would have been a reduction in permeability lower than the 1 percent disclosed. However, once the impact of the project is understood, it is important to add an analysis of how the existing condition of the SR 14 freeway restricts wildlife movement to specific areas to understand where and whether installation of crossings under the Project would provide biological benefit. Emphasis was placed on the existing freeway undercrossings and also at the locations identified in the UC Davis Real-time Deer Incidents &Wildlife-Vehicle Conflict (WVC) Hotspots map (Figure 3), which incorporates live data feeds from the California Roadkill Observation System (CROS) and the California Highway Incident Processing System (CHIPS) (UC Davis 2023). The data collected by UC Davis includes large roadkill and deer incidents. The Hotspot map shows high use areas with the rate of incidents per mile per year with large roadkill and deer incidents shown individually, providing an indication of wildlife movement across the SR 14 freeway. The stretch of the SR14 freeway along Bee Canyon is not a hotspot, suggesting the high volume of traffic, steep topography, and steep road cut slopes deter crossing attempts within that area of the Linkage Design. Hotspots for small and medium size wildlife along the project alignment include:

- East Avenue S (north and south adjacent to Lake Palmdale) - 0.3 incidents per mile per year
- E Barrel Springs Road (Lake Palmdale to across the CA Aqueduct) - 0.5 incidents per mile per year

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- Sierra Highway to Mountain Springs Road - 0.5 incidents per mile per year
- Soledad Canyon Road to Santiago Road - 0.3 incidents per mile per year
- Red Rover Mine Road to Ward Road - 0.5 incidents per mile per year
- Escondido Road - 0.3 incidents per mile per year
- Stonecrest Road to Soledad Canyon Road - 0.5 incidents per mile per year

No large roadkill or deer incidents were reported along the stretch of the SR 14 freeway between Palmdale and Santa Clarita, concluding that the hotspots listed above are comprised of small to medium wildlife. The nearest deer incident reported on the California Highway Incident Processing System (CHIP) was on Placerita Canyon Road near Santa Clarita, east of the SR 14 freeway, recorded on September 11, 2023 (Figure 3).

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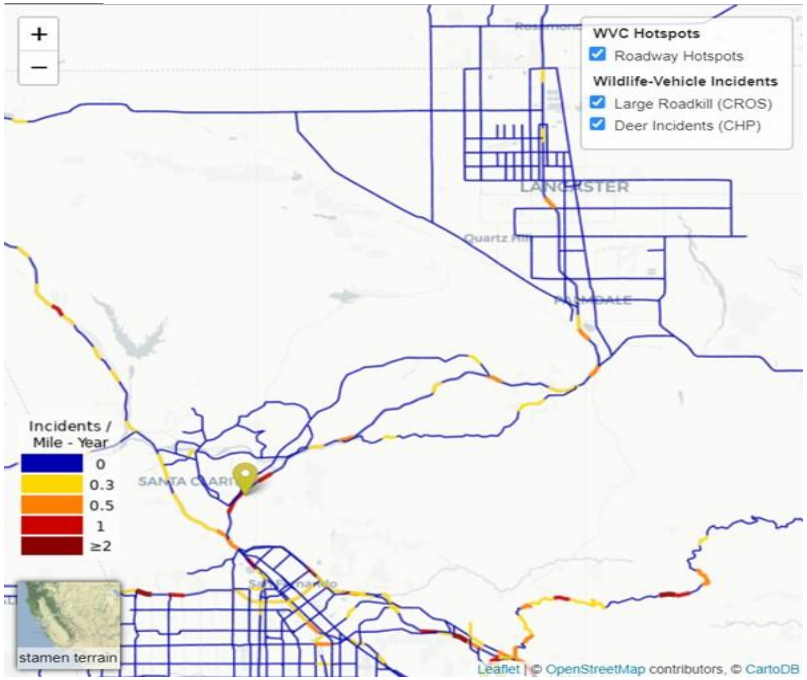

Figure 3 –UC Davis Real-time Deer Incidents &Wildlife-Vehicle Conflict (WVC) Hotspots map, September 16, 2023.

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Figure 4. Looking northwest at the steep cut slopes along the SR 14 freeway adjacent to Bee Canyon.

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Figure 5. Looking northwest at the steep natural terrain and steep road cuts along the SR 14 freeway adjacent to Bee Canyon.

The commenter highlights that the project would result in habitat loss and fragmentation adjacent to the ANF, obstruct 30 to 46 percent of the Linkage, and increase the movement cost for mountain lion. However, the total percentage of the Linkage Design crossed only provides a limited picture of the effects of the project. This is because the at-grade segments are punctuated by extensive tunnel and viaduct segments where wildlife movement is unimpeded. Table 6-6 in the WCA and Table 2-13 of the WCA Supplement show the relative positioning and lengths of the permeable segments that cross through the Linkage Design and align with the existing crossing locations under the SR 14 freeway as well as those areas shown as high wildlife use hotspots. For these

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reasons, the calculations of reduced permeability are a better metric for assessing the project's impact on wildlife movement. The commenter is of the opinion that these impacts are significant and is concerned the Authority is not mitigating the Project's significant impacts. Again, an extensive analysis was conducted during the preparation of the WCA and WCA Supplement that supports the determination that wildlife movement is maintained across the project alignment, essentially to the same degree as pre-project conditions. Graph 6-1 in the WCA provides a visual depiction of the results of the Local Permeability Analysis modeling for mountain lion and illustrates how similar the pre- and post-project conditions are. In short, the effects to wildlife movement are minimal when compared to existing conditions.

The commenter expresses concern that BIO-MM#64 would not reduce the Project's impact on wildlife connectivity, specifically because of the use of the terms "extent feasible" and "consideration," which the commenter states are not enforceable requirements. BIO-MM#64 would require crossings to be constructed south of the California Aqueduct and east of Una Lake, which adequately mitigates Project effects on wildlife movement. The Authority has revised BIO-MM#64 in the Final EIR/EIS to clarify that the two dedicated wildlife crossings are required to be installed.

The commenter expresses concern that past and probable future projects have a considerable cumulative effect on mountain lion and wildlife connectivity, noting that the SR 14 freeway impedes wildlife connectivity adjacent to the ANF, as well as development within the city of Santa Clarita and transportation infrastructure along the SR 14 freeway corridor. The commenter states that the Refined SR14 or SR14A Build Alternatives would have a cumulatively considerable impact on mountain lion and wildlife movement compared to the other alternatives, which are mostly in tunnel through the ANF. The commenter also states the Refined SR14 and SR14A Build Alternatives are the only alternatives that cross through the Linkage Design. The Authority respectfully disagrees. As previously described, the Refined SR14 and SR14A Build Alternatives maintain wildlife connectivity movement opportunities through an extensive series of tunnels and viaducts in spatial relationship to the Linkage Design, listed in Table 6-6 in the WCA and Table 2-13 of the WCA Supplement, which align with the existing bridges on the SR 14 freeway and high wildlife use hotspot areas (UC Davis 2023). Movement across the Linkage Design at locations that facilitate wildlife movement would be maintained via the extensive lengths of tunnels and viaducts that align with the existing freeway bridge undercrossings and high wildlife use hotspot areas (UC Davis 2023). The change in permeability is negligible compared to existing conditions and for that reason the project does not provide a considerable contribution to

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the significant cumulative impact.

The commenter states that the Refined SR14 and SR14A Build Alternatives would result in at least a 1-mile-long, 1,000-foot-wide barrier adjacent to past, present, and probable future projects that have or will have an impact on wildlife movement. As shown in Table 6-6 in the WCA and Table 2-13 in the WCA Supplement, the at-grade sections in the Bee Canyon area are 0.89 mile long and 1.13 miles long, respectively. The length of the barrier posed by this at-grade section is disclosed and fully evaluated in the WCA, the WCA Supplement, and in Section 3.7, Biological and Aquatic Resources of the Draft EIR/EIS.

Although both the Refined SR14 and SR14A Build Alternatives would have a 1,000-foot-wide temporary disturbance footprint, most of the temporary impact would be revegetated back to native habitat. The fence in this area would be located directly adjacent to the HSR tracks, so that the restored habitat can be utilized by wildlife.

The commenter states that temporarily excluding and relocating wildlife from the project site during construction does not offset impacts on wildlife movement after the project is completed. The Authority agrees with that statement and notes that the measure referenced is not intended to address the permanent effect of a new barrier. It should be noted that Impact BIO#13 evaluates various types of project effects on wildlife movement during construction and operation, not just the addition of a new linear barrier, and the mitigation measures proposed to address the various types of effects identified in Impact-BIO#13 are not all applicable to the barrier. Wildlife movement is expected to be temporarily disrupted during construction; however, once construction is completed, wildlife is expected to acclimate to the new condition crossing under the SR 14 freeway at the bridge undercrossings or at the high wildlife use hotspot areas (UC Davis 2023) and be able to continue across the adjacent HSR alignment over tunnels and under the viaducts. The U.S. Department of Transportation's Wildlife Crossing Structure Handbook, Design and Evaluation in North America (Clevenger and Huijser 2011) and the California Department of Transportation (Caltrans) Wildlife Crossings Guidance Manual (Meese et al. 2009) provide design guidelines and examples where wildlife has adapted to undercrossings under roadways.

The commenter suggests wildlife would not use the area for movement that were temporarily impacted and restored because there would still be a permanent barrier on the landscape. Wildlife movement has been documented in areas that have been graded and restored, such as on the slopes adjacent to the SR 14 freeway highlighted

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as high wildlife use hotspot areas (UC Davis 2023).

The commenter requests clarification on how worker awareness programs and managing non-native invasive plants would mitigate impacts to wildlife movement during project operation. During operation, workers will be trained on the mitigation measures to minimize disturbances to adjacent wildlife habitat. Minimizing disturbance during maintenance activities will minimize disruption to wildlife movement corridors, such as where the alignment is on viaduct or at the dedicated wildlife crossings.

The commenter opines that impacts to mountain lion would be significant, stating the project does not mitigate for permanent and temporal impacts on genetic connectivity between subpopulations of mountain lion for its fair share of impacts to wildlife connectivity. The Authority disagrees, based on the outcome of the extensive analysis in the WCA and WCA Supplement, which indicate that the impacts to mountain lion movement would be negligible (an approximate 1 percent reduction in permeability) because the project maintains movement corridors across the SR 14 freeway. The Refined SR14 and SR14A Build Alternatives maintain wildlife connectivity movement opportunities through an extensive series of tunnels and viaducts in spatial relationship to crossing opportunities at existing bridges at the SR 14 freeway and identified high wildlife use areas (UC Davis 2023) within the Linkage Design, listed in Table 6-6 in the WCA and Table 2-13 of the WCA Supplement.

The commenter asserts that the project continues to have a substantial adverse effect, either directly or through habitat modifications, on mountain lion, a species identified as a candidate under CESA. As demonstrated in the WCA and WCA supplement, the impacts to mountain lion movement are less than significant due to the extensive network of viaduct and tunnels that align with existing crossing opportunities at the SR 14 freeway through bridges and high wildlife use areas (UC Davis 2023). The Authority would implement mitigation measures to avoid, minimize, and offset impacts to mountain lion habitat. Therefore, the project would not have a substantial adverse effect following implementation of BIO-MM#64, contrary to the commenter's statement.

The commenter states that the single biggest potential biological impact arising from the construction of the project is the impact on regional movements of wildlife and connections between habitats, and requests that the Authority consider the following recommendations:

In Recommendation #4, the commenter recommends that the Authority participate in

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early consultation with CDFW, as substantial modification to the project and mitigation measures may be required to obtain an Incidental Take Permit (ITP) for mountain lion under CESA. The Authority recognizes the species status as a CESA candidate species for listing and acknowledges take of the species is prohibited without authorization under CESA. If the Southern California/Central Coast ESU subpopulation of mountain lion is identified as a candidate or listed species during the detailed design phase of the project, the Authority will seek an ITP prior to construction.

In Recommendation #5 and Recommendation #6, the commenter suggests that the Authority revise Section 3.7, Biological and Aquatic Resources to discuss project impact on mountain lion from the standpoint of genetic exchange between the Southern California/Central Coast ESU subpopulations. The commenter further recommends that the Authority discuss the project's cumulative impacts on mountain lion with genetic exchange effects included as part of the discussion. The commenter recommends that the EIR/EIS provide data to support the conclusion regarding the project impacts, and level of significance, on mountain lion. As previously described, the Build Alternatives would maintain wildlife movement across the SR 14 freeway corridor at existing bridge undercrossings and high wildlife use hotspot areas (UC Davis 2023) by aligning tunnels and viaducts with these areas. Because wildlife movement is maintained and subpopulations would not be isolated by the project, genetic exchange is expected to continue similar to current conditions. As such there is no need for a project-level or cumulative analysis separate and distinct from the analysis conducted in the WCA, WCA Supplement, and Draft EIR/EIS.

In Recommendation #7, the commenter states that Refined SR14 and SR14A Build Alternatives would have the greatest impact on mountain lion movement and further states that no mitigation is provided or proposed for potential impacts to mountain lion. The Authority respectfully disagrees with this comment both because the analysis presented in the WCA indicates that the E1 and E2 Build Alternatives reduce permeability for mountain lion to a greater degree than SR14A or Refined SR14 would, and because mitigation is proposed for impacts to mountain lion (see discussion of BIO-MM#96 and BIO-MM#97 above). The Refined SR14 and SR14A Build Alternatives maintain wildlife movement opportunities across the existing SR 14 freeway bridge undercrossing and other crossing opportunities through alignment of tunnels and viaducts. As a result, permeability for mountain lion is reduced by approximately 1 percent. The commenter also recommends that the Authority minimize impacts to mountain lion and wildlife movement by modifying the at-grade segment of HSR adjacent to Bee Canyon to a tunnel or at-grade covered segment. If this alternative is

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not feasible or the Authority declines to adopt it, the commenter advises the Authority to revise the EIR/EIS to provide a meaningful evaluation and analysis as to why the Authority cannot modify the at-grade segment.

A multidisciplinary team of Authority engineers reviewed the topography and the design for the HSR Palmdale to Burbank Section and found that the refinement would not provide biological benefit because the SR 14 freeway is a complete barrier at this location due to the high traffic volumes (cited below), combined with the steep natural terrain and roadcuts (Figure 4 and 5, above) and confirmed by the lack of wildlife use recorded by UC Davis adjacent to Bee Canyon between Stonecrest Road and Agua Dulce Canyon Road. The 2014 annual average daily traffic volume (AADT) for the SR 14 freeway ranges between 71,000 and 99,000 vehicles in Palmdale and Santa Clarita (Caltrans 2014), which is seven to ten times the volume that Clevenger and Huijser (2009) found to repel wildlife due to the almost constant level of disturbance and heavy traffic volume. In addition, the steep road cuts and steep terrain along the SR 14 freeway between Stonecrest Road and Agua Dulce Canyon Road make the freeway less likely to facilitate wildlife movement, a conclusion supported by the high wildlife use hotspot areas (UC Davis 2023). Examples of the steep road cuts are provided in the Google Streetview images above.

Construction of a covered at-grade section would also not be feasible given constructability, cost, and other engineering, economic, and environmental impacts. This at-grade section has a cut of variable height, with the highest cuts on the southeast side of the alignment, with small cuts or fully at-grade sections on the northwest side. After the excavation and earthwork is completed, the suggested at-grade covered option would require building two artificial twin-tunnel structures to cover the tracks, and then cover these structures with dirt from the excavation. The final profile of the covered HSR tracks would be above the original ground elevation. This cover layer would intercept the watercourses running downhill from the mountains southeast of the HSR alignment towards the bottom of Bee Canyon. A multidisciplinary team of engineers from SENER found that accumulation of water would occur within the lowest areas of the natural watercourses southeast and adjacent to the alignment, impeding efficient drainage. This would substantially change the local hydrology runoff conditions and would affect the stability of the cover layer and the tunnel structures. Nowhere else along this HSR project section does the proposed design include mounds on top of the tunnel that would impede the natural water runoff. In addition, the slopes needed to build up the ground cover, considering the need to replicate as much as possible the existing ground conditions, would extend beyond the grading limits on the northwest side of the

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alignment proposed in the design included in the Draft and Final EIR/EIS. This would require increasing the environmental footprint and hence the impact on the lower part of Bee Canyon would also increase. The increase of the environmental footprint is estimated to be approximately 10 acres. Construction cost and duration would substantially increase due to the new tunnel structures and earthworks for the cover. The cost would increase by approximately $510 million dollars, and the construction duration in the Bee Canyon area would last 18 additional months. The additional mile of tunnel would also increase the maintenance and operation costs due to the augmented lighting, ventilation, monitoring, and safety systems. Based on these constructability, cost, and other engineering, economic, and environmental constraints, construction of a fully enclosed at-grade section would not be feasible through the Linkage Design.

In Mitigation Measure #5, the commenter suggests that the Authority revise BIO-MM#64 to “require” (instead of recommend) that wildlife crossings be constructed. The Authority has revised BIO-MM#64 to clarify that dedicated wildlife crossings to be constructed south of the California Aqueduct and east of Una Lake are required to be installed. The commenter recommends that BIO-MM#64 include a design that establishes specific criteria for monitoring the performance of the crossings (viaducts, undercrossing, overcrossings) for routine and ongoing use by mountain lion and its prey. The commenter states that changes to the project after the CEQA review process, such as the addition of more at-grade segments or a decision not to construct wildlife crossings, could result in additional significant impacts not identified and analyzed in the EIR/EIS and may necessitate preparation of a subsequent CEQA document (CEQA Guidelines, §15162). The viaducts, tunnels, and undercrossings maintain significant wildlife movement opportunities across the HSR alternatives. New proposed crossings at the California Aqueduct and east of Una Lake will be monitored bi-annually for five years to document wildlife use or to determine if adaptive management measures need to be implemented to encourage wildlife crossing use. Wildlife crossing monitoring will consist of wildlife cameras, scent stations, and spotlight surveys. The Authority recognizes the comment regarding project changes as a result of the design-build process and acknowledges that substantial changes could require additional environmental review. However, changes to the project that would affect implementation of BIO-MM#64 are not anticipated.

