

Attachment B: Section 7 USFWS Consultation – Biological Opinion



United States Department of the Interior

FISH AND WILDLIFE SERVICE
Sacramento Fish and Wildlife Office
2800 Cottage Way, Suite W-2605
Sacramento, California 95825-1846
SFWO_mail@fws.gov



In Reply Refer to:
2024-0035741-S7

May 1, 2025
Sent Electronically

Ray Tellis
Regional Administrator
U.S. Department of Transportation
Los Angeles, CA 90017
kathleen.kelly@dot.gov

Subject: Formal Consultation on the Valley Link Commuter Rail Project, Alameda and San Joaquin Counties, California

Dear Ray Tellis:

This letter is in response to the U.S. Department of Transportation's Federal Transit Administration's December 23, 2024, request to initiate formal consultation with the U.S. Fish and Wildlife Service (Service) on the proposed Valley Link Commuter Rail Project (proposed project), in Alameda and San Joaquin Counties, California. Your request was received by the Service on December 30, 2024. At issue are the proposed project's effects on the federally threatened vernal pool fairy shrimp (*Branchinecta lynchi*), the Central California Distinct Population Segment of the California tiger salamander (*Ambystoma californiense*) (California tiger salamander), the California red-legged frog (*Rana draytonii*) and its critical habitat, the San Joaquin kit fox (*Vulpes macrotis mutica*), and the endangered Palmate-bracted bird's beak (*Chloropyron palmatum* (syn. *Cordylanthus palmatus*)). The proposed project also falls within critical habitat for vernal pool fairy shrimp and delta smelt (*Hypomesus transpacificus*), but the Federal Transit Administration (FTA) determined the project will have no effect to their critical habitats. This response is provided under the authority of the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 *et seq.*) (Act), and in accordance with the implementing regulations pertaining to interagency cooperation (50 CFR 402).

The federal action on which we are consulting is the FTA, in coordination with Tri-Valley – San Joaquin Valley Regional Rail Authority (Authority) establishing a new passenger rail service along a 22-mile corridor between the existing Dublin/Pleasanton Bay Area Rapid Transit (BART) Station in Alameda County and the proposed Mountain House Community Station in San Joaquin County. Pursuant to 50 CFR 402.12(j), you submitted a Biological Assessment for our review and requested concurrence with the findings presented therein. These findings conclude that the proposed action may affect, and is likely to adversely affect the vernal pool fairy shrimp, California tiger salamander, California red-legged frog, San Joaquin kit fox, and Palmate-bracted bird's-beak. These findings also conclude that the proposed action may affect, but will not adversely affect California red-legged frog critical habitat.

The Service concurs that the proposed project is not likely to adversely affect California red-legged frog critical habitat. Approximately 72 percent of the proposed project aligns with the existing freeway, which already presents a barrier to these species. Additionally, 15 percent of the proposed project will be constructed on viaduct and/or bridge structures, allowing for unimpeded movement beneath the tracks in these areas. The proposed project includes design features to avoid permanent effects to sensitive areas by constructing most of the proposed track along existing roads or on an elevated viaduct or bridge. Culverts will be designed and installed to minimize impacts to aquatic features and not restrict connections or flow between potential aquatic habitats. Retaining walls will be installed along steep hill slopes, not valley bottoms or drainages that are more likely to be movement corridors for these species (the location of many of the viaducts). Where the track is installed at grade, it is anticipated that there will be sufficient gaps between the rail and gravel bed to permit California red-legged frogs to pass underneath the rail. It is also anticipated that California red-legged frogs will be capable of jumping over the rail, if needed. The sections of the proposed project that include viaducts will also allow for unimpeded movement of California red-legged frogs. Due to these considerations, the proposed project's effect on landscape permeability for the California red-legged frog will be minimal.

Further, the proposed project impacts to critical habitat unit CCS-2B, which totals 44,470 acres, will be non-contiguous and will remain along the edges of the critical habitat unit. The approximately five acres of permanent impacts to potential aquatic breeding habitat is minimal. The permanent impact to approximately 96 acres of upland dispersal/estivation habitat will be offset with conservation measures that ensure dispersal and movement will continue across project features. The proposed project is anticipated to result in temporary impacts to approximately four acres of potential aquatic breeding habitat and approximately 64 acres of upland dispersal/estivation habitat due to temporary staging and clearing. Temporary impacts to aquatic and upland habitat will be restored. These effects to habitat are insignificant and discountable to the overall critical habitat unit and there will continue to be dispersal and aquatic habitat within and surrounding the action area. Conservation measures to avoid impacts to habitat will be implemented as a part of the proposed project, further reducing the likelihood of effects.

The remainder of this document provides our biological opinion on the effects of the proposed project on the vernal pool fairy shrimp, California tiger salamander, California red-legged frog, San Joaquin kit fox, and palmate-bracted bird's-beak.

In considering your request, we based our evaluation on the following:

- 1) FTA's December 23, 2024, formal consultation request;
- 2) The Valley Link Biological Assessment dated November 2024; and
- 3) Other information available to the Service.

Consultation History

September 4, 2024: The Service received Valley Link Draft Biological Assessment for preliminary review.

September 19, 2024: The Service, the Authority, and environmental consultants met for a field tour of the proposed action area.

- September 25, 2024: The Service and FTA staff met to discuss compensation and mitigation.
- December 30, 2024: The Service received FTA's December 23, 2024, letter requesting initiation of consultation for the proposed project as well as the associated Biological Assessment via email.

BIOLOGICAL OPINION

Description of the Proposed Action

The proposed project is located along Interstate 580 (I-580) from the existing Dublin/Pleasanton BART Station in Alameda County until Greenville Road in Livermore, where it continues along Altamont Pass Road and the Alameda Transportation Corridor north of I-580. The alignment gets closer to I-580 again in the Mountain House Creek area and follows I-580 to its immediate north, crossing the California Aqueduct and the Delta-Mendota Canal and maintains its position north of Interstate 205 (I-205) into the Mountain House/Tracy area where it ends east of Mountain House Parkway in San Joaquin County. The site of the proposed Operations and Maintenance Facility / Operations Support Site is south of West Schulte Road in Tracy.

The proposed project includes four new stations located: (i) across from the Dublin/Pleasanton BART Station, (ii) in the I-580 median near the Isabel Avenue interchange, (iii) a station platform in the I-580 median at Southfront Road in Livermore, and (iv) a platform north of the I-260 near Mountain House Parkway. In addition to the new stations, a maintenance-of-way (MOW) staging area in the Altamont Pass area, as well as a Layover Facility (LF) and an Operations and Maintenance Facility (OMF) / Operations Support Site (OSS) will be incorporated in areas at the east end of the alignment.

Facility Construction

The proposed project includes the following components that will be constructed:

Train tracks: 22 miles of single and double track will be built between Dublin/Pleasanton and the Mountain House Community along I-580, Altamont Pass Road, and Interstate 205 (I-205) with associated structures, such as viaducts and retaining walls where needed. There will be no at-grade crossings of public roads; the tracks will be viaducted over such crossings. The tracks will be installed over a gravel bed using concrete ties, with culverts installed where needed to allow stormwater to drain properly. No fencing will be installed along the tracks other than barbed wire where needed to keep livestock off the tracks.

Dublin/Pleasanton Station: A station platform will be built south of the eastbound I-580 freeway across the highway from the existing Dublin/Pleasanton BART Station with stairs, escalators, and elevators for vertical circulation in the station. This facility will be fenced for security purposes.

Isabel Station: A station platform will be built in the I-580 median near the Isabel Avenue I-580/interchange East Airway Boulevard with a pedestrian overcrossing, elevators, and stairs; a 24-acre parking lot along East Airway Boulevard; and associated road improvements for access to the lot, including driveways and restriping of East Airway Boulevard. This facility will be fenced for security purposes.

Southfront Road Station: A station platform will be built in the I-580 median near Southfront Road in Livermore with a pedestrian overcrossing, elevators, and stairs; a 7-acre parking lot off the road; and associated highway and road improvements to accommodate the station and access to the lot. This facility will be fenced for security purposes.

Mountain House Community Station: A station platform will be built north of I-205 near Mountain House Parkway with pedestrian overcrossings, a 54-acre parking lot off the road, and associated road improvements for access to the lot. This facility will be fenced for security purposes.

Altamont MOW staging area: A staging area will be established on a portion of a 24-acre property along Altamont Pass Road near Dyer Road to provide maintenance vehicle staging and for use during construction. This facility will be fenced for security purposes.

Mountain House LF: A facility for train layovers, storage, and light maintenance will be constructed east of the Mountain House Community Station on an 86-acre property with administrative offices and other supporting facilities. This facility will be fenced for security purposes.

Tracy OMF/OSS: A support facility will be built on an approximately 200-acre property along West Schulte Road west of Tracy for heavy maintenance activities and to support the control center and warehouse storage. This facility will be fenced for security purposes.

Retaining walls will be constructed in several locations to minimize right-of-way impacts, avoid impacts to existing interchange overcrossing structures, and support the ramp approaches and roadway embankments. Noise barriers (permanent and temporary) will be constructed where appropriate. Concrete barriers will be installed in the center median on both sides of the proposed rail alignment, and Caltrans standard concrete barriers will be constructed as part of the freeway realignment between local roadways and I-580.

The proposed project includes design features to help avoid permanent effects to sensitive areas, including aquatic features and critical habitat. The proposed project deviates from I-580 and travels through the Altamont Pass for approximately 6.25 miles. This stretch of the proposed project passes through extensive tracts of sensitive habitat, and 1.15 miles of the proposed project through this area have been designed to travel on viaducts and bridges to avoid and minimize effects to the sensitive habitat and listed species that may be present. An additional 2.16 miles of the rail are elevated along the sections of the proposed project that are parallel to I-580 (approximately 16.13 miles in total). This elevation will aid in efforts to avoid and minimize effects to listed species. In addition, proposed project infrastructure will be located within or adjacent to existing transportation infrastructure or corridors, utility corridors, and other development to minimize effects to sensitive habitats. Additionally, culverts will be designed and installed to minimize impacts to aquatic features and not restrict connections or flow between potential aquatic habitats. Permanent fencing will be located at the MOW staging and the LF area for security purposes. The remainder of the proposed project will not be fenced to minimize barrier impacts.