In Mitigation Measure #6, the commenter suggests that BIO-MM#77 and BIO-MM#78 be revised to require the Project Biologist or contractor to obtain CDFW’s review and approval of fencing and wildlife escape plans that ensure avoidance of take of mountain lion. The commenter notes that these measures lack measurable, quantifiable actions or

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enforceability to avoid, minimize, or mitigate impacts on wildlife movement during project operation. The Authority respectfully disagrees. BIO-MM#77 as written would ensure that the alignment is fenced in a manner that excludes mountain lion, and BIO-MM#78 would ensure that in the unlikely event a mountain lion is able to enter the track alignment, escape ramp-outs will be available for it to find its way out. It is likely that mountain lion will be a covered species under a Section 2081 permit issued under CESA, in which case the fencing and wildlife escape plans would be subject to CDFW review and approval.

In Mitigation Measure #7, the commenter recommends the Authority revise BIO-MM#96 by replacing the phrase “If the den is determined to be occupied, the 600-meter non-disturbance buffer will be maintained until the den is confirmed abandoned by the Project Biologist” with “If the den is determined to be occupied, then project activities in the defined buffer area would need to halt for two (2) months and a re-survey be conducted to determine if the female has abandoned the den and relocated the kittens. The Project Biologist and Authority shall immediately consult with CDFW upon detection of an active den.” The Authority revised BIO-MM#96 to clarify as follows: “The 600-meter non-disturbance buffer would remain in place for two (2) months after the initial survey and a re-survey at that time would be conducted by the Project Biologist to determine if the female has abandoned the den and relocated the kittens. The Authority will consult with CDFW upon detection of an active den. Construction may proceed if the Project Biologist determines that a reduced buffer could be implemented because of topography or other factors, or that the den is not being used by mountain lions.” The non-disturbance buffer would also be subject to modification pursuant to authorizations issued under CESA or Section 1600 et seq. Please see Section 3.7.7 of the Final EIR/EIS for these changes.

In Mitigation Measure #8 and Mitigation Measure #9, the commenter recommends that the Authority consult with CDFW to identify wildlife crossing opportunities and/or opportunities for land acquisition within the San Gabriel-Castaic Linkage, protect mitigation lands in perpetuity under a conservation easement dedicated to a local land conservancy or other appropriate entity that has been approved to hold and manage mitigation lands, and consult and collaborate with CDFW to conserve areas beneficial to the Southern California/Central Coast ESU that includes the SGSB subpopulation that may improve and maintain connectivity. As noted above, the Authority's analysis shows that the SR14A and Refined SR14 Build Alternatives would maintain wildlife connectivity opportunities similar to existing conditions across the SR 14 freeway corridor at the existing bridge undercrossings and other crossing areas identified through the high

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wildlife use hotspot areas (UC Davis 2023). The wildlife crossing opportunities have been extensively reviewed in the WCA and WCA Supplement, as well as wildlife connectivity that is maintained adjacent to the SR 14 freeway bridge undercrossings and high wildlife use hotspot areas (UC Davis 2023), as highlighted in Figures 1 and 2 below. The commenter recommends that wildlife crossing opportunities be approved by CDFW and incorporated into final design plans. The project effects to wildlife connectivity are less than significant, as demonstrated by the results of the WCA and WCA Supplement, and approval from CDFW is not required. The Refined SR14 and SR14A alignments maintain extensive crossing opportunities, which largely consist of a series of tunnels and viaducts that align with the existing SR 14 freeway crossings at bridges and high wildlife use areas (UC Davis 2023). Based on the established criteria, two additional crossings were incorporated into the design where the tunnels and viaducts were not sufficient to facilitate wildlife movement adjacent to Una Lake and the California Aqueduct. The tunnels, viaducts, and dedicated wildlife crossings are shown in the design plans. The commenter recommends that in addition to or instead of wildlife crossings, the Authority should acquire or fully fund the public acquisition of land within the San Gabriel-Castaic Linkage. The commenter states that the Authority should consult and collaborate with CDFW to conserve areas beneficial to the Southern California/Central Coast ESU and SGSB subpopulation that may improve and maintain connectivity. As described above, the permeability provided post-project closely resembles the existing conditions such that wildlife movement and gene flow are maintained. For this reason, no additional crossings or compensatory mitigation specific to wildlife movement impacts are proposed. However, compensatory mitigation to be provided for impacts to mountain lion habitat would conserve areas beneficial to mountain lion, which could include areas that support wildlife linkages. The Authority anticipates close coordination with CDFW regarding acquisition of compensatory mitigation for mountain lion, and if the subpopulation is covered by a Section 2081 permit, approval of compensatory mitigation would be required from CDFW. Cumulative biological impacts, including habitat fragmentation, degradation, habitat loss, and potential loss of individuals to the population, are discussed in Section 3.19.5.7, Biological and Aquatic Resources, of the Draft EIR/EIS. The analysis concludes that the project would not result in a considerable contribution, and that no mitigation is required for cumulative impacts.

In Mitigation Measure #10, the commenter recommends that the Authority prepare and implement a Mountain Lion Crossing Monitoring Plan and that the Authority consult with CDFW during the drafting of the Monitoring Plan and obtain approval of the Monitoring Plan prior to Project implementation. The WCA and WCA Supplement document

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existing crossing opportunities, which are corroborated by the recent UC Davis data on high wildlife use hotspot areas. As described above and shown in Figures 1 and 2, the Refined SR14 Build Alternatives and SR14A Build Alternatives contain a large network of tunnels and viaducts that align with the existing crossing opportunities [existing bridges and high wildlife use hotspot areas (UC Davis 2023)] to maintain existing wildlife movement opportunities and gene flow. As such, a mountain lion crossing monitoring plan is not required.

In Mitigation Measure #11, the commenter recommends that, in the event that mountain lion or dens are detected during surveys per BIO-MM#96, the Authority should prepare a Mountain Lion Avoidance Plan. The commenter recommends that the avoidance plan, at a minimum, should avoid, to the maximum extent possible, nursery sites, dens, and kill sites and that the Authority should submit a Mountain Lion Avoidance Plan to CDFW for review. Based on revisions to BIO-MM#96 in the Final EIR/EIS described above, which requires a substantial buffer of 600 meters for active mountain lion dens, a separate stand-alone avoidance plan is not necessary to avoid or minimize impacts.

In Mitigation Measure #12, the commenter recommends that the Authority obtain appropriate take authorization from CDFW pursuant to Fish and Game Code section 2081 subdivision (b) prior to any ground-disturbing activities. The comment is noted. For CESA-listed species, the Authority will consult with CDFW to discuss how to implement the Project to avoid take, or if avoidance is not feasible, to include the species in the ITP application for the Project section, pursuant to Fish and Game Code section 2081(b). The Authority anticipates that the Southern California/Central Coast ESU subpopulations of mountain lion would be included in a Section 2081 permit application if it is a candidate or listed species during the detailed design phase of the project. Furthermore, the Authority is committed to continued consultation with CDFW to avoid and minimize project effects.

In Mitigation Measure #13, the commenter recommends that the Authority maintain a ¼mile buffer from movement corridors, such as drainages and riparian areas, to minimize impacts to mountain lion and that no night work should occur in drainages and riparian areas and areas within the ¼mile buffer. Under BIO-MM#96, active mountain lion dens would be protected by 600-meter buffers that exceed ¼mile, and BIO-MM#37 requires avoidance of ground disturbing activities at night in wildlife movement corridors to the extent feasible. The mitigation measures will ensure that impacts to mountain lion are avoided and minimized such that a ¼mile buffer for 24 hours each day as recommended by the commenter is not necessary. Such a buffer would also not be

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feasible because it would have a substantial adverse effect on the construction schedule.

The Authority is committed to protecting the Southern California/Central Coast ESU subpopulation of mountain lion. The mitigation measures proposed in the Draft EIR/EIS will ensure that impacts to mountain lion in the Southern California/Central Coast ESU subpopulations are less than significant. As discussed above, the effects to wildlife connectivity are less than significant, as analyzed in the WCA and WCA Supplement and described in the Draft EIR/EIS.

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Refer to Standard Response PB-Response-PUE-3: Water Demand and Usage.

As CDFW acknowledges, the Draft EIR/EIS discloses impacts from the project on aquatic resources including streams, creeks, rivers, and seeps.

Section 3.7.6.3 discusses both the direct and indirect effects of the Build Alternatives on State protected aquatic resources in Impact BIO#8: "Project Construction Effects on State and Federally Protected Aquatic Resources" and Impact BIO#15: "Indirect Effects on Federal and State Protected Aquatic Resources from Project Operations". Impact BIO#8 and #15 disclose impacts that would include aquatic resources under the jurisdiction of CDFW and would require the Authority to obtain a Lake and Streambed Alteration (LSA) Agreement under Fish and Game Code 1600 et seq. To provide a comprehensive evaluation of all resources subject to Section 1600 et seq., the EIR/EIS also sets forth Impact BIO#9, “Project Construction Would Affect Fish and Wildlife Resources” and in Table 3.7-28 provides a summary of the riparian, lake, and stream effects, as well as total effects to CDFW resources for each Build Alternative. Once the project section is approved, during the detailed design phase and prior to initiation of construction, the Authority would submit a Section 1602 notification(s), as needed, to obtain LSA Agreement(s).

The Authority assumes that for the purpose of this response regarding implementation of an Adaptive Management and Monitoring Plan (AMMP), CDFW is referring to BIO-MM#93 not BIO-MM#94, which is mitigation for monarch butterfly host plants. As such, this response is specific to BIO-MM#93 requiring implementation of the biological resources portion of the AMMP prepared pursuant to HYD-MM#4. CDFW notes that even with implementation of both these mitigation measures, impacts to aquatic resources could still occur. As described in Impact BIO#8, in Section 3.7, Biological and Aquatic Resources of the Draft EIR/EIS, while actions would be implemented during construction to reduce the indirect impacts on special-status plants and plant communities and to minimize the loss of habitat resulting from tunnel construction, the project could result in loss and degradation of aquatic habitat. To address this impact, the Authority would implement biological resource specific actions from the AMMP, which includes a requirement for monitoring groundwater-dependent surface water resources and associated habitat within the tunnel construction Resource Study Area,

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providing supplemental water where needed, and remediating or compensating for any adverse effects identified during monitoring. If restoration of affected habitat areas is not successful, compensatory mitigation to offset the loss of habitat would be provided. Furthermore, the Authority will submit the required documentation to obtain a Section 1603 LSA Agreement and will continue to coordinate with CDFW through the Section 1602 notification process. The Authority understands that mitigation, including biological resources related actions in the AMMP, may be further refined during the LSA process per CDFW requirements.

The commenter notes current drought conditions in the State of California and states that the Authority may not have supplemental water for the AMMP. As documented in Impact HWR#5 in Section 3.7, Hydrology and Water Resources of the EIR/EIS, the Authority would implement state-of-the-art design features and construction methods to avoid and minimize impacts on hydrologic resources, including through the use of TBMs equipped with specific features designed to reduce or prevent inflows and grouting and tunneling-lining approaches that have been effective at controlling water seepage (as required by HYD-IAMF#5, HYD-IAMF#6, and HYD-IAMF#7). This would help prevent the need for supplemental water for habitat restoration. Please refer to PB-Response-PUE-3: Water Demand and Usage, which provides additional information about sources of water for the project. This additional information provides clarification and more specificity as to the possible sources and approaches to obtaining water during project construction during dry and multiple dry years. However, this information does not change the impact conclusions relative to water supply during dry and multi-dry years.

The commenter notes that the project's impacts on aquatic resources have yet to be mitigated below a significant level. Numerous mitigation measures, including preparation of an AMMP, have been proposed to offset impacts disclosed in the Draft EIR/EIS (see Impacts BIO#8 and BIO#9). The mitigation as proposed in the Final EIR/EIS would effectively reduce impacts to aquatic resources to less than significant levels. The Authority will submit the required documentation to obtain a Section 1603 LSA Agreement and will continue to coordinate with CDFW through the LSA process as well as other applicable provisions of the California Fish and Game Code. In its comment letter, CDFW provides six recommendations and four suggestions for mitigation measure revisions to help address their concerns on impacts to aquatic resources. A

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response to each recommendation is provided below.

In Recommendation #8, CDFW recommends that the Final EIR/EIS should fully identify the potential impacts to aquatic and riparian resources and provide avoidance, mitigation, monitoring, and reporting commitments for issuance of an LSA Agreement. The Draft EIR/EIS disclosed all potential impacts in Impact BIO#8. The Palmdale to Burbank Project Section Biologic and Aquatic Resources Technical Report maps aquatic resources throughout the Build Alternative aquatic resource RSAs, and the Authority is confident that the impacts disclosed in Impact BIO#9 and Table 3.7-28 noted above, are an overestimate of the impacts that will result from project construction. The Draft EIR/EIS provides mitigation measures to reduce impacts to Section 1600 et seq. resources to less than significant (See BIO-#46, BIO-MM#47, BIO-MM#56, BIO-MM#61, BIO-MM#62, and BIO-MM#93).

In Recommendation #9, CDFW recommends field evaluations be conducted to confirm impacts to streams for the project once Right-of-Way is secured by the Authority. The Authority acknowledges that once Right-of-Way is secured and prior to submitting notifications under Section1602, additional field evaluations will be conducted. CDFW also refers to Additional Recommendation #32 in this comment. Please refer to Response to Comment #10569, which addresses CDFW's Recommendation #32.

In Recommendation #10, CDFW recommends the EIR/EIS discuss the project's impacts on streams from the standpoint of any nighttime lighting that may be needed during construction, and that the EIR/EIS should provide measures to mitigate for any significant effects on aquatic resources from construction lighting. The Draft EIR/EIS evaluates the effects of night lighting on special-status species, including species using aquatic habitats (See Impact BIO#6). As provided under BIO-MM#37, the Authority, to the extent feasible, will avoid conducting ground disturbing activities in wildlife habitat, including movement corridors and aquatic resources, during nighttime hours. The Draft EIR/EIS already covers the potential impacts from construction lighting on biological resources including aquatic resources, and has identified measures that would minimize impacts to a less than significant level, including Mitigation Measure BIO-MM#99, which requires the Authority to implement lighting minimization measures during construction.

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In Recommendation #11, CDFW recommends the Authority revise Table 1 in Appendix 3.8-C Water Resources Adaptive Management and Monitoring Plan for Potential Hydrologic Effects within the Angeles National Forest. CDFW recommends that the Authority monitor water pressure, flow, velocity, water quality, and wetted perimeter as metrics for potential effects indicators. The reduction below lowest documented pressure in the piezometer pressure database from the previous year is a sufficient monitoring metric for monitoring groundwater levels. Piezometers can detect the depth of the water pressure in the soil and detect water flow and strata permeability, thereby monitoring water pressure below ground. CDFW also recommends the following revisions to Table 1 in Appendix 3.8-C: the Authority should reduce the trigger level from 20 percent, provide location and species-specific trigger levels, and include species richness, density, and abundance as a monitoring metric. By using the metrics of 20 percent reduction in percent cover of groundwater-dependent plants or vegetation communities; or 20 percent reduction in or loss of herbaceous species; transition of riparian species to upland species; or increased signs of stress in oak trees and other tree species that species richness, density and abundance is captured across the tunnel construction RSA in the Angeles National Forest. The Authority appreciates CDFW's recommendations and suggested revisions and is committed to continued coordination with CDFW to monitoring surface water resources and groundwater levels prior to and during project construction. The mitigation measures as proposed in the Draft EIR/EIS will ensure impacts to surface water resources and ground water are less than significant.

In Recommendation #12, CDFW recommends the EIR/EIS discuss the new trigger level pertaining to U.S. Forest Service Standards 47 and 11 and discuss why trigger levels proposed would adequately detect and respond to impacts on aquatic resources in an efficient and effective manner. The AMMP triggers include water pressure/level readings measured in piezometers established along the Project alignment. Implementing the AMMP will involve the installation of piezometers along the project alignment, as well as development of a groundwater model during detailed design and in advance of construction. The combination of monitoring groundwater levels far underground at the tunnel construction level (several thousand feet below the surface in some cases) and the groundwater model will be effective as an early warning trigger so that measures can be implemented such as changes in construction techniques. Using water

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pressures/level readings measured at the tunnel construction zone, combined with the groundwater model, provides an early trigger to ensure that adverse changes are detected and that response actions are implemented in a timely manner to avoid adverse impacts to riparian habitats and threatened, endangered, proposed, candidate, or sensitive (TEPCS) species.

In Recommendation #13, CDFW recommends the Authority provide documentation that supplemental water will be available for the project. Please refer to PB-Response-PUE-3: Water Demand and Usage, which provides information on the sources of water for the project.