Construction Duration

Table 1 identifies the duration of construction for each proposed project improvement. The construction durations are not sequential; construction could occur simultaneously at several

locations. Logical work improvements are organized by section; the Tri-Valley Section refers to the west portions of the proposed project in the I-580 median, and the Altamont Section refers to improvements in the east portion of the proposed project through the Altamont Pass to Mountain House and Tracy. Proposed project improvements will require permitting, contractor selection, and final design prior to construction; therefore, the total duration could be longer than the construction duration.

Table 1: Construction Duration

Improvement	Construction Duration (Months)	Section
Track Work	36	Tri-Valley Section
I-580 Modifications	42	Tri-Valley Section
Dublin/Pleasanton Station	24	Tri-Valley Section
Isabel Station	18	Tri-Valley Section
Southfront Road Station	16/18	Tri-Valley Section
Track Work including Altamont MOW	30	Altamont Section
Mountain House Community Station	12/16	Altamont Section
Mountain House LF	36	Altamont Section
Tracy OMF/OSS	36	Altamont Section

Based on similar projects, construction associated with modified overhead structure under crossings will last approximately 30 to 120 working days, with an average of 60 working days; construction of station platforms will last approximately 3 months, with more complex station facilities (i.e., pedestrian overcrossing access structures) extending to 6 to 9 months; and track work will last approximately 36 months.

Operations and Maintenance

The Authority's trains will operate seven days a week between the Mountain House Community Station and the Dublin/Pleasanton Station, with all trains stopping at the Isabel and Southfront Road Stations. The first weekday train to depart the Mountain House Community Station will be timed to arrive at the Dublin/Pleasanton Station 11 minutes prior to the first BART departure at 5:06 a.m. On weekdays, trains will operate at 15-minute headways during peak periods and 45-minute headways during non-peak periods. The last westbound weekday train will depart the Mountain House Community Station at 7:45 p.m., and the last eastbound weekday train will depart the Dublin/Pleasanton Station at 8:30 p.m. Weekend and holiday headways will be 45 minutes, with trains operating from 8:00 a.m. until 8:00 p.m. Typical travel speeds between the stations situated in the I-580 median (Dublin/Pleasanton, Isabel, and Southfront Road) may reach up to 79 miles per hour (mph). In the Altamont Pass area, between the Southfront Road Station and Mountain House Community Station, average travel speeds may range between 79 mph and 25 mph, with higher speeds on straighter segments and slower speeds along curves.

Maintenance activities will include periodic inspections, scheduled maintenance of the buildings, rail structures, drainage structures, and access roads; scheduled overhaul and unexpected repairs; and maintenance of the vegetation within the corridor. Maintenance of vegetation and

disturbance of established areas will be limited to what is necessary for the safe operation of the trains. Maintenance activities will comply with mitigation and conservation measures specific to vegetation removal, restoring disturbed areas, and preventing the introduction or spread of invasive plants.

Compensatory Mitigation Framework

Portions of the proposed project will traverse areas covered by the San Joaquin County Multi-Species Habitat Conservation and Open Space Plan (SJMSCP), which is an adopted Habitat Conservation Plan that covers all of San Joaquin County, and the East Alameda County Conservation Strategy (EACCS), which is a conservation framework for eastern Alameda County. The EACCS was developed to be consistent with the conservation goals of the SJMSCP so that applicants operating in more than one regional conservation planning jurisdiction will obtain consistent permit requirements. Federally listed species jointly covered by these conservation planning documents that are being consulted on include vernal pool fairy shrimp, California tiger salamander, California red-legged frog, and San Joaquin kit fox. The FTA is not a signatory to the SJMSCP or the EACCS, and the proposed project and the FTA are not subject to the requirements within. However, these conservation planning documents include standardized avoidance and minimization measures and compensatory mitigation strategies that have been previously approved by the Service.

The mitigation framework prescribed in the EACCS and SJMSCP will be used as a basis for development of the compensatory mitigation package for the portion of the proposed project alignment within these areas. For effects on listed species that occur outside of the EACCS or SJMSCP areas, or on species that are not covered by these conservation planning documents, the Authority will provide compensatory mitigation for the loss of occupied habitat at a ratio agreed upon with the Service.

The mitigation framework in the EACCS and SJMSCP have been used to establish mitigation ratios for the proposed project-related permanent and temporary effects on species habitat. To determine the mitigation ratio for a species within the EACCS area, mitigation tables are used in conjunction with the standardized reference map. While mitigation ratios are standardized in the EACCS, impact and mitigation sites may be evaluated using score sheets of the EACCS to determine whether the habitat value is equivalent at each site. If the score sheets determine that the sites are not equivalent, adjustments may be made to the standardized mitigation ratio accordingly. Compensatory mitigation must be located within the study area of the EACCS.

Compensatory mitigation within the SJMSCP portion of the alignment is based on the area of project effects for four habitat types: agricultural habitat lands, natural lands (non-wetlands), natural lands (vernal pools), and natural lands (wetlands other than vernal pools). The SJMSCP provides standardized mitigation ratios for conversion of these habitat types from open space use. SJMSCP Index Zones, which include the Vernal Pool Zone, Southwest Zone, Central Zone, Primary Zone of the Delta, and Central/Southwest Transition Zone, are used to determine the location of compensatory mitigation; impacts within a given zone must be offset with compensatory mitigation in that same zone except as noted in the plan.