In Mitigation Measure Recommendation#14, CDFW recommends that the Authority revise BIO-MM#33, BIO-MM#34, and BIO-MM#47 to include aquatic resources subject to Fish and Game Code section 1602. The Authority agrees with CDFW's suggested revision and has revised the three mitigation measures in the Final EIR/EIS to specifically reference resources subject to Section 1600 et seq. The Authority has also revised BIO-MM#46 in the Final EIR/EIS to add reference to Section 1600 et seq. It should be noted that although Section 1600 et seq. was not specifically identified, Impact BIO#9 indicates that these compensatory mitigation measures are being relied upon to offset effects to aquatic and riparian resources subject to Section 1600 et seq. See Section 3.7.7 of the Final EIR/EIS for changes made to mitigation measures as described above.

In Mitigation Measure Recommendation#15, CDFW recommends that the Authority revise HYD-MM#4 and provides CDFW and other stakeholders the opportunity to review and provide feedback on the Water Resources Adaptive Management and Monitoring Plan (AMMP). The Authority is committed to ongoing coordination with CDFW through applicable permitting processes. Documentation needed to support the permitting process(es) will be included in the application/notification package(s), and thus will be subject to additional reviews. The Authority will consider the possibility of convening a working group regarding the AMMP and provide input to CDFW accordingly.

In Mitigation Measure Recommendations #16 and #17, CDFW recommends that the Authority submit a notification pursuant to Fish and Game Code Section 1602 for

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construction and activities occurring near or impacting streams and associated natural communities. The Authority acknowledges the comment by CDFW and intends to notify CDFW prior to the start of construction and in time to negotiate one or more Lake and Streambed Alteration Agreements for all areas subject to Section 1602 notification requirements. The notification package will be inclusive of information necessary for CDFW to issue LSA Agreement(s).

The mitigation measures proposed in the Draft EIR/EIS will ensure that impacts to aquatic and riparian resources and species dependent on those resources are less than significant.

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The commenter expresses a concern that the Project would have a significant impact on western Joshua tree, a candidate species for listing under the California Endangered Species Act (CESA). The commenter states that the Draft EIR/EIS does not provide a discussion or complete disclosure of the Project's impact on western Joshua tree even though the Project could impact the species. The commenter provides a list of potential effects to western Joshua tree, as a result of Project implementation as well as the potential location of a Joshua tree.

The commenter claims the Project has not mitigated for impacts on western Joshua tree and the Project continues to have a substantial adverse effect, either directly or through habitat modifications, on a species identified as a candidate species by CDFW. The commenter provides one recommendation and three suggestions for mitigation measure revisions to help address their concerns with regards to western Joshua tree impacts. In Recommendation #14, the commenter recommends the Authority conduct a focused western Joshua tree mapping survey and update Section 3.7 Biological and Aquatic Resources to include a discussion of the Project's impact on western Joshua trees. In Recommendation #18, commenter recommends that the Authority should fully avoid impacts to western Joshua trees and implement a minimum 300-foot buffer that is temporarily demarcated by protective fencing and signage. In the commenter's Mitigation Measure #19 and Mitigation Measure #20, they recommend that if the Authority is unable to avoid impacts on western Joshua tree, then the Authority should obtain take authorization for western Joshua tree and mitigate at a ratio no less than 2:1.

The Authority recognizes the western Joshua tree's status as a CESA candidate species for listing and acknowledges that no take of the species is authorized except under State law (Fish &Game Code, §§86, 2062, 2067, 2068, 2080, 2085; Cal. Code Regs., tit. 14, §786.9). In addition, the Western Joshua Tree Conservation Act (WJTCA; Senate Bill 122) went into effect on July 10, 2023, which directs CDFW to establish a permitting program, in-lieu fee conservation fund, and conservation plan. Because this Act when into effect after the Draft EIR/EIS was published, this Act could not have been included in the Draft EIR/EIS; nonetheless, additional background information on the WJTCA has been added to the Final EIR/EIS. As the CDFW observes in their comment, one western Joshua tree is known to occur within APN 3006-006-029; however, that particular parcel does not occur in the Palmdale to Burbank project section. This APN is located in the

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Palmdale Station area, which was approved as part of the Bakersfield to Palmdale Project section. The Authority recognizes that the lack of occurrence for western Joshua tree within CNDDB does not mean the species does not occur in a given area. Based on the analysis provided in the Draft EIR/EIS and subsequent aerial mapping of western Joshua tree, the Authority does not expect significant impacts to the species as a result of the Project. Please see below for additional information.

The Draft EIR/EIS disclosed the potential occurrences of Joshua tree in two places, in Section 3.7.5.2, Vegetation Communities (where they are a component of Juniper and Coastal Scrub habitats) and in Section 3.7.5.11, Protected Trees. Potential impacts were disclosed in Section 3.7.6, in both Impact BIO#12 (Project Construction Effects on Protected Trees) and Impact BIO#19 (Project Operation Effects on Protected Trees). Table 3.7-4 of the Draft EIR/EIS define the Juniper and Coastal Scrub vegetation communities as comprised of individual Joshua trees and affected acreages of each community are provided within each Build Alternative. Section 3.7.5.11, Protected Trees of the Draft EIR/EIS describe Joshua trees as Protected Trees under the City of Palmdale Municipal Code. Impact BIO#12 (Project Construction Effects on Protected Trees) and Impact BIO#19 (Project Operation Effects on Protected Trees) describe the direct and indirect effects on protected trees as a result of construction and operation of the Project.

Nonetheless, in order to clarify that the analysis covers Joshua Tree, the Final EIR/EIS has been revised to further clarify these impacts and the mitigation measures have been refined, as suggested by the commenter. Tables 3.7-5 and 3.7-11 in the Final EIR/EIS have been modified to clarify the presence of western Joshua tree. In order to further characterize and quantify impacts to western Joshua trees, the approximate numbers of individual Joshua trees per alignment were determined through aerial photograph interpretation. A footnote was added to Table 3.7-11 in the Final EIR/EIS to include: “Based on aerial interpretation, approximately 40 western Joshua trees occur within the Refined SR14 alignment footprint (99 in indirect impact area), 2 Joshua trees within the SR14A alignment (29 trees in indirect impact area), 20 trees within the E1 alignment (33 trees in indirect impact area), 6 trees within the E1A alignment (25 trees in indirect impact area), 20 Joshua trees within the E2 alignment (33 trees in indirect impact area), and 6 Joshua trees within the E2A alignment (25 trees in indirect impact area).”

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The Mitigation Measures identified in the Draft EIR/EIS would apply for impacts on Joshua tree. Under BIO-MM#1, pre-construction presence/absence surveys for special-status plants (which includes western Joshua tree) will be performed prior to any ground disturbing activity. If any Joshua trees are detected at that time, the Authority would implement Environmentally Sensitive Areas and Non-disturbance Zones as specified under BIO-MM#58 and BIO-MM#35. As specified under BIO-MM#2, BIO-MM#3, BIO-MM#35, and BIO-MM#38, if any Joshua trees are detected during pre-construction surveys and impacts are unavoidable, the Authority would coordinate with relevant regulatory agencies (CDFW) as appropriate and in accordance with authorizations under CESA. Additionally, the Authority would prepare a Compensatory Mitigation Plan as specified under BIO-MM#53 for western Joshua tree. BIO-MM#35 in the Final EIR/EIS has been revised to clarify that Joshua trees will be replaced based on the take authorization. The Authority appreciates the CDFW recommendations and suggested revisions and is committed to continued consultation with the CDFW to avoid impacts to western Joshua tree from Project construction and operation.

In summary, the Draft EIR/EIS considered the potential impacts on Joshua Tree and the Final EIR/EIS has been revised to clarify that the analysis applies to Joshua Tree.

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CDFW acknowledges the project would result in temporary and permanent loss of suitable nesting and foraging habitat for Crotch bumble bee (Bombus crotchii), a CESA candidate species, and that project ground-disturbing activities may cause death or injury of adults, eggs, and larva; burrow collapse; nest abandonment; and reduce nest success. As the CDFW points out, Section 3.7, Biological and Aquatic Resources in the Draft EIR/EIS does disclose impacts to Crotch bumble bee (see Draft EIR/EIS Section 3.7.6.3, Impact BIO#5: Project Construction Effects on Special-Status Invertebrate Habitat). The Authority acknowledges CDFW's concern that the EIR/EIS did not provide mitigation measures to fully reduce or avoid impacts to Crotch bumble bee. The Authority further acknowledges that Crotch bumble bee is granted full protection as a threatened species under CESA and that take of Crotch bumble bee is prohibited, except as authorized by State law. CDFW provides recommendations for mitigation measure revisions to address their concerns for impacts to Crotch bumble bee. The Authority appreciates the CDFW recommended mitigation measure revisions. In addition to Draft EIR/EIS Section 3.7 BIO-MM#39 (Provide Compensatory Mitigation for Impacts on Vernal Pool Fairy Shrimp and Vernal Pool Tadpole Shrimp Habitat), BIO-MM#47 (Prepare and Implement a CMP for Impacts on Aquatic Resources), BIO-MM#50 (Implement Measures to Minimize Impacts During Off-Site Habitat Restoration, or Enhancement, or Creation on Mitigation Sites), and BIO-MM#53 (Prepare and Implement a CMP for Species and Species Habitat), two additional measures (BIO-MM#102 [Conduct Surveys and Implement Avoidance Measures for Crotch Bumble Bee] and BIO-MM#103 (Provide Compensatory Mitigation for Impacts on Crotch Bumble Bee Habitat]) have been included as part of the Final EIR/EIS to address CDFW comments and provide further protection for Crotch bumble bee. BIO-MM#102 provides additional clarification and consistency with the Authority's intent to avoid/minimize impacts to this species, and in the event that avoidance/minimization is not possible, BIO-MM#103 proposes compensatory mitigation to offset impacts to this species.

Mitigation Measure BIO-MM#102 has been added in the Final EIR/EIS to include site-specific surveys conducted by qualified Project Biologists in suitable habitat (identified by species habitat suitability modeling) during the flight season (March–September) (Thorp et al. 1983). The purpose of this pre-construction survey would be to identify active nest colonies and associated floral resources within and adjacent to construction activities to determine areas of avoidance, and if needed, additional actions to address potential impact to Crotch bumble bees. Surveys will follow an acceptable protocol

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consistent with general guidelines and best practices for bumble bee surveys in accordance with USFWS' Survey Protocols for the Rusty Patched Bumble Bee (Bombus affinis) (USFWS 2019) and consistent with other bumble bee survey protocols used by The Xerces Society (Hatfield et al. 2020). For each of the four sampling events, the Project Biologist(s) will survey suitable habitat within the project footprint and a 100-foot buffer surrounding the project footprint (where access is allowed), using non-lethal netting methods for 1 person-hour per 3 acres of the highest quality habitat or until 150 bumble bees are sighted, whichever comes first. If initial sampling of a given habitat area indicates that the habitat suitability is of low quality or nonexistent, no further sampling of that area shall be required. If surveys conducted within 1 year prior to construction identify occupied Crotch bumble bee habitat within the project footprint or the 100-foot buffer, including within inactive small mammal burrows and thatched/bunch grasses, additional pre-construction surveys of such habitat will be required for active bee nest colonies and associated floral resources (i.e., flowering vegetation on which bees from the colony are observed foraging) within seven (7) days prior to scheduled disturbance between March and September. If active nest colonies and associated floral resources are identified during pre-construction surveys, the Project Biologist will establish exclusion buffers with a minimum of 50 feet (15.24 meters) of clearance around nest entrances and maintain disturbance-free airspace between the nest and nearby floral resources, and in effect until the colony is no longer active (i.e., no bees are seen flying in or out of the nest for three consecutive days, indicating the colony has completed its nesting season and the next season's queen has dispersed from the colony). Mitigation Measure BIO-MM#103 describes that if take or adverse impacts to Crotch bumble bee cannot be avoided during construction or operation of the project, the Authority shall obtain appropriate take authorization from CDFW pursuant to Fish and Game Code section 2081 subdivision (b). Should take authorization be necessary, this measure also proposes compensatory mitigation for impacts on occupied habitat/floral resources for Crotch bumble bee (confirmed through surveys as described in BIO-MM#102) at a replacement ratio of not less than 1:1, unless a higher ratio is required pursuant to an authorization issued under the California Endangered Species Act. Compensatory mitigation may be implemented through purchase of CDFW-approved bank credits (if available), through preservation of habitat in perpetuity, including suitable habitat currently preserved by the Authority, or through replacement of floral resources as close to their original location as is feasible. Specific to the

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replacement option, if active Crotch bumble bee nests have been identified and floral resources cannot be replaced within 200 meters (approximately 656 feet) of their original location, floral resources shall be planted in the most centrally available location relative to identified nests, no more than 1.5 kilometers (approximately 0.93 mile) from any identified nest. Replaced floral resources may be split into multiple patches to meet distance requirements for multiple nests. These floral resources will be maintained in perpetuity and replanted/managed as needed to ensure the replacement habitat is preserved. The final mitigation option, or a combination of options, will be determined in coordination with CDFW. Refer to Section 3.7.7 in the Final EIR/EIS for the full text in these two additional mitigation measures. With the addition of these two measures to the Final EIR/EIS, additional protection is provided for Crotch bumble bee, and impacts to this species remain less than significant.

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CDFW notes that the Project may impact monarch butterfly by degrading or converting overwintering and/or breeding habitat. As CDFW points out, the Draft EIR/EIS does disclose potential impacts to monarch butterfly (refer to Draft EIR/EIS Section 3.7.6, Impact BIO#5: Project Construction Effects on Special-Status Invertebrate Habitat), including the following: removal of monarch butterfly host plants potentially reducing long-term viability of monarch butterfly populations; direct effects from permanent conversion of occupied habitat, project infrastructure or changes to micro/local hydrology; and indirect effects during construction, such as the accumulation of fugitive dust on host plants, inadvertent introduction of nonnative invasive weeds that would outcompete host plants. CDFW comments that impacts to monarch butterfly are not mitigated below levels of significance, specifically for potential impacts to overwintering and breeding sites.

The Authority appreciates the recommendation from CDFW and is committed to protecting the monarch butterfly. Based on the information provided in the Draft EIR/EIS, the mitigation as proposed reduces impacts to monarch butterfly to less than significant levels. Specifically, mitigation measures BIO-MM#3,BIO-MM#4, BIO-MM#5, BIO-MM#6, BIO-MM#39, BIO-MM#47, BIO-MM#50, BIO-MM#,BIO-MM#55, BIO-MM#56, BIO-MM#60, BIO-MM#61, BIO-MM#63, BIO-MM#94, and BIO-MM#95 would be implemented to minimize and offset impacts to monarch butterfly. Based on CDFW's suggested mitigation measure revisions, BIO-MM#94 (Avoid Direct Impacts on Monarch Butterfly, Monarch Butterfly Overwintering Habitat, and Monarch Butterfly Host Plants) has been expanded to capture CDFW's concerns and provide further protection for the monarch butterfly (see EIR/EIS Section 3.7, Impact#5 (Project Construction Effects on Special-Status Invertebrate Habitat).

Mitigation Measure BIO-MM#94 has been revised to add further clarification, such as a qualified Project Biologist surveying for monarch butterfly within suitable habitat prior to ground-disturbing activities, including in potential overwintering habitat, and delineating overwintering habitat following the Xerces Management Guidelines for Monarch Butterfly Overwintering Habitat (Xerces Society 2017). Refer to Section 3.7.7 in the Final EIR/EIS for the full text in this mitigation measure. If overwintering monarchs are present, the Project Biologist will establish a 100-foot exclusion buffer from all identified overwintering monarchs. The Project will follow overwintering habitat management

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recommendations as provided in the Western Monarch Butterfly Conservation Recommendations (USFWS 2021). During the breeding and larval foraging periods and prior to any ground-disturbing activities, the Project Biologist will also survey for the presence of larval host plants, including native milkweed species, within suitable habitat areas. If host plants are found, the qualified Project Biologist will conduct focused surveys for adult monarch butterflies during the peak of the flight period to determine presence/absence in suitable habitat. If monarch butterflies are observed, the Project Biologist will establish a 50-foot exclusion buffer from all identified host plants to ensure that construction personnel avoid these areas.

In addition, Mitigation Measure BIO-MM#95: Provide Compensatory Mitigation for Impacts on Monarch Butterfly Habitat, has been revised to clarify that compensatory mitigation options include one or more of the following:

- Purchase of credits from an agency-approved conservation bank.
- Acquisition in fee title of USFWS-approved property.
- Establishment of a conservation easement over a property with replacement functions and values. Development of an agreement with an appropriate endowment in coordination with a long-term management entity.
- Payment into an in-lieu fee program.

Although the Authority recognizes CDFW's request to increase the compensatory mitigation ratio, the current ratio is consistent with the statewide programmatic mitigation measures implemented by the California High-Speed Rail program and consistent with measures required of large transportation and other infrastructure projects in California. The Authority has determined this ratio is sufficient to mitigate impacts on monarch butterfly. Please refer to the Final EIR/EIS, Section 3.7.7 for the full text of these measures. Revisions to these mitigation measures provide further protections for monarch butterfly, and impacts remain less than significant.

Mitigation for monarch butterfly will prioritize areas within any future designated critical habitat (if/when the monarch is listed and/or critical habitat is designated), and with existing monarch butterfly populations and suitable milkweed populations to facilitate breeding. The secondary priority is to create suitable habitat in other areas, if feasible (e.g., establish self-sustaining milkweed populations). The ultimate mitigation option, or a combination of options, will be determined in coordination with CDFW and USFWS.

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Please refer to Section 3.7.7 in the Final EIR/EIS for the full text in this mitigation measure.

Furthermore, BIO-MM#54 (Prepare and Implement an Annual Vegetation Control Plan) and BIO-MM#55 (Prepare and Implement a Weed Control Plan) has been revised in the Final EIR/EIS to include special consideration for monarch butterfly. Use of pesticides within one mile of overwintering groves will be avoided or minimized. Non-chemical weed control techniques will be used when possible. If pesticides are used, applications would be conducted from mid-March through mid-September, when possible. Use of herbicides will consider occupied monarch butterfly habitat, with special consideration of occupied host plants (e.g., milkweed) consistent with provisions set forth in the Annual Vegetation Control Plan and BIO-MM#6. Refer to Section 3.7.7 in the Final EIR/EIS for the full text in this mitigation measure.

The Authority has amended Mitigation Measures BIO-MM#54, BIO-MM#94, and BIO-MM#95 in the Final EIR/EIS (refer to Section 3.7.7) to provide additional clarification and to strengthen protection to monarch butterflies, by minimizing and avoiding impacts associated with weed control, and by following Xerces guidelines when assessing suitable habitat. The revisions to the mitigation measures will further reduce impacts to monarch butterfly.

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CDFW acknowledges the HSR Palmdale to Burbank Section could result in temporal or permanent loss of breeding and upland habitat for special-status amphibian species, and construction activities could result in injury or mortality of amphibians. CDFW also notes that amphibians could be trampled or crushed by equipment, vehicles, and foot traffic. As pointed out by CDFW, the Draft EIR/EIS discloses impact to special-status amphibian species and provides detailed analysis and discussion in Section 3.7.6.3, Impact BIO#2: Project Construction Effects on Special-Status Amphibian Habitat of the Draft EIR/EIS.

In their comment, CDFW expresses concern that the Project may continue to have a significant impact on special-status amphibian species. The Draft EIR/EIS discloses impacts to three FESA-listed (one of which is also CESA-listed) and two non-listed amphibian species from construction of the six Build Alternatives. The Refined SR14 Build Alternative would have the greatest impact on FESA-listed species, while the E2/E2A Build Alternatives would have the greatest impact on non-FESA-listed species. The Draft EIR/EIS provides mitigation measures to reduce or avoid impacts to special-status amphibians (e.g., BIO-MM#6 (Prepare and Implement a Restoration and Revegetation Plan), BIO-MM#7 (Conduct Pre-construction Surveys for Special-Status Reptile and Amphibian Species), BIO-MM#8 (Implement Avoidance and Minimization Measures for Special-Status Reptile and Amphibian Species), BIO-MM#32 (Restore Temporary Riparian Habitat Impacts), BIO-MM#33 (Restore Aquatic Resources Subject to Temporary Impacts), BIO-MM#34 (Monitor Construction Activities within Jurisdictional Waters), BIO-MM#36 (Install Aprons or Barriers within Security Fencing), BIO-MM#46 (Provide Compensatory Mitigation for Permanent Impacts on Riparian Habitat), BIO-MM#47 (Prepare and Implement a Compensatory Mitigation Plan for Impacts on Aquatic Resources), BIO-MM#50 (Implement Measures to Minimize Impacts During Off-Site Habitat Restoration, or Enhancement, or Creation on Mitigation Sites), BIO-MM#53 (Prepare a Compensatory Mitigation Plan for Species and Species Habitat), BIO-MM#55 (Prepare and Implement a Weed Control Plan), BIO-MM#56 (Conduct Monitoring of Construction Activities), BIO-MM#58 (Establish Environmentally Sensitive Areas and Nondisturbance Zones), BIO-MM#60 (Limit Vehicle Traffic and Construction Site Speeds), BIO-MM#61 (Establish and Implement a Compliance Reporting Program), BIO-MM#62 (Prepare Plan for Dewatering and Water Diversions), BIO-MM#63 (Work Stoppage), and BIO-MM#76 (Implement Wildlife Rescue Measures)). Under BIO-MM#6,

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the Authority would be required to restore and revegetate areas that provide suitable habitat for protected amphibian species. BIO-MM#7 requires pre-construction surveys to determine the presence or absence of special-status amphibian species. BIO-MM#8 and BIO-MM#56 require monitoring during construction activities and identify no-work buffers in the event special-status species are observed. BIO-MM#32 and BIO-MM#33 require that within 90 days of the completion of construction activities, riparian habitat will be restored and revegetated with native plants and seeds and aquatic habitat will be restored, respectively. BIO-MM#34 requires monitoring of construction activities in and near jurisdictional waters, including installation of protective barriers. BIO-MM#36 requires the installation of permanent security fencing along portions of the Palmdale to Burbank Project Section adjacent to prevent special-status wildlife ingress into the HSR right-of-way during project operations. BIO-MM#46, BIO-MM#47, BIO-MM#50, and BIO-MM#53 require the Authority to prepare and implement a plan for compensation of permanent impacts on riparian habitats and suitable habitat for special-status species through habitat restoration, the acquisition of credits from an approved mitigation bank, or participation in an in lieu fee program. BIO-MM#55 requires the preparation and implementation of a weed control plan to reduce potential risks to special-status species individuals and habitat from invasive weeds. BIO-MM#58 requires the installation of ESA fencing and the establishment of exclusionary zones to protect special-status species. BIO-MM#60 requires limiting construction vehicle speeds to 15 miles per hour within the construction footprint. BIO-MM#61 identifies reporting requirements for compliance with regulatory permits. BIO-MM#62 requires the preparation and implementation of a plan for dewatering and water diversions and identifies measures to protect special-status species, in the event such species are present. BIO-MM#63 identifies the measures to stop work in the event special-status species are observed during construction activities. BIO-MM#76 identifies measures for rescuing injured or trapped wildlife species encountered in the construction footprint. With implementation of these mitigation measures that will avoid and reduce impact to and compensate for habitat impacts, the Draft EIR/EIS concluded that surface construction impacts would be less than significant for the six Build Alternatives.

CDFW provides suggestions for revisions to seven mitigation measures (referred to hereafter as “CDFW-MM#X”) to help address their concerns for impacts to special-status amphibians. The following discussion addresses CDFW’s suggestions. CDFW-

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MM#35 recommends the Authority revise BIO-MM#7 to specify survey methods and protocols (if available) that would be implemented to adequately detect special-status amphibian species during pre-construction surveys. As suggested by CDFW, the Authority has consulted the CDFW Survey and Monitoring Protocols and Guidelines (CDFW 2022c) and the USFWS Survey Protocols and Guidelines (USFWS 2022) for survey protocols. The Authority recognizes the importance of clarifying what survey protocols are to be performed and has revised BIO-MM#7 and BIO-MM#8 in this Final EIR/EIS to provide this clarification. BIO-MM#7 and BIO-MM#8 can be found in Section 3.7.7 of this Final EIR/EIS. CDFW-MM#36 recommends that the Authority revise mitigation measures or provide a specific mitigation measure addressing compensatory mitigation for amphibian habitat. BIO-MM#46, BIO-MM#47, BIO-MM#50, and BIO-MM#53 require the Authority to prepare and implement a plan for compensation of permanent impacts on riparian habitats and suitable habitat for special-status species, including special-status amphibians, through habitat restoration, the acquisition of credits from an approved mitigation bank, or participation in an in lieu fee program. The compensatory habitat mitigation for long-term impacts will be further developed as project design advances and with additional site-specific information in coordination with resource agencies.

The Compensatory Mitigation Plan (CMP) requirements, discussed in BIO-MM#53, set forth adequate detail in terms of approach, goals and minimum conservation ratios, which provide performance standards that will ensure impacts will be mitigated. BIO-MM#46, BIO-MM#47, BIO-MM#50, and BIO-MM#53 adequately address impact concerns for compensatory mitigation for amphibian habitat. CDFW-MM#37 recommends that during initial ground-disturbing activities, a qualified biologist should conduct construction activity monitoring daily for arroyo toad (August 1 to March 31), western spadefoot (October 1 to May 31), California red-legged frog (November 1 to March 31), and southern mountain yellow-legged frog (March 1 to May 31). As discussed above, BIO-MM#8 and BIO-MM#56 require monitoring during construction activities and identify no-work buffers in the event special-status species are observed. As discussed in BIO-MM#8, if a special-status amphibian is observed, the Project Biologist may implement measures, such as establishing a temporary Environmentally Sensitive Area (ESA) in the area where a special-status amphibian has been observed and delineating a 50-foot no-work buffer around the ESA. BIO-MM#8 has been revised

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in the Final EIR/EIS to ensure that the ESA buffer shall not be made of solid material such that the species becomes entrapped within the buffer area. Additionally, the ESA buffer shall include an area of suitable habitat around the species observation location such that the species has suitable area to perform normal life history functions and is able to move away from the project site of its own volition. At no point shall the ESA buffer be less than 50 feet from the point where the species was observed, and the resulting ESA shall not be isolated within the construction site from adjacent suitable habitat for the species. As specified, if any of the special-status species referenced above are encountered during construction, the Authority would coordinate with USFWS and CDFW to determine the appropriate course of action. BIO-MM#8 and BIO-MM#56 adequately address impact concerns related to initial ground-disturbing activities and monitoring activities. CDFW-MM#38 recommends that a qualified biologist should prepare an Amphibian Relocation and Avoidance Plan that would include species-specific avoidance buffers and suitable relocation areas at least 200 feet outside of the Project site. BIO-MM#7 has been revised in this Final EIR/EIS to require the Project Biologist prepare an Amphibian Relocation and Avoidance Plan, which would be approved and implemented by the Authority.

Although the Authority recognizes the commenter's request to increase the relocation distance, the current distance in the Draft EIR/EIS is adequate to mitigate project impacts. It is also consistent with the statewide programmatic mitigation measures implemented by the California High-Speed Rail program and consistent with measures required of large transportation and other infrastructure projects in California. CDFW-MM#39 recommends that if the Authority must relocate CESA- or FESA-listed species, the Authority should obtain appropriate take authorization from CDFW and/or USFWS. The Authority recognizes this requirement and includes it in the appropriate mitigation measure in the Final EIR/EIS, for example BIO-MM#18, BIO-MM#35, BIO-MM#79, BIO-MM#80, BIO-MM#81, BIO-MM#82, and BIO-MM#103. CDFW-MM#40 recommends that if the Authority must relocate species of special concern, then only a qualified biologist with appropriate handling permits should capture, temporarily possess, and relocate wildlife to avoid harm or mortality in connection with Project construction and activities. BIO-IAMF#1 in the Draft EIR/EIS requires that the Authority review resumes and approve qualifications of Project Biologists, Designated Biologists, Species-Specific Biological Monitors, and General Biological Monitors retained to conduct biological

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resource monitoring activities and implement avoidance and minimization measures. BIO-IAMF#1 adequately addresses concerns related to employing qualified biologists. CDFW-MM#41 recommends that to compensate for permanent loss of habitat, the Authority should provide no less than 2:1 to offset impacts, or as required in a take permit authorized by USFWS for FESA-listed species or CDFW for CESA-listed species. The Authority appreciates the recommendations and suggested revisions from CDFW.

The Authority is committed to continued consultation with CDFW to further refine measures to avoid impacts to special-status amphibians from project construction and operation. The mitigation measures identified in Section 3.7 of this Final EIR/EIS are consistent with the statewide programmatic mitigation measures implemented by the California High-Speed Rail program and are consistent with measures required of large transportation and other infrastructure projects in California. Together, the mitigation measures identified in Section 3.7 of this Final EIR/EIS would reduce impacts to special-status amphibian species to less than significant.

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Refer to Standard Response PB-Response-GEN-5: Impacts on Una Lake.

The commenter provided text from the BARTR and Draft EIR/EIS that described the potential direct and indirect effects on western pond turtle and stated that the measures proposed (BIO-MM#7, BIO-MM#8, BIO-MM#53, and BIO-MM#93) do not mitigate those impacts to below a significant level. The commenter provided the definition of a CDFW Species of Special Concern (SSC) and suggestions for mitigation measure revisions to address their concerns on impacts to western pond turtle. The suggestions include: following established survey protocols, providing specific compensatory mitigation and defining performance criteria/standards, 475-foot no-disturbance buffer zones around nest areas during breeding season, and development of a Western Pond Turtle Relocation Plan if turtles need to be relocated outside of the breeding season.

The specific impacts the commenter describes on western pond turtle were described in Impact BIO#7 (Project Construction Effects on Special-Status Reptile Habitat) on page 3.7-158 of the Draft EIR/EIS. The CDFW comments that project impacts to western pond turtle could occur during the breeding season directly or through habitat modification where the project occurs near Una Lake. The CDFW correctly acknowledges that western pond turtles are determined to be present at Una Lake. Between Avenue M and the California Aqueduct, HSR trackway and ancillary facilities associated with the Refined SR14, E1, and E2 Build Alternatives would directly affect Una Lake through the placement of fill; however, in response to the habitat present at Una Lake and through consultation with regulatory agencies, the Authority developed Build Alternatives that avoid direct impacts to Una Lake (SR14A, E1A, E2A). Please also refer to Standard Response PB-Response-GEN-5: Impacts on Una Lake, which provides additional information about the development of additional alternatives, as well as the biological and aquatic resource impacts at Una Lake.

As described in Section 3.7, Biological and Aquatic Resources of the Draft EIR/EIS, separate from the discussion of potential impacts to western pond turtle at Una Lake, changes in groundwater levels during tunnel construction could result in full or partial desiccation of aquatic resources, which could affect suitable aquatic and riparian habitat for special-status reptiles, including western pond turtle. The High Risk Area and Moderate Risk Area for the SR14A Build Alternative contain several ephemeral streams

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and associated western pond turtle habitat. However, the Authority believes these resources would not be impacted by potential effects from tunneling activities because they are not dependent on groundwater. During the detailed design phase of the project prior to initiation of construction, if additional seeps, springs, intermittent or perennial streams are discovered within the tunnel construction resource study area, the risk of indirect effects may increase accordingly. Implementation of HYD-IAMF#5 (Tunnel Boring Machine Design and Features), HYD-IAMF#6 (Tunnel Lining Systems), and HYD-IAMF#7 (Grouting) will minimize the severity and duration of groundwater inflow during tunnel construction, but groundwater inflow into the tunnel excavations may still occur. Implementation of the AMMP set forth in BIO-MM#93 (Adaptive Management Plan for Groundwater Effects on Species and Habitat) would minimize impacts that occur and, if necessary, provide compensatory mitigation for unavoidable impacts to surface aquatic resources.

Based on the commenter's recommendation specific to BIO-MM#7 (Conduct Pre-construction Surveys for Special-Status Reptile and Amphibian Species), this measure has been revised in the Final EIR/EIS to include a link to following established survey protocols for special-status reptiles during pre-construction surveys, which includes the Draft USGS Western Pond Turtle Visual Survey Protocol for the Southcoast Ecoregion (USGS 2006) and Draft USGS Western Pond Turtle Trapping Protocol for the Southcoast Ecoregion (USGS 2006), available at: https://wildlife.ca.gov/Conservation/Survey-Protocols#377281282-amphibians. BIO-MM#7 has also been revised in the Final EIR/EIS to explain that the results of the pre-construction survey would guide the placement of ESAs and approach for species relocation, if needed. Furthermore, BIO-MM#7 has been revised in the Final EIR/EIS to add that a qualified Project Biologist would prepare a Reptile and Amphibian Relocation and Avoidance Plan covering species-specific avoidance buffers, including an avoidance buffer specific to western pond turtle. If needed, relocation would occur only during the period outside of breeding season with individuals moved to suitable sites outside of the project footprint. The Reptile and Amphibian Relocation and Avoidance Plan would be reviewed by CDFW and USFWS prior to any clearing, grading, or excavation work on the project site.

BIO-MM#7 is anticipated to be effective because BIO-MM#7 requires the identification

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and documentation of western pond turtles and their habitat (including nest areas) within the project footprint, informing methods for the species' avoidance, protective fencing placement, and relocation activities. The pre-construction survey is an assessment that would be useful in understanding the species present and would help guide the implementation of the performance standards to be consistent with other mitigation requirements.

BIO-MM#8 (Implement Avoidance and Minimization Measures for Special-Status Reptile and Amphibian Species) has been revised in the Final EIR/EIS to include clarifications about the ESA buffer, including that it would not be made of solid material such that the species becomes entrapped within the buffer area; that it shall include an area of suitable habitat around the species observation such that the species has suitable area to perform normal life history functions and is able to move away from the project site of its own volition; and the resulting ESA shall not be isolated within the construction site from adjacent suitable habitat for the species. This measure requires the Project Biologist to monitor all initial ground disturbing activities that occur within suitable habitat for special-status reptiles (including western pond turtle) and will conduct clearance surveys of suitable habitat on a daily basis to reduce impacts on special-status reptiles and their habitat. While the buffer is not specific to western pond turtle (as requested in CDFW's Mitigation Measure #44), it provides parameters on the type of ESA fencing and size of buffers.

BIO-MM#52 (Conduct California Glossy Snake, California Legless Lizard, Coast Patch-Nosed Snake, Coastal Rosy Boa, Coastal Whiptail, Blainville's Horned Lizard, San Bernardino Ringneck, San Bernardino Mountain Kingsnake, South Coast Garter Snake, Two-Striped Garter Snake, and Western Pond Turtle Monitoring, and Implement Avoidance and Minimization Measures) was modified in the Final EIR/EIS to include western pond turtle. Under BIO-MM#52, clearance surveys for western pond turtle will be performed prior to any ground disturbing activity. The Project Biologist may establish wildlife exclusion fencing to keep the species from entering the work area. If western pond turtle is observed during construction, measures will be taken to avoid the individual(s), and the species will be allowed to leave of its own volition or be relocated outside of the work area (only during the period outside of the breeding season; refer to BIO-MM#7) by the Project Biologist. Clearance surveys will be conducted daily during

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construction unless the Project Biologist determines that the surveys are no longer necessary.