Species-specific compensatory mitigation ratios based on temporary and permanent proposed project effects on suitable habitat within the action area are provided in the Valley Link Biological Assessment. Refinement of the ratios is ongoing based on advancement of the

proposed project design and resulting impact assessment, selection of mitigation sites, and feedback provided by the Service.

Conservation Measures

General Conservation Measures

CM-1 – Worker Environmental Awareness Training: Before any equipment staging, grading, or vegetation removal in areas supporting or potentially supporting federally listed species habitat, the Authority will prepare and implement a worker environmental awareness training program. The training program will be provided to construction personnel (contractors and subcontractors) to brief them on the need to avoid effects on sensitive biological resources and the penalties for not complying with applicable state and federal laws and permit requirements. The training program will be delivered by a biologist and will include information on the life history and habitat requirements of federally listed species that could occur in the action area, the importance of protecting habitat, and the terms and conditions of the biological opinion and applicable permits. The training program will also cover general restrictions and guidelines that must be followed by construction personnel to reduce or avoid effects on sensitive biological resources during construction.

CM-2 – Protect Sensitive Natural Communities, Including Riparian Habitat, During Construction: The Authority will ensure that before site preparation a resource specialist (i.e., biologist, botanist, ecologist, or soil scientist) will clearly identify, using high-visibility construction fencing or markers (e.g., lathe or pin flags), any sensitive natural communities to be preserved, including riparian habitat, abutting the proposed project footprint. Construction will not encroach on sensitive natural communities that the resource specialist identifies to be preserved. The resource specialist will use the verified wetland delineation, soils data, and land cover data to confirm the location of sensitive natural community boundaries, based on existing conditions at the time of the avoidance marking. Exclusion fencing or markers will be installed before construction activities are initiated, and the fencing will be maintained in the section throughout the construction period. Vehicles and equipment will be parked on pavement, existing roads, and previously disturbed areas to the extent practicable. No construction activity, traffic, equipment, or materials will be permitted in fenced sensitive natural community areas to be preserved. Exclusion fencing and markers will be removed following completion of construction activities.

CM-3 – Vegetation Removal and Restoration: Vegetation removal will be limited to the designated work areas needed for access and workspace. Where possible, vegetation removal in temporary work areas will be cut above soil level to promote regrowth of established plants following construction. The Authority will restore temporarily disturbed areas to the pre-construction contours and functions to the maximum extent practicable. Exposed slopes and bare ground will be reseeded with native local grasses and shrubs to stabilize and prevent erosion. Where disturbance includes the removal of trees and woody shrubs, coordination with the appropriate permitting agency will be warranted, and planting may be required. A native hydroseed mix will be identified in the plans and specifications.

Seeding of areas that have been disturbed by the proposed project will be conducted prior to the beginning of each wet season (November 1). Seed will be applied in late fall to improve germination. If more than 30 days will elapse before the application of the seed mix, a temporary soil stabilizer will be applied to disturbed soils except in wetlands. Establishment of vegetation

cover in disturbed areas will be monitored at the end of the first growing season. The seed mix will be reapplied in the fall if adequate cover (total vegetation cover at least 30 percent) is not achieved by the end of the first growing season. Reseeded areas will be covered with a nontoxic stabilizing (i.e., tackified) mulch or seed-free hay material.

CM-4 – Prevent Introduction or Spread of Invasive Plant Species: To reduce the spread of invasive non-native plant species and minimize the potential decrease of palatable vegetation for wildlife species, the Authority will comply with Executive Order 13112, Invasive Species, which includes the following actions to avoid and minimize the spread or introduction of invasive plant species:

- Construction equipment and vehicles will be cleaned in a designated wash area before entering and exiting the construction site.
- Construction supervisors and managers will be educated about invasive plant identification and the importance of controlling and preventing the spread of invasive plant infestations.
- Small, isolated infestations will be treated with the goal of eradication.
- Surface disturbances will be minimized to complete the work.
- Native, noninvasive species or nonpersistent hybrids will be used in erosion control plantings to stabilize site conditions and prevent invasive plant species from colonizing.
- Weed-free imported erosion control materials (or rice straw) will be used in upland areas.

One year after construction, the Authority will conduct a monitoring visit to each active or previously active (within one year) improvement footprint to ensure that no new occurrences of invasive plant species not previously present have become established. Any newly established invasive species not previously present will be eradicated.