To address potential direct and indirect impacts to aquatic habitat, that would also benefit western pond turtle, BIO-MM#47 (Prepare and Implement a CMP for Impacts on Aquatic Resources) involves the preparation of a CMP for impacts to aquatic resources. To offset habitat loss, BIO-MM#47 identifies compensatory mitigation ratios to be used unless a higher ratio is required pursuant to regulatory authorizations issued under Section 404 of the CWA and/or the Porter-Cologne Act and/or Fish and Game Code section 1600 et seq.:

• Seasonal wetlands: between 1:1 and 1.5:1 based on impact type, function and values lost
• 1:1 off-site for permanent impacts
• 1:1 on-site and 0.1:1 to 0.5:1 off-site for temporary impacts

The mitigation included in BIO-MM#47, in combination with BIO-MM#6 (Prepare and Implement a Restoration and Revegetation Plan), will replace and/or restore impacted aquatic habitat for western pond turtle. BIO-MM#53 would provide compensatory mitigation for direct impacts to western pond turtle individuals, if needed.

The Authority recognizes the importance of clarifying what survey protocols are to be performed and addressing western pond turtle mitigation measures directly, and has revised BIO-MM#7, BIO-MM#8, and BIO-MM#52 in the Final EIR/EIS accordingly. Based on analysis provided in the EIR/EIS, the Preferred Alternative (SR14A) as well as Build Alternatives E1A and E2A avoid western pond turtle habitat at Una Lake. With implementation of revisions to BIO-MM#7, BIO-MM#8, and BIO-MM#52, impacts to western pond turtle and its habitat are expected to be avoided, reduced, or minimized to below a level of significance. In addition, BIO-MM#6 (Prepare and Implement a Restoration and Revegetation Plan), BIO-MM#47, and BIO-MM#53 are expected to mitigate potential impacts to western pond turtle habitat. The Authority believes that the mitigation measures proposed in the Final EIR/EIS will ensure impacts to western pond turtle and its habitat are less than significant. Please refer to Section 3.7.7 of the Final EIR/EIS for the full text of these measures. The Authority appreciates the CDFW

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recommendations and suggested revisions and is committed to continued consultation with the CDFW to further refine measures to mitigate any impacts to western pond turtle from Project construction and operation.

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CDFW notes in their comment that the Draft EIR/EIS disclosed impacts to burrowing owl including injury or mortality of burrowing owl, disruption of natural breeding behavior, collapse of burrows, and reduced reproductive capacity. CDFW provides two suggestions for mitigation measure revisions to help address their concerns for impacts to burrowing owl. In Mitigation Measure #46, CDFW recommends that the Authority revise BIO-MM#21 by increasing the 600-foot no-work buffer to 1,650 feet to avoid impacts on occupied burrowing owl burrows during the nesting and non-nesting seasons.

The Authority recognizes the sensitive status of the burrowing owl, as noted by CDFW in their comment. However, the mitigation outlined in the Draft EIR/EIS is adequate and is consistent with the mitigation provided in other sections of the High-Speed Rail program with certified EIR/EIS documents, specifically the Bakersfield to Palmdale Final EIR/EIS which relied on a 600-foot avoidance (exclusion) buffer. However, to address CDFW's recommendation regarding mitigation language, BIO-MM#21 has been revised in the Final EIR/EIS to remove "to the extent feasible", to indicate that the Project Biologist may increase buffer sizes depending on the level of project disturbance, and to reference the Authority's commitment to rely on CDFW's Staff Report on Burrowing Owl Mitigation (CDFW 2012) when considering additional actions and/or alternatives to active relocation of burrowing owl, should avoidance not be possible.

BIO-MM#21 is anticipated to be effective because it would require identification and documentation of active burrowing owl burrows, foraging habitat, and nest burrows; establishes avoidance buffers around active nest burrows; monitors nest burrows to determine when they are no longer active, thus allowing young to develop and fledge. This measure also includes passive relocation (outside of breeding season only) to avoid direct owl mortality from construction activities. Passive relocation could have indirect impacts on non-nesting burrowing owls because it would allow for the removal of unoccupied burrows; (outside of the nesting season), and therefore, result in loss of suitable habitat. Compensatory mitigation to offset loss of burrowing owl habitat is described below.

CDFW also recommends the Authority revise mitigation measure BIO-MM#53 or provide a specific mitigation measure addressing compensatory mitigation for burrowing owl

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habitat. The Authority included a 2:1 mitigation ratio for burrowing owls in BIO-MM#44 (Provide Compensatory Mitigation for Loss of Active Burrowing Owl Burrows and Habitat). BIO-MM#44 is anticipated to be effective because it provides minimum compensatory mitigation standards for burrowing owls. Implementation of this mitigation measure may also require the acquisition of suitable additional lands outside of the project footprint for the purposes of providing habitat for burrowing owls. This land may be converted from other current uses, such as agriculture, which in turn could have potential secondary environmental impacts on agricultural resources (through farmland conversion). Such secondary impacts from off-site mitigation activities are addressed under BIO-MM#50 (Implement Measures to Minimize Impacts During Off-Site Habitat Restoration, Enhancement, or Creation on Mitigation Sites). In response to CDFW's request that mitigation be specific, provide performance standards, and action(s) to achieve those performance standards, BIO-MM#53 explains that the CMP will include a "description of the success criteria that will be used to evaluate the performance of habitat restoration or enhancement projects, and a description of the types of monitoring that will be used to verify that such criteria have been met". Therefore, the mitigation ratio identified in BIO-MM#44 in combination with the preparation and implementation of the CMP (BIO-MM#53), as well as the understanding that final mitigation ratios will be identified pursuant to applicable regulatory authorizations, would ensure that impacts to burrowing owl are mitigated to less than significant levels.

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CDFW expresses concern that impacts to bats are not mitigated to a less than significant level, and CDFW recommends revisions to BIO-MM#25, BIO-MM#26, and BIO-MM#27.

The Draft EIR/EIS addresses impacts to bats in Section 3.7.6.3 under Impact BIO#6, and Impact BIO#14 of the Draft EIR/EIS. The Draft EIR/EIS concluded that, after incorporation of the IAMFs, the project would have a substantial adverse effect on habitat for bats by eliminating or measurably degrading habitat. To reduce impacts to less than significant, mitigation measures will be implemented. These measures include BIO-MM#6 (Prepare and Implement a Restoration and Revegetation Plan), BIO-MM#25 (Conduct Pre-construction Surveys for Bat Species), BIO-MM#26 (Implement Bat Avoidance and Relocation Measures), BIO-MM#27 (Implement Bat Exclusion and Deterrence Measures), BIO-MM#47 (Prepare and Implement a Compensatory Mitigation Plan for Impacts on Aquatic Resources), BIO-MM#50 (Implement Measures to Minimize Impacts During Off-Site Habitat Restoration, or Enhancement, or Creation on Mitigation Sites), BIO-MM#53 (Prepare and Implement a Compensatory Mitigation Plan for Species and Species Habitat), BIO-MM#56 (Conduct Monitoring of Construction Activities), BIO-MM#58 (Establish Environmentally Sensitive Areas and Nondisturbance Zones), BIO-MM#63 (Work Stoppage), BIO-MM#76 (Implement Wildlife Rescue Measures), and BIO-MM#99 (Implement Lighting Minimization Measures During Construction).

CDFW has recommended clarifying information be incorporated into BIO-MM#25, BIO-MM#26, and BIO-MM#27. While the Authority believes the measures identified in the Draft EIR/EIS would adequately mitigate for impacts to special-status bat species, in response to this comment, the Authority has provided revisions to these mitigation measures for special-status bats in the Final EIR/EIS, Section 3.7.7. Based on the comments from CDFW, BIO-MM#25 has been revised in the Final EIR/EIS to indicate that surveys will be conducted during the appropriate time for the species in question, and surveys are required to include visual and acoustic components. BIO-MM#26 has been revised in the Final EIR/EIS to state that if active hibernacula or maternity roosts are identified in the work area or 500 feet extending from the work area during pre-construction surveys, they will be avoided to the extent feasible. Any buffer required by permitting and regulatory authorizations will be instituted. BIO-MM#26, as revised, also

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includes removal/relocation methods in the event that additional action is needed to prevent harm to bats, as well as includes a proposed compensatory mitigation ratio, which ratio shall be determined by applicable regulatory permitting authorizations. BIO-MM#27 has also been revised in the Final EIR/EIS to clarify bat exclusion and deterrence methods. The Compensatory Mitigation Plan (CMP) must be prepared in coordination with CDFW and USFWS to determine equivalent or superior mitigation approaches to address each special-status species, and must be reviewed and approved by CDFW and USFWS prior to any ground disturbance. The Authority's commitment to the mitigation discussed above and their commitment to ongoing coordination with CDFW and USFWS will ensure that all impacts to special-status bats will be mitigated to less than significant levels.

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CDFW comments that the project may continue to have a significant impact to CESA and FESA-listed plants and sensitive natural communities and expresses concern that loss of individuals and populations of rare, threatened, and endangered plants and natural communities may not be fully mitigated. CDFW correctly notes that the project would impact special-status plants and sensitive natural communities during surface construction and tunnel construction. In addition, CDFW notes that impacts to oak woodlands should be considered significant even while oak woodlands, by definition (S4 ranking), are not considered a sensitive natural community. CDFW considers coast live oak woodlands to be a sensitive plant community, especially oak riparian forests. The Authority acknowledges and appreciates CDFW's comments.

All Build Alternatives would affect the same 3 federally listed plant species, 41 non-federally listed special-status plant species, and 6 sensitive natural communities (refer to Table 3.7-4 in Section 3.7, Biological and Aquatic Resources of the Final EIR/EIS). The Refined SR14 Build Alternative would affect the most acres of special-status plant species and special-status plant communities. The following IAMFs (listed in Appendix 2-E of the Draft EIR/EIS) and mitigation measures (described in Section 3.7.7 and discussed under each impact in Section 3.7.6 in the Final EIR/EIS), would minimize and offset impacts on special-status plants and special-status plant communities: BIO-IAMF#1, BIO-IAMF#2, BIO-IAMF#3, BIO-IAMF#4, BIO-IAMF#5, BIO-IAMF#8, BIO-IAMF#10, BIO-IAMF#11, HMW-IAMF#9, HMW-IAMF#10, HYD-IAMF#1,BIO-MM#1 BIO-MM#2, BIO-MM#4, BIO-MM#5, BIO-MM#6, BIO-MM#32, BIO-MM#34, BIO-MM#38, BIO-MM#47, BIO-MM#50, BIO-MM#53, BIO-MM#55, BIO-MM#56, BIO-MM#58, and BIO-MM#61. The significance conclusion for Impact BIO#1 (Pages 3.7-112 through 3.7-113 of the Draft EIR/EIS) also describe how each applicable mitigation measure (i.e., in addition to the IAMFs discussed above as part of project design) would reduce surface construction impacts on special-status fish. The suite of mitigation measures described in this section provides a multi-tiered approach to avoiding/minimizing impacts to special-status plant species and special-status plant communities. This multi-tiered approach includes measures intended to avoid/minimize impacts, followed by restoration or relocation, as needed. Monitoring is applied where restoration/relocation occurs to ensure that mitigation efforts are successful.

Furthermore, if avoidance/minimization of impacts to special-status plant species and

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special-status plant communities is not possible, compensatory mitigation would be applied. As described in Section 3.7.4.6 of the Draft EIR/EIS, the Project would result in a significant impact (pursuant to CEQA's mandatory findings of significance) if it would substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, or substantially reduce the number or restrict the range of an endangered, rare, or threatened species. The Draft EIR/EIS determined that, with implementation of mitigation, none of the Build Alternatives would result in a significant impact per the conclusion identified herein. Implementation of the IAMFs as part of project design in conjunction with the multi-tiered approach to mitigation during project construction and operations will ensure impacts remain less than significant.

CDFW comments that "take" under FESA is more broadly defined than take under CESA, and that take under FESA "includes significant habitat modification or degradation that could result in death or injury to a listed species by interfering with essential behavioral patterns such as breeding, foraging, or nesting." The Authority has initiated Section 7 consultation with the USFWS for the FESA-listed species. Specific to state-listed plants, no take is expected to occur. Specific to CESA, and as noted by CDFW, impacts to plants with a California Rare Plant Rank and sensitive natural communities are not considered take and do not require take authorization. However, pursuant to CEQA, oak woodlands were included in the applicable mitigation measures noted above and revisions to mitigation measures as noted below. Oak woodlands are also subject to preservation requirements of Section 22.56.2060 of Los Angeles County Oak Ordinance (refer to Draft EIR/EIS Section 3.7.5.11).

CDFW provides two recommendations and three suggested mitigation measure revisions to address their concerns regarding state-listed plants or sensitive natural communities. Based on the BIO-IAMFs and BIO-MMs already proposed, impacts have been adequately mitigated because they designate a Project Biologist and require construction monitoring; facilitate agency access; train workers; delineate work areas and environmentally sensitive areas; avoid spreading of invasive and noxious weeds and implementation of weed control plan; require stormwater management and treatment plan; identify, document, and protect special-status plant species within 100 feet of the project footprint; salvage unavoidable special-status species within the project

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footprint; relocate salvaged species to suitable habitat acquired within the region, and monitor relocated species per the Special Plant Species Management Plan; implement restoration and revegetation plan; restore temporary impacts to sensitive (protected) habitats; monitor construction activities within jurisdictional waters; compensate for impacts on listed plant species; require preparation and implementation of Compensatory Mitigation Plan for impacts on aquatic resources and special-status species and their habitat; minimize impacts during restoration or creation of mitigation sites; and establish and implement a compliance monitoring program.

The Authority is committed to continued coordination with CDFW and providing further protection for special-status plants and sensitive natural communities. Thus, to demonstrate this commitment to protection, the Authority proposes to include the following revisions to mitigation measures, consistent with the Final EIR/EIS for the Bakersfield to Palmdale Project Section. BIO-MM#1 (Conduct Presence/Absence Pre-construction Surveys for Special-Status Plant Species and Special-Status Plant Communities) has been revised in the Final EIR/EIS to indicate how the mitigation would be effective in minimizing impacts to special-status plants. BIO-MM#1 is anticipated to be effective because it identifies, documents, and protects special-status plant species and sensitive natural communities (including oak woodlands) within 100 feet of the project footprint, thus reducing the potential for disturbance during construction. In addition, the Authority has proposed more mitigation than just BIO-MM#1 to reduce impacts on special-status plants and sensitive natural communities. Please refer to Impact BIO#1 in the Draft EIR/EIS for the full list of mitigation measures that would be implemented to reduce impacts on both special-status plant species and special-status plant communities. BIO-MM#2 (Prepare and Implement Plan for Salvage and Relocation of Special-Status Plant Species) is anticipated to be effective because it salvages unavoidable special-status species within the project footprint; relocates salvaged species to suitable habitat acquired within the region, and monitors relocated species per the Plan to provide for acceptable survival of special-status plant species, reducing the potential for disturbance during construction. BIO-MM#2 would have a temporary impact on special-status plants through direct disturbance as part of salvage and relocation efforts. However, in conjunction with compensatory mitigation for federal and state-listed species (refer to BIO-MM#38 below), this approach would ultimately be beneficial because implementation of the Plan would protect special-status plants.

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Implementation of this mitigation measure may also require the acquisition of suitable additional lands outside of the project footprint for the purposes of relocating special-status plant species. This land may be converted from other current uses, such as agriculture, which in turn could have potential secondary environmental impacts on agricultural resources (through farmland conversion), other biological resources (through direct and indirect impacts on species habitat), and cultural resources (through disturbance of archaeological resources and impacts on historic properties). Such secondary impacts from off-site mitigation activities are addressed under Draft EIR/EIS, Section 3.7.7.1 Impacts from Implementing Mitigation Measures.

CDFW also provides a recommendation that the Authority revise Table 3.7-4 in Section 3.7, Biological and Aquatic Resources to provide affected natural community names based on the Manual of California Vegetation (CNPS 2022). The Manual of California Vegetation was used for classification and this Manual is appropriately referenced in the Biological and Aquatic Resources Technical Report (the Manual was authored by Sawyer et.al. 2009). Table 3.7-4 of the Draft EIR/EIS is intended to present vegetation communities within the special-status plant resource study area (RSA) and does appropriately capture all habitats within the special-status plant RSA, including those that, if impacted, would be subject to mitigation requirements. It is Table 3.7-7 of the Final EIR/EIS that is intended to identify special-status plant communities within the refined SR14, SR14A, E1, E1A, E2, and E2A special-status plant RSAs (Please note that the Table numbering for this Table changed from Table 3.7-6 in the Draft EIR/EIS to Table 3.7-7 in the Final EIR/EIS). CDFW comments that, “the Project could result in loss of acreage of six Sensitive Natural Communities. Sensitive Natural Communities impacted would include California sycamore (Platanus racemosa) woodlands, Fremont cottonwood (Populus fremontii) forest, coast live oak (Quercus agrifolia) woodland, black willow (Salix nigra) thickets, and California walnut (Juglans californica) woodland.” The Draft EIR/EIS identifies six special-status plant communities that if impacted, would require mitigation: scalebroom scrub, California sycamore woodlands, Fremont cottonwood forest, bigcone Douglas fir forest, coastal oak woodland, and black willow thickets.

Also note that CDFW’s comment includes California walnut; while some individual walnut trees were observed in the RSA, there are no California walnut grove communities. In addition, CDFW notes the black willow thickets as *Salix nigra*; however, to clarify, the correct species is *Salix gooddingii*.

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CDFW comments that “Fully Protected species may not be taken or possessed at any time, and no licenses or permits may be issued for their take, except for collecting these species for necessary scientific research, relocation of the bird species for the protection of livestock, or if they are a covered species whose conservation and management is provided for in a Natural Community Conservation Plan." CDFW recommends the Authority revise the mitigation measures provided in the Draft EIR/EIS to sufficiently avoid impacts on Fully Protected birds. CDFW provides recommendations for revisions to mitigation measures that address bald and golden eagles (BIO-MM#66 and BIO-MM#67), California condor (BIO-MM#16, BIO-MM#71, and BIO-MM#72), and white-tailed kite (BIO-MM#68).

The Authority acknowledges that CDFW has jurisdiction over Fully Protected species of birds, mammals, amphibians, reptiles, and fish pursuant to Fish and Game Code sections 3511, 4700, 5050, and 5515, appreciates CDFW’s recommendations, and proposes to include revisions to the following mitigation measures to provide additional clarification and to ensure further protection of fully protected bird species: Mitigation Measure BIO-MM#66: Implement Avoidance Measures for Active Eagle Nests in the Draft EIR/EIS specifies implementation of 1-mile line-of-sight and 0.5-mile no line-of-sight exclusion zones (i.e., no-work buffer) during the breeding season (January 1 through August 31) to ensure that construction activities do not result in injury or disturbance to eagles; BIO-MM#66 text has been edited to clarify that the buffer distances are minimum distances. Additionally, this mitigation measure was revised to remove the allowance for buffer reduction by the Project Biologist. This mitigation measure is anticipated to be effective because it would restrict construction activities within a 1-mile line-of-sight buffer or a 0.5-mile no line-of-sight no-work buffer from active eagle nests. Mitigation Measure BIO-MM#67: Provide Compensatory Mitigation for Loss of Eagle Nests has been revised in the Final EIR/EIS to add CDFW for consultation, should pre-construction surveys identify active eagle nests in the permanent impact area and development of a nest relocation or replacement plan becomes necessary. Additional text has been added stating that “impacts to active golden eagle nests will be avoided” and that “active bald eagle nests and/or inactive golden eagle nests will be relocated, or a suitable nest will be provided, within the same territory as a viable nesting options for the affected eagle pair” and “in the event relocated eagles fail to resume nesting or establish a new nest away from the impact

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area, adaptive compensatory mitigation mechanisms outlined in the permit obtained from USFWS for nest relocation will be implemented.

Adaptive compensatory mitigation mechanisms may include conservation banking, in-lieu fees, and other third-party mitigation projects or arrangements in the event of unsuccessful nest relocation." Mitigation Measure BIO-MM#16: Implement Avoidance Measures for California Condor has been revised to include CDFW as being notified, if the Authority is informed of or finds roosting California condors. Furthermore, this measure included USFWS as being notified prior to construction-related helicopter use, and CDFW has also been added. Mitigation Measure BIO-MM#71: Implement California Condor Avoidance Measures During Helicopter Use includes that the Project Biologist will coordinate with USFWS to establish that no California condors are present in the area, prior to construction-related use of helicopters. This measure has been revised to add CDFW to this same coordination effort. Mitigation Measure BIO-MM#72: Implement Avoidance of Nighttime Light Disturbance for California Condor states that nighttime light disturbance will be minimized in and adjacent to suitable habitat where California condor may be present. In the event that nighttime lighting is required, it will be focused, shielded, and directed away from adjacent suitable habitat, including nighttime roost areas. During nighttime construction, a qualified Project Biologist will be on site to determine whether the lighting poses a risk to or otherwise disturbs or harms condors. The mitigation measure was revised to provide direction on reducing or discontinuing lighting in the event disturbance to condor is observed. This mitigation measure is anticipated to be effective as is because it would require focused, shielded, and directed nighttime light to avoid disturbances to roosting California condors and provides for a qualified Project Biologist to be on site during nighttime light use.

Please refer to Section 3.7.7 in the Final EIR/EIS for the full text of revised Mitigation Measures.

4512-10555

CDFW recognizes the compensatory mitigation approach outlined in BIO-MM#43 but expresses concerns that the mitigation is insufficient to mitigate loss of foraging habitat for Swainson's hawk (CESA-listed species). CDFW states that even at the highest proposed ratio of 1:1 preservation, a net loss of functional foraging habitat would still occur. CDFW recommends the Authority revise BIO-MM#43 to provide a minimum of 2:1 compensatory mitigation, so that there is no net loss of foraging habitat for Swainson's hawk and provide a minimum 1:1 preservation ratio and 1:1 creation/restoration ratio for a net gain in foraging habitat.

In addition, CDFW recommends that the Authority provide the following information in the EIR/EIS to demonstrate that mitigation would be effective through adoption of performance standards: 1) Specific data and analyses that will be used to determine whether replacement habitat would provide functional foraging habitat and the quality of potential replacement habitat; 2) Definitions for "primary", "secondary", and "tertiary" foraging habitat; 3) Explanation of how mitigation ratios were developed, especially if replacement habitat has yet to be identified and habitat functionality and quality at those locations has yet to be determined; 4) Explanation of how the Authority would determine if replacement habitat is similar to the acres of functional foraging habitat impacted; and 5) Explanation of how the Authority would assess the performance of functional replacement habitat and use by Swainson's hawk.

The Authority notes that the mitigation strategy and associated details will be defined as part of the compensatory mitigation planning (refer to Final EIR/EIS Section 3.7.7, BIO-MM#53) where specific impacts will be known to occur based on refinement of project design and, where noted in the Final EIR/EIS, further species-specific surveys will be conducted well in advance of construction. These details will vary depending on the type and value of habitat impacted, and similarly, the mitigation lands acquired.

The Authority appreciates the comment from the CDFW and the concern for loss of functional foraging habitat for Swainson's hawk. Although the Authority recognizes CDFW's request to increase the compensatory mitigation ratio, the current ratio is consistent with the statewide programmatic mitigation measures implemented by the California High-Speed Rail program and consistent with measures required of large transportation and other infrastructure projects in California. The Authority has determined this ratio is sufficient to mitigate impacts on Swainson's hawk.

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4512-10556

CDFW notes that four mitigation measures in the Draft EIR/EIS (BIO-MM#79, BIO-MM#80, BIO-MM#81, and BIO-MM#82) address impacts to special-status species of passerine birds. The CDFW advises that the mitigation measures currently proposed may result in take of FESA-listed and CESA-listed species, including that the currently proposed 300-foot exclusion buffer is insufficient and should be increased to 500 feet. CDFW also asserts that if the Authority is unable to avoid impacts on these listed passerine species, the Authority should consult with CDFW and/or USFWS to determine if take authorization may be needed. Accordingly, CDFW recommends that obtaining take authorization should be written into BIO-MM#79 and BIO-MM#82 as a requirement if impacts cannot be avoided. In addition, CDFW notes that the Authority should revise BIO-MM#80, BIO-MM#81, and BIO-MM#82 to state that CDFW would also be consulted if the project is unable to avoid impacts on least Bell's vireo, southwestern willow flycatcher, and western yellow-billed cuckoo. In addition, CDFW notes that compensatory mitigation has yet to be provided for the project's potential impact on these species as a result of habitat loss. CDFW asserts that for the purposes of compensatory mitigation, BIO-MM#53 for special-status species habitat may be considered deferred mitigation, and that only including temporary exclusion of project activities within nesting buffers during nesting season may not constitute effective mitigation for the purposes of offsetting project impacts associated with the loss of breeding and nesting habitat. CDFW further asserts that effective mitigation for impacts to nesting habitat for birds and raptors requires structurally (e.g., ground cover, subshrubs, shrubs, and trees) and species diverse vegetation as part of habitat restoration. CDFW recommends the Authority provide compensatory mitigation for impacts on habitat.

The Authority acknowledges CDFW's comment and appreciates their concern for these FESA- and CESA-listed passerine bird species. Furthermore, the Authority is committed to perform surveys well in advance of construction to allow time for consultation with the Wildlife Agencies and pursuit of take permits, if necessary, as well as conduct nest surveys closer to and prior to start of construction. The Authority is currently undergoing the Endangered Species Act Section 7 consultation process with the USFWS with regards to direct and indirect effects on coastal California gnatcatcher, least Bell's vireo, and southwestern willow flycatcher. The Authority is also committed to consultation with CDFW and understands that if it is determined that direct impacts to

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state-listed bird species, including western yellow-billed cuckoo, cannot be avoided, then an incidental take permit will be obtained from CDFW prior to the initiation of project activities. The Compensatory Mitigation Plan required by BIO-MM#53 is intended to address direct loss of habitat, including breeding/nesting habitat for CESA-listed and FESA-listed passerine bird species discussed here. BIO-MM#53 has been revised to indicate that final mitigation ratios for federal and state-listed species and their habitat will ultimately be determined pursuant to regulatory authorizations issued under FESA and CESA. Although the Authority recognizes CDFW's request to increase the avoidance buffer distance, the current buffer distance of 300 feet is consistent with the state-wide California High-Speed Rail program and consistent with measures required of large transportation and other infrastructure projects in California. The Authority has determined this buffer distance is sufficient to protect listed passerine bird species, together with the suite of mitigation measures including as revised. Refer to the Final EIR/EIS, Section 3.7.7 for the full text of these measures. Revisions to these mitigation measures provide further protections for listed passerine bird species, and impacts remain less than significant.

4512-10557

CDFW acknowledges the mitigation measure in the Draft EIR/EIS, BIO-MM#69, and notes the measures implemented to avoid impacts on active tricolored blackbird nest colonies would require 300-foot no-work buffers, to the extent practicable. CDFW expresses concern that the measure as currently proposed may result in take of the tricolored blackbird, a CESA-listed species. CDFW notes that adequate surveys are needed to identify the full extent of a nesting colony and that implementation of an insufficient buffer or reducing a buffer may be inadequate to avoid the entire nesting colony. CDFW also notes that installing a sound curtain during the nesting season to adjust for survey shortfalls can disturb a nesting colony and result in population decline; that nesting can occur synchronously, with all eggs laid within one week, and depending on timing, disturbance to nesting colonies can cause abandonment, significantly impacting tricolored blackbird populations. The Authority acknowledges CDFW's comment and appreciates the thorough explanation of potential impacts to a tricolored blackbird colony because of project activities. As currently included in the Draft EIR/EIS, when a tricolored blackbird colony is known to occur near construction activities, BIO-MM#69 (Conduct Surveys and Implement Avoidance Measures for Active Tricolored Blackbird Nest Colonies) provides for three surveys to be performed within 15 days prior to construction, with one of the surveys to be within five days prior to the start of construction. This level of survey effort for a known colony would be sufficient to detect the extent of the colony and assess the potential impact on the colony. The Authority understands that tricolored blackbird nesting colonies can be sizable and may expand over time. The Project Biologist would be experienced with the species and would likewise understand this nuance in the nesting behavior of tricolored blackbird. The Project Biologist would be responsible for determining the extent of a colony and establishing the avoidance buffer limits. The Project Biologist, in collaboration with the Authority, would coordinate with CDFW under circumstances described in BIO-MM#69. BIO-MM#69 has been revised in the Final EIR/EIS to include language clarifying the survey requirements and avoidance buffer requirements. Furthermore, BIO-MM#69 has been revised in the Final EIR/EIS to remove the language permitting the Project Biologist to reduce the minimum buffer requirement and to utilize sound curtains. Please refer to Section 3.7.7 of the Final EIR/EIS for the revised BIO-MM#69. This mitigation measure is expected to be effective because it would outline a protocol for conducting surveys prior to construction to identify active nest colonies within 300 feet of the construction work area, would require ongoing surveys to assess any changes in the

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colony, and would require coordination with the CDFW in the event the avoidance buffer is insufficient and take cannot be avoided.

4512-10558

The commenter requests that the Authority should revise the EIR/EIS to discuss how the Project has been designed to be bird safe. BIO-IAMF#12 was sufficient for the purposes of the Draft EIR/EIS in describing the Authority's commitment to designing facilities to be bird and raptor-safe. The Authority convened a working group of biologists and engineers in 2020 to investigate the electrical components of the HSR system to determine if they had the potential to result in electrocution hazards for birds. Among other findings, the Authority found that the preliminary Overhead Contact System (OCS), with a maximum separation of electrified or electrified and grounded elements of 20.7 inches, posed a risk of electrocution to some birds, in particular large species such as golden eagle and California condor. The working group recommended a number of design changes to the OCS configuration to increase the separation of elements to avoid and minimize electrocution risk. The Authority presented the draft findings to CDFW, which included two new OCS configurations for eagles (and all other raptors smaller than eagles) and for California condor, and solicited comments, which were received by the Authority on February 18, 2021 as noted by the commenter. The Authority carefully considered each of the comments provided by CDFW, made several additional design changes, and produced a final Bird Electrocution Avoidance Configuration memorandum that provides guidance and recommendations for the OCS to minimize the risk of large raptor and condor electrocutions (Authority 2021). An example of adjustments made to the designs based on CDFW comments were to use the horizontal wingspan measurement for Golden Eagle and to use the Bald Eagle vertical measurement for minimum conductor separations (because golden eagles have a longer wingspan than bald eagles but golden eagles are shorter than bald eagles when perched). As another example, the Authority also increased the areas recommended for the larger California condor OCS configuration based on comments from CDFW describing the present and future range of that species. Overall, the Authority considered each of the comments and made adjustments to the OCS designs where feasible. Recirculation of the EIR/EIS is not necessary because the commitment to design the project to be bird safe is unchanged and the recommended adjustments to the OCS, while an engineering challenge, are not a substantial change to the proposed project.

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4512-10559

CDFW comments that many of the mitigation measures proposed by the Project, BIO-MM#1 through 101, contain the following language: “to the extent feasible .” CDFW expresses concern that “aspects of mitigation measures may not be enforceable given that caveat, and those mitigation measures may not meet the standards for deferred mitigation under CEQA Guidelines section 15126.4.” CDFW recommends the Authority revise all mitigation measures so that they are enforceable in order to adequately mitigate for the Project’s impact on biological resources. The Authority acknowledges CDFW’s comment the need for mitigation measures to be enforceable to adequately mitigate for project impacts.

A number of the mitigation measures provided in the EIR/EIS recognize that circumstances may occur under which it is not be feasible to implement the measure. In those instances, the mitigation measure identifies alternative approaches or measures to implement.

4512-10560

In Recommendation #23, the CDFW provides a summary of the federal and State regulation pertaining to migratory nongame native birds and reminds the Authority of the prohibition on take “of all birds and their active nests including raptors and other migratory nongame birds (as listed under the Federal MBTA).” The CDFW further reminds the Authority that it is unlawful to take, possess, or needlessly destroy the nest or eggs of any raptor and that the CDFW does not issue permits for take of nests, eggs, or chicks. The CDFW express concern that a 75-foot buffer, as required by BIO-MM#14, “may result in incidental loss of fertile eggs or nestlings, or otherwise lead to nest abandonment.” The CDFW expresses concern that project-related disturbances “occurring within 75 feet of nesting birds could result in birds abandoning their nests, resulting in loss of fertile eggs or chicks.”

The Authority acknowledges the concerns raised by the CDFW and acknowledges the recommendation to “implement a 300-foot minimum buffer for all non-listed passerine species and 500-foot buffer for all non-listed raptors.” The Authority has concluded that the language of the measure is sufficient to address the CDFW’s concerns as it provides for greater no-work buffers in instances where “a larger buffer is required pursuant to regulatory authorizations issued under FESA and/or CESA.” In addition, the Project Biologist may increase the size of the buffer for all birds if necessary to ensure that the nest is not disturbed. No-work buffers will be maintained and monitored by the Project Biologist to determine when “nestlings have fledged and are no longer reliant on the nest or parental care for survival, or the Project Biologist determines that the nest has been abandoned.” By implementing this measure in this flexible way, the Authority has concluded that take of nest, eggs, or chicks will be avoided and no loss of fertile eggs or nestlings will occur.

Please refer to Section 3.7.7, Mitigation Measures, of the Final EIR/EIS, for the full text of BIO-MM#14, which was revised to be consistent with the Bakersfield to Palmdale Project Section Final EIR/EIS.

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4512-10561

The CDFW notes, Per BIO-MM#53, the Authority will prepare a Conservation Management Plan that "that sets out the compensatory mitigation that will be provided to offset permanent and temporary impacts on federal and state-listed species and their habitat, fish and wildlife resources regulated under Section 1600 et seq. of the Fish and Game Code, and certain other special-status species." CDFW expresses concerned that BIO-MM#53 as written is not specific to any species. The CDFW further comments that "because the CMP has yet to be developed, the public and reviewing agencies are unable to evaluate whether mitigation would be provided for all special-status species significantly impacted by the Project and whether mitigation could be successful and appropriate for each species." CDFW recommends the Authority provide a compensatory mitigation measure for each significantly impacted special-status species and their habitat. CDFW comments that mitigation measures should be specific, quantifiable, and enforceable, and that mitigation measures should have specific goals to replace requisite habitat for each species in order to support self-sustaining populations.

The purpose of BIO-MM#53 is to ensure the compilation of all compensatory mitigation requirements set out in species-specific and habitat mitigation measures. BIO-MM#53, as written provides an overview of the required components of the CMP, and states that the CMP would include "A description of the species and habitat types for which compensatory mitigation is being provided." As requested by CDFW, the species and habitat types for which compensatory mitigation is being provided includes the special-status species and habitats for which potentially significant impacts were identified (see e,g., BIO-MM#35, BIO-MM#38, BIO-MM#39, BIO-MM#43, BIO-MM#46, BIO-MM#67, and BIO-MM#70).