CM-5 – Implement Avoidance of Nighttime Light Disturbance: Prior to construction requiring nighttime lighting, a lighting plan will be prepared verifying how the nighttime construction lighting will be shielded and directed downward toward active construction areas to avoid exposing nocturnal wildlife to excessive glare. The lighting plan will be submitted to FTA and the Authority for review and approval prior to any work requiring nighttime lighting. The lighting plan will describe the type of lighting that will be used and maximum level of lumens to be emitted and include a schematic showing where lighting equipment will be stationed and which cardinal direction(s) the lighting equipment will face. Any nighttime lighting used for nighttime construction will be evaluated for its ability to safely light the construction work area while reducing light spill and glare. At a minimum, the construction contractor will minimize proposed project-related light and glare to the maximum extent feasible, given safety considerations, for all viewer groups. Color-corrected halide lights or balloon lights, if suitable for construction of the proposed project, will be used. Portable lights will be operated at the lowest allowable wattage and height; they will be raised to a height no greater than 20 feet, except for pedestrian bridge and flyover work. Lights will be screened and directed downward toward work activities and away from the night sky and sensitive biological areas (e.g., wetlands, ponds) to the maximum extent possible. The number of nighttime lights used will be minimized to the greatest extent possible. Directional lighting and shields will be used when night construction is necessary to prevent light intrusion into adjacent areas. Permanent lighting will be equipped with shields to focus light downward onto the appropriate subject area and to avoid having light escape beyond the proposed project footprint.

CM-6 – Implement Fugitive Dust Controls During Construction: The Authority will require the following fugitive dust control requirements to be included in construction contract specifications:

The construction contractor will implement basic and enhanced control measures at construction and staging areas to reduce construction-related fugitive dust. The following measures are based on Bay Area Air Quality Management District's (BAAQMD) California Environmental Quality Act guidelines and are in conformance with San Joaquin Valley Air Pollution Control District fugitive dust control requirements (Regulation VIII).

- Basic Fugitive Dust Control Measures.
- Exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) will be watered two times per day.
- Haul trucks transporting soil, sand, or other loose material off-site will be covered.
- Visible mud or dirt track-out onto adjacent public roads will be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.
- Roadways, driveways, and sidewalks to be paved will be completed as soon as possible. Building pads will be laid as soon as possible after grading unless seeding or soil binders are used.
- A publicly visible sign with the telephone number and the name of the person to contact at the lead agency regarding dust complaints will be posted. This person will respond and take corrective action within 48 hours. The phone number of the district will also be visible to ensure compliance.
- Enhanced Fugitive Dust Control Measures for Land Disturbance
 - Exposed surfaces will be watered at a frequency adequate to maintain minimum soil moisture of 12 percent. Moisture content can be verified by laboratory samples or moisture probe.
 - Excavation, grading, and/or demolition activities will be suspended when average wind speeds exceed 20 mph.
 - Wind breaks (e.g., trees, fences) will be installed on the windward side(s) of actively disturbed areas of construction. Wind breaks should have at maximum 50 percent air porosity.
 - Vegetative ground cover (e.g., fast-germinating native grass seed) will be planted in disturbed areas as soon as possible and watered appropriately until vegetation is established.
 - The simultaneous occurrence of excavation, grading, and ground-disturbing construction activities on the same area at any one time will be limited. Activities will be phased to reduce the amount of disturbed surfaces at any one time.
- Measures for Entrained Road Dust
 - Trucks and equipment, including tires, will be washed off prior to leaving the site.
 - Site accesses to 100 feet from the paved road will be treated with a 6- to 12-inch compacted layer of wood chips, mulch, or gravel.
 - Sandbags or other erosion control measures will be installed to prevent silt runoff to public roadways from sites with a slope greater than one percent.
 - Vehicle speeds on unpaved roads will be limited to 15 mph.
 - Unpaved roads will be watered twice daily.

CM-7 – Implementation of Water Quality/Erosion Control BMPs: The Authority will prepare a stormwater pollution prevention plan that identifies appropriate erosion and sediment

control BMPs to minimize any wind- or water-related erosion, in compliance with the General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (CA Order No. 2022-0057-DWQ). These measures will include, at a minimum, the following:

- Significant earth-moving activities will not be conducted in riparian areas within 24 hours of predicted storms or after major storms (defined as one inch of rain or more).
- Stockpiling of material in riparian areas will occur outside of the top of bank, and preferably outside of the outer riparian dripline and will not exceed 30 days.
- No debris, soil, silt, sand, bark, slash, sawdust, cement, concrete, washings, petroleum products, or other organic or earthen material will be allowed to enter or be placed where it may be washed by rainfall or runoff into waters of the U.S. or drainages. No discharge of excessively turbid water will be allowed, and all equipment will be well-maintained and free of leaks.
- No discharge of pollutants from vehicle and equipment cleaning will be allowed into any storm drains or watercourses.
- Vehicle and equipment fueling and maintenance operations will be kept at least 100 feet away from watercourses and sensitive habitats (e.g., wetlands), except at established commercial gas stations or established vehicle maintenance facilities.
- Concrete waste will be collected in washouts, and water from curing operations will be collected and disposed of. Neither will be allowed into watercourses.
- Spill containment kits will be maintained on-site during construction operations and/or staging or fueling of equipment.
- Dust control measures will include use of water trucks and dust palliatives to control dust in excavation-and-fill areas; covering temporary access road entrances and exits with rock (rocking); and covering temporary stockpiles when weather conditions require.
- Graded areas will be protected from erosion using a combination of silt fences and fiber rolls along toes of slopes or along edges of designated staging areas, and erosion control netting (e.g., jute or coir) will be used as appropriate on sloped areas. Erosion control materials that use plastic or synthetic monofilament netting will not be used in the proposed project footprint. This will include products that use photodegradable or biodegradable synthetic netting, which can take several months to decompose. Acceptable materials will include natural fibers, such as jute, coconut, twine, or other similar fibers.