4512-10562

CDFW recommends the Authority specify that a Project Biologist be on site daily during initial ground disturbing activities. CDFW comments that "after the area has been cleared, the Project Biologist should remain on site once a week or once every two weeks to continue to verify compliance with mitigation measures." The Authority appreciates CDFW's comment and will make the following revisions to BIO-MM#56: Conduct Monitoring of Construction Activities: During any initial ground disturbing activity, the Project Biologist will be present daily in the work area to verify compliance with avoidance and minimization features, to establish ESAs, and install wildlife exclusion fencing and construction exclusionary fencing. Following completion of initial ground disturbing activities, the Project Biologist will visit the project construction site(s) once per week, or once every two weeks, depending on the Project Biologist's assessment of the level of disturbance, to very compliance with mitigation measures.

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4512-10563

In Recommendation #26, the CDFW correctly notes BIO-MM#61 states, “If agency personnel visit the construction footprint in accordance with BIO-IAMF#2, the Project Biologist will prepare a memorandum within one day of the visit that memorializes the issues raised during the field meeting. This memorandum will be submitted to the Authority via Environmental Mitigation Management and Assessment. Any issues regarding regulatory compliance raised by agency personnel will be reported to the Authority and the contractor.” The CDFW comments that they recommend the Authority specify that issues raised by agencies will be addressed immediately and that “all related construction and activities should be temporarily halted until the Project Biologist/Authority resolves agency concerns.” The CDFW comments that “The Authority should ensure that agency concerns are resolved.” It is the Authority’s intention to resolve the CDFW’s concerns, and the Authority will work with the CDFW to understand concerns raised and reach an agreeable resolution as quickly as possible. The requirement for a memorandum in BIO-MM#61 is to provide a record for all agency site visits, and it is expected that in many instances the issues raised during the site visit would not require "immediate" action or work stoppage. The mitigation measures already authorize the Project Biologist to stop work in particular circumstances, and the Authority will coordinate with the CDFW in situations requiring immediate actions, irrespective of a requirement for preparation of a memorandum. As such, the Authority believes that revisions to BIO-MM#61 to include “all related construction and activities should be temporarily halted until the Project Biologist/Authority resolves agency concerns” are not warranted.

4512-10564

The CDFW referenced BIO-MM#76, which states that, if "an injured or trapped" member of a wildlife species is "observed[,] the Project Biologist shall be notified immediately to determine if it is appropriate to release or take the wildlife species to the nearest CDFW permitted rehabilitation center. The Project Biologist will follow all relevant guidelines for federal and state listed species." The CDFW recommends the Authority specify what “guidance” that mitigation measure is referencing.

The reference in BIO-MM#76 to relevant guidelines applies to present and future guidelines for the species in question, and the relevant guidance would be assessed by the agency-approved (BIO-IAMF#1) Project Biologist for the particular species, under the particular circumstances (i.e., during construction, maintenance, and operation if an injured or trapped wildlife species is observed). As such, BIO-MM#76 does not specify a specific guideline.

4512-10565

Refer to Standard Response PB-Response-GEN-5: Impacts on Una Lake.

CDFW comments that they appreciate the design of SR14A, E1A, and E2A to avoid Una Lake and asks that the EIR/EIS clarify if avoidance of Una Lake by 300 feet includes all project components. Please refer to standard response, PB-Response-GEN-5: Impacts on Una Lake. As noted in the EIR/EIS in Chapter 2, and shown in maps contained in Appendix 3.1-A, the permanent HSR footprint and facilities would be located about 300 feet (at their closest) to Una Lake. The footprint accounts for all construction staging, drainage and utilities required for the project.

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4512-10566

In Recommendation #29, the CDFW comments that they do not agree with statements in Section 8 of the Draft EIR/EIS that the Project impacts on biological resources would be the same or similar across all six Build Alternatives. The CDFW comments that alignments that more strictly follow the State Route 14 freeway corridor would result in impacts on wildlife connectivity that the other alternatives may not, and refers to Comment #1 in their letter. The CDFW comments that Table 8-2, on page 8-15, "only summarizes impacts on special-status plant species, waters, and riparian habitat and does not weigh impacts on wildlife movement, established corridors, mountain lion, and special-status wildlife species for each alternative." The Authority appreciates the CDFW's comments and perspective on the impacts relevant to each Build Alternative. Analysis of the impacts to the human and natural environment are provided throughout Chapter 3 of the Draft EIR/EIS, and the Authority describes in Chapter 8 of the Draft EIR/EIS why the SR14A Build Alternative is the preferred alternative and why certain impacts on the natural environment and community resources would be the same, or similar, across all six Build Alternatives and therefore do not provide meaningful information to distinguish between the relative merits of the alternatives. The Authority does not agree that "Alignments that more strictly follow the State Route 14 freeway corridor would result in impacts on wildlife connectivity that the other alternatives may not," as the CDFW asserts. The majority of the two Build Alternatives that follow the SR14 freeway transportation corridor, and especially the preferred alternative, are underground for a substantial distance and the underground portions would not present a barrier to wildlife movement. Where the Build Alternatives surface and travel along at grade constitutes one- to two-mile-long sections within a half mile of the SR14 freeway. These intermittent, at-grade, sections would not significantly contribute to barriers to wildlife movement above the ambient condition of the SR14 freeway, which is a multi-lane freeway with regular, high-speed traffic, and Krail, or larger, median barriers throughout the sections in question. In response to the comments by CDFW on Table 8-2, the Authority will add impact summaries for impacts on wildlife movement, established corridors, mountain lion, and special-status wildlife species for each alternative.

4512-10567

As the CDFW correctly points out, the Project description includes several design features to avoid or minimize impacts to biological resources. Design features are included as specific components of the project design and as Impact Avoidance and Minimization Features (IAMF) incorporated into the design of the project specifically to reduce or avoid the impact of the project on sensitive resources. The CDFW requests that "These Project design features should not change at the site-level during construction," and comments that "Changes to design features after the CEQA review process is complete (e.g., from viaducts to full embankments, longer embankments reducing viaducts, additional walls, new features) could result in additional significant impacts not identified and analyzed in the Draft EIR/EIS (CEQA Guidelines, § 15162)." The Authority appreciates the CDFW's comment and acknowledges that any changes to design of the project could have unaccounted for impacts to sensitive resources and may require additional CEQA review. Some design changes are expected, including in response to comments received during public review of the Draft EIR/EIS, leading up to initiation of construction. The Authority will consider all necessary design changes in the context of CEQA and NEPA, and other State and federal regulations, and will provide the necessary environmental review and obtain the necessary permits, as warranted.

4512-10568

CDFW comments that the Authority should mitigate impacts within Los Angeles County or CDFW Region 5, when feasible to ensure no net loss of biological resources within the area where the Project would occur. The Authority appreciates the recommendation and is committed to mitigating for impacts within Los Angeles County or CDFW Region 5, when feasible. Based on the recommendation by the CDFW, BIO-MM#47 (Prepare and Implement a Compensatory Mitigation Plan for Impacts on Aquatic Resources) and BIO-MM#53 (Prepare and Implement a Compensatory Mitigation Plan for Species and Species Habitat) have been revised in the Final EIR/EIS to specify the preference for mitigation to occur within Los Angeles County and CDFW Region 5, when feasible. The Authority will continue to work with the CDFW, and other State and federal agencies, to implement compensatory mitigation.

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4512-10569

Refer to Standard Response PB-Response-BIO-2: Construction and Operations Impacts to Special-Status Plants and Wildlife.

The commenter expresses their concern with the use of predictive habitat modeling and reliance on the CNDDB in the Draft EIR/EIS for the general understanding of where species impacts may occur and the likelihood of species presence within the project direct and indirect impact areas. CDFW comments that “Impacts associated with the Project are primarily estimated using coarse-level predictive habitat modeling without having site-specific surveys to supplement the modeling effort. In addition, the Draft EIR/EIS consistently defaults to the lack of CNDDB occurrence to conclude whether a species is present. Please note that modeling and CNDDB is not a substitute for site-specific, focused species surveys.” Additionally, the commenter states: “Areas without records should not be treated as areas where species do not occur.” CDFW goes on to provide a thorough and thoughtful explanation of the pitfalls associated with using predictive modeling and historical, volunteer-based, online reporting databases (i.e., CNDDB) for assessing the potential for species presence and project-related impacts.

The Authority's use of predictive modeling and CNDDB in the EIR/EIS resulted in an impact assessment that is conservative in its conclusions of both extent of suitable habitats and presence of species within the known range or distribution. The predictive models were developed through weekly, monthly, or quarterly coordination meetings with the USFWS, USFS, and CDFW technical staff over a period of several years. Table 3.7-2 in Section 3.7, Biological and Aquatic Resources of the Draft EIR/EIS, identifies the data sources utilized in pre-field investigation of resources. Table 3.7-3 summarizes the informal consultation with the USFWS and other stakeholders including the dates, agencies involved, purpose, and outcome of meetings and correspondence that have taken place. In addition, the preliminary and draft models were provided to these agencies to validate the methods and habitat predictability for each species. The models were updated based on agency input after each review cycle. For each species model, if the predictive model indicated the potential presence of habitat, the Authority assumed the species could be present, even if CNDDB (and other online reporting databases, such as eBird) records were absent, and the conclusion was made that impacts could occur, and avoidance, minimization of impacts, and mitigation was needed. CNDDB, and other online databases, were used as a supplement to provide additional

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information on species occurrences, not as a means of ruling out the presence of species. Predictive modeling became a necessary tool for the EIR/EIS analysis given the size of the study areas over multiple alternatives and the lack of permissions to enter private property outside the ANF, both of which made comprehensive field surveys throughout the alignment RSAs infeasible. The use of predictive modeling as part of an EIR/EIS analysis of multiple project alternatives provides sufficient information as to the magnitude of impacts to various biological resources as well as appropriate level of information to accurately compare and contrast the potential impacts between each Build Alternative. Because the analysis is predominately based on predictive modeling, the Authority has included mitigation measures in the EIR/EIS that require surveys of the Preferred Alternative after ROD during the detailed design period and prior to construction. Information obtained from these surveys will be incorporated into the project's updated GIS data. The Authority has included mitigation measures in the Draft EIR/EIS, Section 3.7 Biological and Aquatic Resources, to perform surveys prior to construction and as properties become accessible; e.g., BIO-MM#7 (Conduct Pre-construction Surveys for Special-Status Reptile and Amphibian Species) and BIO-MM#79 (Conduct Surveys for Coastal California Gnatcatcher). BIO-MM#7 will be effective because it will identify and document special-status reptile and amphibian species and their habitat within the project footprint, inform methods for the species’ avoidance, protective fencing placement, and relocation activities. Determining the presence of suitable coastal California gnatcatcher habitat allows for the implementation of avoidance, minimization, and/or compensatory mitigation measures that ensure that death and injury to these special-status species would be avoided and effects on habitat reduced or avoided. BIO-MM#102 (Conduct Surveys and Implement Avoidance Measures for Crotch Bumble Bee) was added to provide guidance on performing focused surveys for Crotch bumble bee within one year of construction. BIO-MM#103 (Provide Compensatory Mitigation for Impacts on Crotch Bumble Bee Habitat) was also added based on results of surveys (BIO-MM#102) and if take or adverse impacts to Crotch bumble bee could not be avoided during construction or operation of the project. The Authority appreciates CDFW's comment and is committed to continued coordination with CDFW to further refine our mutual understanding of species occurrences and the potential for impacts from project construction and operation. Please refer to Standard Response PB-Response-BIO-2: Construction and Operations Impacts to Special-Status Plants and Wildlife, which provides additional information about how impacts to wildlife

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were fully evaluated and mitigated in the Draft EIR/EIS, including a summary of each species-specific survey, avoidance, minimization, and compensatory mitigation measure. The results of the site-specific, focused surveys described in the Final EIR/EIS would be used to inform the LSA and/or CESA take permit applications.

4512-10570

CDFW recognizes that the Authority proposes to use additional surveys for certain species to supplement the modeling results and to refine the impact analysis. CDFW correctly notes that the Authority intends to perform additional surveys prior to the start of construction to provide detailed and current information on the presence, or potential for presence, of sensitive natural resources (e.g., BIO-MM#3, BIO-MM#7, BIO-MM#14, BIO-MM#15, BIO-MM#25, BIO-MM#28, BIO-MM#29, BIO-MM#52, BIO-MM#65, BIO-MM#68, BIO-MM#96). CDFW comments that “it is important to acknowledge that pre-construction or modified surveys are not equivalent to protocol surveys that are designed for maximum detectability.” CDFW recommends a two-pronged survey approach that consists of protocol then pre-construction verification surveys at appropriate times for a given species. The Authority understands the important distinction between pre-construction surveys and agency-established protocol surveys. The Authority has included in the Draft EIR/EIS measures to implement agency-established protocol surveys; e.g., BIO-MM#1 (Conduct Presence/Absence Pre-construction Surveys for Special-Status Plant Species and Special-Status Plant Communities), BIO-MM#20 (Conduct Protocol Surveys for Burrowing Owls), BIO-MM#79 (Conduct Surveys for Coastal California Gnatcatcher), BIO-MM#80 (Conduct Surveys for Least Bell’s Vireo), BIO-MM#81 (Conduct Surveys for Southwestern Willow Flycatcher), BIO-MM#82 (Conduct Surveys for Western Yellow-billed Cuckoo) that would be performed during the appropriate time of year, under the appropriate conditions, and sufficiently in advance of construction. The Authority also understands that such surveys completed during a drought period may not be acceptable to CDFW and other stakeholders and additional surveys may be required in such instances. The Authority has included in the Draft EIR/EIS measures to implement pre-construction surveys prior to project implementation; e.g., BIO-MM#1 (Conduct Presence/Absence Pre-construction Surveys for Special-Status Plant Species and Special-Status Plant Communities), BIO-MM#3 (Conduct Pre-construction Surveys for Vernal Pool Wildlife Species), BIO-MM#7 (Conduct Pre-construction Surveys for Special-Status Reptile and Amphibian Species), BIO-MM#14 (Conduct Pre-construction Surveys and Delineate Active Nest Buffers Exclusion Areas for Breeding Birds), BIO-MM#15 (Conduct Pre-construction Surveys and Monitoring for Non-Special Status Raptors), BIO-MM#17 (Conduct Surveys for Swainson’s Hawk Nests), BIO-MM#20 (Conduct Protocol Surveys for Burrowing Owls), BIO-MM#25 (Conduct Pre-construction Surveys for Bat Species), BIO-MM#28 (Conduct Pre-construction Surveys for Ringtail and Ringtail Den Sites and

Response to Submission 4512 (Ruby Kwan-Davis, California Department of Fish and Wildlife, South Coast Region 5, Habitat Conservation Planning Program, December 1, 2022) - Continued

4512-10570

Implement Avoidance Measures), BIO-MM#29 (Conduct Pre-Construction Surveys for American Badger Den Sites and Implement Minimization Measures), BIO-MM#52 (Conduct California Glossy Snake, California Legless Lizard, Coast Patch-Nosed Snake, Coastal Rosy Boa, Coastal Whiptail, Blainville's Horned Lizard, San Bernardino Ringneck, San Bernardino Mountain Kingsnake, South Coast Garter Snake, Two-Striped Garter Snake, and Western Pond Turtle Monitoring, and Implement Avoidance and Minimization Measures), BIO-MM#65 (Conduct Pre-construction Surveys and Monitoring for Bald and Golden Eagles), BIO-MM#69 (Conduct Surveys and Implement Avoidance Measures for Active Tricolored Blackbird Nest Colonies), BIO-MM#79 (Conduct Surveys for Coastal California Gnatcatcher), BIO-MM#80 (Conduct Surveys for Least Bell's Vireo), BIO-MM#81 (Conduct Surveys for Southwestern Willow Flycatcher), BIO-MM#82 (Conduct Surveys for Western Yellow-billed Cuckoo), BIO-MM#96 (Conduct Pre-Construction Surveys and Implement Avoidance and Minimization Measures for Mountain Lion Dens), as well as BIO-MM#58 (Establish Environmentally Sensitive Areas and Nondisturbance Zones). The Authority believes that the mitigation measures listed above are sufficient for detecting listed species and that the mitigation measures follow the CDFW recommended two-pronged approach of completing both agency-established protocol surveys and pre-construction surveys. The Authority appreciates CDFW recommendations and is committed to continued consultation with CDFW on state-listed species, including survey methodology, during any FGC Section 2081(b) permit application process.

4512-10571

The CDFW recommends that the Authority submit information on special-status species and native plant populations to CDFW databases. As recommended by the CDFW, the Authority intends to submit information on special-status species obtained during all phases of the project to the California Natural Diversity Database (CNDDB) by compiling and submitting CNDDB Field Survey Forms as well as the Combined Rapid Assessment and Relevé form, which will be submitted to the Vegetation Classification and Mapping Program.

4512-10572

The CDFW recommends the Authority revise the Project's proposed Biological Resources Mitigation Measures and condition the EIR/EIS document to include mitigation measures recommended in their comment letter. The Authority acknowledges and appreciates the effort CDFW put into providing mitigation measures that are specific, detailed, enforceable through permit conditions, agreements, or other legally-binding instruments, and clear so as to be fully enforceable and implemented successfully via a mitigation monitoring and/or reporting program. The Authority is committed to implementing a mitigation program that meets the needs of CEQA, NEPA, and other State and federal regulations through a robust EIR/EIS environmental document and obtaining all necessary permits. The Authority has reviewed those proposals, and has incorporated a number of the recommendations, as described in detail in its other responses to CDFW's letter.