CM-8 – Develop and Implement a Construction Noise and Vibration-Reduction Plan: Prior to the issuance of any demolition or construction permit for each phase of project construction, the Authority will develop a construction noise and vibration-reduction plan to minimize daytime and nighttime construction noise at nearby noise-sensitive and vibration-sensitive receptors. The plan will be developed in coordination with an acoustical consultant and the project construction contractor and will be approved by applicable agencies. The plan will include the following elements:

- A sound barrier plan that includes the design, implementation, and construction schedule of the temporary sound barriers for the construction phase of the proposed project. At a minimum, these barriers will be designed to meet the applicable impact criteria (e.g., 80 decibels, A-weighted [dBA], eight-hour time-average sound level) at all noise-sensitive receptors.
- Buffer distances and types of equipment will be selected to minimize noise impacts.

- Construction contractors will utilize equipment and trucks equipped with the best available noise control techniques, such as improved mufflers, equipment redesign, use of intake silencers, ducts, engine enclosures, and acoustically attenuating shields or shrouds, wherever feasible and practicable.
- Impact tools (e.g., jackhammers, pavement breakers) used for project construction will be hydraulically or electrically powered wherever possible to avoid noise associated with compressed air exhaust from pneumatically powered tools. Where use of pneumatic tools is unavoidable, an exhaust muffler on the compressed air exhaust and external jackets will be used where feasible to lower noise levels. Quiet procedures will be used, such as drills rather than impact equipment, whenever practicable.
- Stationary noise sources (e.g., generators) will be muffled and sited within distances from noise-sensitive receptors that will not exceed noise standards. When equipment must be sited within said distances, stationary noise sources will be wholly or partially shielded from adjacent noise-sensitive receptors such that noise levels at all noise-sensitive properties are below guidance thresholds. Pole power will be utilized at the earliest feasible point in time and to the maximum extent feasible in lieu of generators.
- “Quiet” pile-driving technology (such as auger displacement installation) will be used where feasible in consideration of geotechnical and structural requirements and conditions.
- A community affairs liaison will be designated, and a telephone hotline and email address created to reach this person, with contact information conspicuously posted around the proposed project site, in adjacent public spaces, and in construction notifications. If the community affairs liaison hotline is not staffed 24 hours per day, the hotline will provide an automatic answering feature, with date and time stamp recording, to answer calls when the phone is unattended.
- The community affairs liaison will be responsible for responding to any local complaints about construction activities associated with the proposed project. The community affairs liaison will investigate, evaluate, and attempt to resolve noise complaints related to construction activities of the proposed project. The community affairs liaison will coordinate with a designated construction contractor representative to implement the following:
 - Document and respond to each noise complaint.
 - Attempt to contact the person(s) making the noise complaint as soon as feasible and no later than one construction day.
 - Conduct a prompt investigation to determine whether construction activities related to the proposed project contribute a substantial amount of noise related to the complaint.
- If it is reasonably determined by the community affairs liaison that construction-related noise described in the complaint exceeds ambient exterior noise levels by five dBA or more at a noise-sensitive property then the community affairs liaison will identify and implement feasible reasonable measures within the vicinity of the proposed project footprint to address the noise complaint.
- Examples of reasonable measures that may be implemented within the proposed project footprint include but are not limited to:
 - Confirming construction equipment and related noise suppression devices are maintained per manufacturers’ specifications
 - Ensuring construction equipment is not idled for extended periods of time

- Evaluating feasible relocations of equipment, alternatives to specific types of equipment, or resequencing of construction activities, as appropriate, while maintaining the project schedule and safety

CM-9 – Avoid Entrapment of Federally Listed Species: To prevent inadvertent entrapment of wildlife during construction, excavated holes or trenches more than one foot deep with walls steeper than 30 degrees will be covered by plywood or similar materials at the close of each working day. Alternatively, an additional four-foot-high vertical barrier will be used to further prevent the inadvertent entrapment of wildlife. If it is not feasible to cover an excavation or provide an additional four-foot-high vertical barrier, independent of exclusionary fences, one or more escape ramps constructed of earth fill or wooden planks will be installed. Before such holes or trenches are filled, they will be thoroughly inspected for trapped animals. Culverts or similar enclosed structures with a diameter of four inches or greater that are stored at a construction site will be inspected for federally listed wildlife species before the pipe is subsequently used or moved.

CM-10 – Construction Requirements for Work Areas: The Authority will impose the following site restrictions to avoid or minimize effects on federally listed species and their habitats:

- Routes and boundaries of roadwork will be clearly marked before the start of construction or grading.
- Food and food-related trash items will be enclosed in sealed trash containers and will be properly disposed of off-site.
- No pets belonging to construction personnel will be allowed anywhere in the work area during construction.
- No firearms will be allowed in the work area except for those carried by authorized security personnel or local, state, or federal law enforcement officials.
- A spill response plan will be prepared. Hazardous materials (e.g., fuels, oils, or solvents) will be stored in sealable containers in a designated location that is at least 50 feet from any hydrologic features.

CM-11 – Vernal Pool-Endemic Species Surveys:

Identification and Avoidance of Vernal Pool Habitat: During the development of final project designs, a biologist will survey the proposed project footprint and a 250-foot buffer (where access is granted) to map suitable habitat for vernal pool-endemic species, including vernal pool fairy shrimp, and assess whether the habitat is occupied. One wet season (October 15 through May 31) survey and one dry season (June 1 through October 14) survey will be completed within three years of each other in areas with the potential to have vernal pools or other suitable habitat for hosting vernal pool fairy shrimp species. Where possible, the Authority will refine the design of the proposed project to avoid impacts to vernal pool features and the area within 250 feet of them.

CM-12 – Protect Vernal Pool-Endemic Species During Construction:

Seasonal Restrictions and Exclusion: Where vernal pools or their 250-foot buffers cannot be avoided, the following measures will be implemented to minimize disturbance to the features and surrounding area:

- All ground-disturbing activities in or within 250 feet of vernal pool habitat will either be scheduled to take place entirely during the dry season (April 15 to October 14, depending

on seasonal inundation conditions and guidance from the biologist) or will be scheduled to begin in the dry season with work during the wet season avoiding impacts to vernal pool habitat (i.e., removal of vernal pool features in the proposed project footprint must take place during the dry season). Outside of the dry season, a Service-approved biological monitor will be present when work is occurring within 250 feet of a vernal pool feature to ensure protection of the feature.

- To ensure vernal pool habitat outside the proposed project footprint is protected, the Authority or its contractor will install exclusion fencing and erosion control measures along the construction limits in areas where vernal pool features will be avoided prior to any ground disturbance. A biologist will supervise installation of the exclusion fencing. If vernal pools and their associated buffer cannot be fully avoided, a biologist may recommend a reduced buffer in consideration of site-specific conditions or the nature of nearby activities. The biologist will coordinate with the Authority and FTA on the appropriate buffer reduction and may contact the Service for input.
- When dry-season temporary access is needed across vernal pool features, wetland mats or similar temporary structures will be used year-round to minimize ground and vegetation disturbance. This restriction will not apply to existing paved or unpaved access routes, including railroad grades.

CM-13 – Compensate for Loss of Vernal Pool Habitat: The Authority will compensate for the loss of occupied vernal pool habitat in the form of conservation credits purchased at an appropriate Service-approved conservation bank in an amount consistent with either the EACCS or SJMSCP before construction activities begin for the proposed project. Compensatory mitigation credits will be purchased at an 11:1 ratio (mitigation area to effect area) in accordance with the EACCS and SJMSCP. The conservation bank, specific amount, and type of credits will be coordinated with the Service and confirmed following the final design plans.

CM-14 – Protect Host Plants for Monarch Butterfly: In order to reduce effects to Monarch butterfly, the following measures will be implemented:

Surveys and Host Plant Avoidance During Construction: If vegetation clearing is proposed to occur between March 1 and September 30, a biologist will conduct pre-construction surveys for milkweed in the proposed project footprint and within 20 feet of the proposed project footprint within 14 days before work is initiated in each area, with multiple surveys anticipated based on the construction phasing schedule. Any host plants within the proposed project footprint will be inspected for eggs or larvae, and if they are present, they will be relocated by a biologist to suitable host plants outside of the proposed project footprint. The biologist will flag any milkweed outside of the proposed project footprint but within 20 feet of the proposed project footprint for avoidance.

Milkweed Seeding: Native milkweed seeds will be included in the native seed mix as detailed in CM-3.

CM-15 – California Tiger Salamander, California Red-Legged Frog, and Western Spadefoot Surveys:

Screening Surveys and Buffers: During final project design, a biologist will conduct wet season surveys for suitable aquatic habitat for California tiger salamander, California red-legged frog, and western spadefoot to determine where these species may be present in or within 250 feet of the proposed project footprint (where access is granted). The biologist will

identify, evaluate, and flag (pin flags or 4-foot lath) suitable aquatic habitat to be preserved outside of the proposed project footprint and up to 250 feet from the edge of the proposed project footprint and flag small mammal burrows that may be used by the species within ten feet of the proposed project footprint. Where possible, the Authority will refine the design of the proposed project to avoid impacts to suitable aquatic habitat, the area within 250 feet of the habitat, and small mammal burrows.

CM-16 – Protect California Tiger Salamander, California Red-Legged Frog, and Western Spadefoot During Construction:

Seasonal Restrictions: If the construction schedule can accommodate seasonal restrictions, vegetation removal (including mowing) and ground-disturbing activities that occur within 250 feet of suitable aquatic habitat will be conducted during the dry season (June 1 to October 14). California tiger salamander, California red-legged frog, and western spadefoot, are less likely to be present in the waterbodies or moving across the upland habitats during this period.

Burrow Avoidance and Exclusion: Small mammal burrows outside of the proposed project footprint will be avoided, and a ten-foot no-disturbance buffer around the burrows will be marked with fencing at the edge of the work area. For large concentrations of burrows within the proposed project footprint that cannot be avoided, exclusion fencing may be installed around such areas prior to the wet season (October 15 to May 31) so that amphibians do not relocate to them as their aquatic habitat dries.