4512-10573

The CDFW comments on the need for assessment of filing fees and notes that fees are payable upon filing the Notice of Determination. The Authority recognizes the requirement to pay filing fees upon filing the Notice of Determination and appreciates the CDFW's comment and reminder.

4512-10574

The Authority agrees and also appreciates to opportunity to work with the CDFW to ensure impacts to sensitive natural resources are minimized or avoided, and appropriately mitigated if avoidance of impacts is not possible. The Authority looks forward to ongoing consultation, as a mutual State agency, with the CDFW for the best possible outcome of the project.

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4512-10575

The CDFW has included Attachment A, which includes the CDFW's comments on the first Palmdale to Burbank Administrative Draft EIR/EIS, which was provided to CDFW for review and comment as a Cooperating Agency in advance of the public distribution. This Attachment A has been considered comprehensively with Submission PB-4512. CDFW's comments on the Palmdale to Burbank Administrative Draft EIR/EIS comprised several overarching subjects, including comments on design features for the project, wildlife connectivity, hydrogeological impacts, and specific question on the analysis of impacts and the mitigation that would be applied. The Authority appreciates CDFW's attachment of its prior comments for informational purposes only. The Authority did review and respond to each of the comments submitted as a part of the Palmdale to Burbank Administrative Draft EIR/EIS process; the Authority's responses were integrated into the content of the Draft EIR/EIS. CDFW did not advise as to any specific comments from the Palmdale to Burbank Administrative Draft EIR/EIS that were not addressed in the Palmdale to Burbank Draft EIR/EIS.

4512-10576

The Authority acknowledges the Attachment B: CDFW's comments for the Santa Clara River Crossing (Soledad Canyon) –Data Request for the SR-14 Alternative Alignment of the High-Speed Rail –Palmdale to Burbank (August 15, 2018), as an attachment to Submission PB-4512. This attachment is referred to in comment 10543. The Authority has considered all comments and recommendations in the August 15, 2018 letter (Attachment B) comprehensively in response to comment 10543 (Comment #1: Impacts on UTS) in Submission PB-4512. The Authority has also been coordinating with CDFW on their requested data needs and has provided CDFW with all requested information that is available at this time.

4512-10577

The Authority acknowledges the Attachment C: Gabion-like structures in Santa Clara River near the proposed Santa Clara River Crossing, as an attachment to Submission PB-4512. This attachment is referred to in comment 10543. The Authority reviewed Attachment C in response to comment 10543 (Comment #1: Impacts on UTS) in Submission PB-4512.

4512-10578

The Authority acknowledges the Attachment D: Wildlife Crossings (yellow points) CDFW proposes the High-Speed Rail Authority construct in order to mitigate for the Project's impact on wildlife connectivity, as an attachment to Submission PB-4512. This attachment is referred to in comment 10544. The Authority reviewed and considered the crossings identified in Attachment D, as discussed in response to CDFW's comments on Mountain Lion and Wildlife Connectivity.

4512-10579

The Authority acknowledges the recommended Draft Mitigation and Monitoring Reporting Plan that the CDFW included in Appendix E, as an attachment to Submission PB-4512. The Authority has comprehensively considered the recommended revisions to mitigation measures made by CDFW.

Submission 4513 (Jessica Nadolski, State Water Resources Control Board, Division of Water Quality, December 1, 2022)

Palmdale - Burbank - RECORD #4513 DETAIL

Status : Delimited
Record Date : 12/6/2022
Interest As : State Agency
First Name : Jessica
Last Name : Nadolski

Stakeholder Comments/Issues :

Hello Serge,

4513-9008 Thank you for the opportunity to review the Palmdale to Burbank Draft EIR/S. State Water Board submitted an official comment pertaining to the document but also wanted to follow-up with a few items of note for future permitting consideration in this Project Section.

Items to consider include:

1. The Los Angeles region currently has a shortage of compensatory mitigation bank areas or areas where restoration and enhancements can be performed. Many project applicants in the Los Angeles region who require compensatory mitigation are having difficulty securing viable mitigation credit. State Water Board recommends consideration of mitigation credits as early as possible.

4513-9009 2. The Draft EIR/S Summary (Page S-70, Mitigation Measures HWR-MM#2) states the High-Speed Rail Authority (Authority) will "avoid placement of facilities in the floodplain or raise the ground with fill above the base flood elevation." However, raising the ground elevation with fill would constitute a direct impact to waters of the state and could cause negative geomorphological effects, reduce flooding capacity, or impact aquatic resources and riparian habitat. These areas should be assessed appropriately in technical studies and may warrant additional, specific conditions (to reduce impact) during the permitting phase.

4513-9010 3. The DEIR/S (Page 3.7-3) references riparian areas being regulated under California Fish and Game Code. Water Boards also regulate riparian areas in relation to waters of the state and the protection of beneficial uses of waters specified in regional Basin Plans.

4. State Water Board notes this geographic region includes problem areas when considering methods of delineation. Areas more recently impacted by drought, fire, or other similar event may need additional analysis to accurately determine the acreage of aquatic resources present or proposed to be impacted at a particular location.

5. Referring to the assessment of vernal pools (Page 3.7-25), State Water Board assumes that field verification of vernal pools will occur prior to submittal of permit applications in any areas where access was restricted during completion of the Draft EIR/S.

6. The DEIR/S (Page 3.7-29) states, "For the purposes of the aquatic resource analysis, intermittent streams, perennial streams, and springs/seeps were considered to be potentially affected by changes in groundwater levels." State Water Board recommends also including 'ephemeral streams.'

7. The DEIR/S (Page3.7-234) indicates work activities in Santa Clara River will be conducted from May 1 to November 30. State Water Board recommends completion on October 15 to align better with the beginning of the local storm season.

4513-9011 8. State Water Board notes general low impact development (LID) concepts are incorporated throughout the DEIR/D within stormwater sections. Water Boards encourages LID implementation to help protect and restore water quality.

9. The benefits of landform grading or modern methodology for geotechnical methods during construction should be considered. In areas where slopes are being cut and laid back, various alternatives for geotechnical engineering and modern methods for slope stabilization should be considered. Utilizing features such as linear concrete v-ditch swales along cut slopes is discouraged, as this creates larger areas of impacts and increased impacts to water quality. These features result in amplified velocities of stormwater runoff and bring potential for negative hydrological effects downstream such as decreased ground infiltration and increased scour as water is discharged through these drainage systems.

10. Erosion and maintenance of flood control structures such as debris basins as well as any channel clearing and/or maintenance of soft-bottom channels could result in effects on beach replenishment; this subject area may require further analysis.

Historically, the Los Angeles County Department of Public Works has been responsible for the maintenance of flood control facilities and the associated removal of sediment and/or debris. Placement of these materials has often been difficult to site as sufficient upland areas are lacking. Sediment management and/or placement site strategies should be proposed when submitted permit applications for this Project Section.

Please let me know if you have any questions.
Best Regards,

Jessica A.Nadolski
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Wetlands Permitting and Enforcement Unit I, Supervisor
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4513-9008

The commenter states there is a shortage of mitigation bank areas or areas where restoration and enhancements can be performed in the Los Angeles region and recommends consideration of mitigation credits as early as possible. Please note that mitigation as proposed in the Draft EIR/EIS, Section 3.7 (Biological and Aquatic Resources) includes more than one option to offset impacts to biological and aquatic resources. For example, BIO-MM#53 (Prepare and Implement a CMP for Species and Species Habitat) includes options for purchase of credits from an agency-approved conservation and mitigation bank, protection of habitat through acquisition of fee-title or conservation easement and funding for long-term management of the habitat, and/or payment to an existing in-lieu fee program. In addition, BIO-MM#47 (Prepare and Implement a CMP for Impacts on Aquatic Resources) includes options for purchase of credits from an agency-approved conservation and mitigation bank, preservation of aquatic resources through acquisition of property, establishment, restoration, or enhancement of aquatic resources, and/or in-lieu fee contribution determined through consultation with the applicable regulatory agencies. Coordination with regulatory and cooperating agencies is ongoing and will continue through the applicable permitting processes. The Authority thanks the commenter and looks forward to further engagement and coordination on securing mitigation opportunities.

4513-9009

The commenter expresses concern that the placement of facilities/fill in the floodplain could raise the ground above base flood elevation. The Authority understands that there are risks that could affect floodplains during project construction. The project build alternatives would be constructed in compliance with building code requirements for application of engineering design features to address and minimize these risks. These risks and impacts are analyzed in detail in Section 3.8, Hydrology and Water Resources, specifically Impact HWR#1 (Permanent Alteration of Surface Drainage Patterns from Aboveground Temporary Construction Activities and Permanent Structures Required for the Build Alternatives) and Impact HWR#3 (Changes in Flood Risks Associated with Temporary Construction Activities and Permanent Structures Required for the Build Alternatives). The Authority would adopt engineering and design approaches described in HYD-IAMF#1 (Stormwater Management) and HYD-IMAF#2 (Flood Protection). HYD-IAMF#1 will require stormwater management facilities to reduce the Build Alternatives' contribution of runoff to existing drainage systems during flood events, and the flood protection plan (HYD-IAMF#2) would minimize increases in flood elevations. However, construction within SFHAs could still impede or redirect flood flows, thereby substantially increasing the rate or amount of surface runoff in a manner that would result in flooding on- or off-site, such outcomes would result in a significant impact. As discussed in Section 3.8.7, Mitigation Measures, HWR-MM#2 will require the Authority to avoid placing permanent facilities within floodplains and minimize encroachment during construction into surface water resources to the extent feasible. If such encroachments during construction are necessary, HWR-MM#2 will require restoration of temporarily affected floodplains after construction, by regrading to mimic contours and revegetating where necessary. Where placement of facilities in floodplains cannot be avoided, HWR-MM#2 will require the use of fill to raise infrastructure above the base flood elevation. As discussed under Impact HWR#3, increases in floodplain elevations resulting from the Build Alternatives would not exceed 1 foot, consistent with FEMA criteria. The Build Alternatives would not substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or through the addition of impervious surface, in a manner which would impede or redirect flood flows or exceed the capacity of existing or planned drainage systems. Also, the floodplain will be restored to its prior operation in instances where floodplains would be affected by construction within 1 year of completing construction at each affected location. This would include grading to restore preconstruction contours and revegetation with

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4513-9009

appropriate native species. For this reason, the analysis concludes that project construction and mitigation would not substantially increase flood risks.

4513-9010

Refer to Standard Response PB-Response-BIO-2: Construction and Operations Impacts to Special-Status Plants and Wildlife, PB-Response-HYD-2: Hydrogeologic Impacts in the Angeles National Forest/Tunneling Impacts in the Angeles National Forest.

The commenter offers several recommended items of note for future consideration during permitting of the approved project.

The commenter notes that in addition to CDFW, the State Water Board also regulates riparian areas in relation to waters of the State and beneficial uses specified in the regional Basin Plan. The Authority is aware of the State Water Board's role in resource regulation and appreciates the reminder to include this agency's role in the Final EIR/EIS. The “Riparian Areas” bullet point in Section 3.7.1.1 in Section 3.7, Biological and Aquatic Resources has been revised in in the Final EIR/EIS to account for the Water Board’s role under the Porter-Cologne Act.

The commenter notes that the geographic region of the project includes areas recently impacted by drought, fire, or other similar events that may require special attention for delineation of impacts. The Authority appreciates the complexity to delineations in the region and appreciates the need to conduct additional analysis in certain areas. The Authority has retained expert support in performing delineations and assessing impacts to aquatic resources.

The commenter requests confirmation that field verification of vernal pools will occur prior to submittal of permit applications in any areas where access was restricted during completion of the Draft EIR/EIS. As stated on page 3.7-25 of the Draft EIR/EIS, a vernal pool assessment was performed that included a field verification component where the alignment was accessible. For those areas not accessible during the initial survey effort, mitigation measures BIO-MM#3, BIO-MM#4, and BIO-MM#5 are included, which require the Authority to survey for vernal pools and vernal pool species, and to seasonally avoid vernal pools. Field verification of vernal pools would occur as part of applicable regulatory processes involving the Water Board. For more information, please see standard response PB-Response-BIO-2: Construction and Operations Impacts to Special-Status Plants and Wildlife.

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4513-9010

The commenter recommends including “ephemeral streams” as affected by changes in groundwater levels. Ephemeral streams are noted in each risk area but because they are temporary streams that flow briefly as a direct result of precipitation, they are not connected to changes in groundwater. As described on page 3.7-108 of Section 3.7.6.3 in the Draft EIR/EIS and in Footnote 10 in Impact HWR#5 in Section 3.8, Hydrology and Water Quality of the Draft EIR/EIS, they are not included as a factor in determining risk. Therefore, no change was made to the Final EIR/EIS. For more information, please see PB-Response-HYD-2: Hydrogeologic Impacts in the Angeles National Forest/Tunneling Impacts in the Angeles National Forest.

The commenter recommends completion of work in the Santa Clara River on October 15 to align better with the beginning of the local storm season. November 30 is provided as a maximum work window, but, as required by mitigation measures BIO-MM#86, BIO-MM#89, BIO-MM#90, and BIO-MM#92 provided in the Draft EIR/EIS, no work will occur when water is present in the channel, regardless of time of year.

4513-9011

The commenter encourages the use of low-impact development (LID) concepts and recommends consideration of landform grading or modern methodology for geotechnical methods during construction to help protect and restore water quality. The commenter notes that erosion and maintenance of flood control structures as well as channel clearing and maintenance of soft-bottom channels could result in effects on beach replenishment, which may require further analysis during the future permitting process. The commenter also notes that sediment management and/or placement site strategies should be included in permit applications submitted for the Palmdale to Burbank Project Section. In the introduction to this comment letter, the commenter notes that each of these items are future permitting considerations.

The Authority appreciates this information and will continue coordination with the State Water Board to implement their measures and recommendations into the final design of the project grading and drainage facilities to ensure compliance with relevant permit requirements. As noted in Section 3.8.3, Consistency with Plans and Laws, the Authority, as the lead state and federal agency proposing to construct and operate the California HSR System, is required to comply with all federal and state laws and regulations and to secure all applicable federal and state permits prior to initiating construction on the selected Build Alternative.

As noted by the commenter, Section 3.8, Hydrology and Water Resources, of the Draft EIR/EIS indicates that post-construction best management practices and LID techniques will be applied to reduce the quantity and improve the quality of stormwater runoff. These post-construction best management practices and LID concepts are described in HYD-IAMF #1: Storm and Groundwater Management and include constructed wetland systems, biofiltration and bioretention systems, wet ponds, organic mulch layers, planning soil beds, and vegetated systems including vegetated swales and grass filter strips. Further, the latest grading regulations and construction practices will be followed to ensure the proper slope stability and drainage elements are included in the final design and grading plans for the project.

As noted by the commenter, the Authority has included various methods to mitigate for the risk of ground failure from unstable soils or slope instability. Prior to construction, the Contractor shall prepare and implement a Construction Management Plan (CMP)

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addressing how the Contractor will address geologic constraints and minimize or avoid impacts to geologic hazards during construction (GEO-IAMF#1). The CMP will address geological and geotechnical restraints and resources including groundwater withdrawal, unstable soils and slope instability, subsidence, water and wind erosion, soils with shrink-swell potential, soils with corrosive potential as well as the development of a health and safety plan. Unstable slopes or landslide areas would be mitigated through appropriate methods for slope stabilization and landslide remediation identified in the CMP. Additionally, the Authority will implement GEO-IAMF#2, which incorporates slope monitoring by a Registered Engineering Geologist. The procedures shall be implemented at sites identified in the CMP where a potential for long-term instability exists from gravity or seismic loading including, but not limited to, at-grade sections where slope failure could result in loss of track support, or where slope failure could result in additional earth loading to foundations supporting elevated structures.

Regarding the commentor's point #10, the project is located well inland, far from coastal areas or beaches and with implementation of measures cited above will not affect beach replenishment. The comment goes on to note that the Los Angeles County Department of Public Works has been responsible for the maintenance of flood control facilities and the associated removal of sediment and/or debris. And that placement of these materials (sediment and/or debris) has often been difficult to site as sufficient upland areas are lacking. As noted above and as described in Section 3.8, Hydrology and Water Resources, of the Draft EIR/EIS indicates that post-construction best management practices and LID techniques will be applied to reduce the quantity and improve the quality of stormwater runoff. These post-construction best management practices and LID concepts are described in HYD-IAMF #1: Storm and Groundwater Management and include the construction of wetland systems, biofiltration and bioretention systems, wet ponds, organic mulch layers, planning soil beds, and vegetated systems including vegetated swales and grass filter strips. Further, the latest grading regulations and construction practices will be followed to ensure the proper slope stability and drainage elements are included in the final design and grading plans for the project. The Authority also will comply with applicable Regional Water Quality Control Board permits and treat potential groundwater contamination (including through constructed wetland systems, biofiltration and bioretention systems, wet ponds, organic mulch layers, planting soil beds, and vegetated systems (biofilters), such as vegetated

4513-9011

swales and grass filter strips) so as to prevent degradation of groundwater quality. Implementation of these measures will minimize the project's impact on surface water and groundwater quality and associated impacts on biological resources and habitat.

Based on the Authority's approach to encourage the use of vegetated swales, concrete v-ditches would not be used. These measures would substantially reduce or avoid sedimentation and/or debris flows as a result of project improvements. However, if required as part of Water Board permits, appropriate sediment management and placement plans would be developed and implemented.