Flagging and Fencing: The Authority or its contractor will protect adjacent habitat areas by installing both high-visibility construction fencing and wildlife exclusion fencing (when feasible) as well as erosion control fencing at the maximum practicable distance from the work site, or if feasible, at least 250 feet from the aquatic habitat edge, wet or dry, to make it easily visible by construction crews.

Construction Monitoring and Relocation: For vegetation removal and ground-disturbing activities that must take place during the wet season (October 15 to May 31), a biologist will conduct daily surveys for federally listed amphibians in aquatic habitat each morning prior to the start of construction activities within 250 feet of suitable habitat to determine whether individuals are present. If individual amphibians are observed, a qualified biologist will relocate them to suitable habitat at least 300 feet from the construction boundary in accordance with a relocation plan approved by FTA, the Authority, and the Service prior to the start of construction occurring within 250 feet of suitable habitat. Relocation sites will be confirmed in coordination with the Service.

CM-17 – Implement Measures to Prevent Diseases: The contractor will comply with the Declining Amphibian Populations Task Force Fieldwork Code of Practice to prevent the introduction and spread of amphibian diseases and parasites. Specific measures to be implemented include:

- Remove mud, snails, algae, and other debris from nets, traps, boots, vehicle tires and all other surfaces. Rinse cleaned items with sterilized (e.g., boiled or treated) water before leaving each study site.
- Boots, nets, traps, etc., should then be scrubbed with 70 percent ethanol solution (or sodium hypochlorite 3 to 6 percent) and rinsed clean with sterilized water between study sites. Avoid cleaning equipment in the immediate vicinity of a pond or wetland.

- When working at sites with known or suspected disease problems, or when sampling populations of rare or isolated species, wear disposable gloves and change them between handling each animal. Dedicate sets of nets, boots, traps, and other equipment to each site being visited. Clean and store them separately and the end of each field day.
- When amphibians are collected, ensure the separation of animals from different sites and take great care to avoid indirect contact between them (e.g., via handling, reuse of containers) or with other captive animals. Isolation from un-sterilized plants or soils which have been taken from other sites is also essential. Always use disinfected/disposable husbandry equipment.

CM-18 – Compensate for the Loss of Aquatic Habitat for Amphibians: The Authority will compensate for the loss of aquatic breeding habitat for California tiger salamander and California red-legged frog in the form of conservation credits purchased at an appropriate Service-approved conservation bank in an amount consistent with either the EACCS or SJMSCP before construction activities begin for the proposed project. The proposed mitigation ratio is 2.5:1 (mitigation area to effect area) based on the locations of the effects and mitigation sites as defined in the EACCS or SJMSCP. The conservation bank, specific amount, and type of compensation will be coordinated with the Service, and confirmed following the final design plans. This compensation will also benefit western spadefoot by protecting aquatic habitat it may use.

CM-19 –Northwestern Pond Turtle Screening:

Nesting Area Screening Surveys: During final project design, survey of potentially occupied habitat will be conducted (where access is granted). During the nesting season (roughly May through July), screening surveys to detect northwestern pond turtle nesting activity will be concentrated within 402 meters (1,319 feet) of suitable aquatic habitat and will focus on areas along south- or west-facing slopes with bare hard-packed clay or silt soils or a sparse vegetation of short grasses or forbs. Areas where nesting is observed will be recorded and buffered by a 25-foot radius, and when possible, the buffered area will be avoided through refinements to the design of the proposed project or as described below in Seasonal Work Restrictions.

CM-20 – Protect Northwestern Pond Turtle During Construction:

Seasonal Work Restrictions: Work within known or suspected nesting locations will be limited to the period between October 1 and April 30 to avoid the nesting season (roughly May through July) and the 90-day incubation period (through September 30) when active nests and hatchlings may be present in the nest chamber.

Preconstruction Surveys: Where potentially occupied aquatic habitat is present or nesting areas identified by the nest screening surveys cannot be seasonally avoided, a biologist will survey the work site no more than 48 hours before the onset of activities for signs of northwestern pond turtles and/or northwestern pond turtle nesting activity (i.e., recently excavated nests, nest plugs) or nest depredation (partially to fully excavated nest chambers, nest plugs, scattered eggshell remains, eggshell fragments). Construction monitoring of aquatic habitats will focus on suitable aerial and aquatic basking habitat such as logs, branches, rootwads, and riprap, as well as the shoreline and adjacent warm, shallow waters where pond turtles may be present below the water surface beneath algal

mats or other surface vegetation. In areas found to or suspected to be occupied by northwestern pond turtle, the following measures will be implemented:

Work Site Exclusion: If preconstruction surveys identify occupied nests at or adjacent to work areas that cannot be seasonally avoided, wildlife exclusion fencing will be placed around the perimeter of the work area (with an appropriate buffer, if necessary, to allow construction activities up to the exclusion fencing) between October 1 and April 30 of the preceding year to avoid the nesting season (roughly May through July) and the 90-day incubation period (through September 30) when active nests and hatchlings may be present in the nest chamber. The fencing will be equipped with one-way escape features to allow any wildlife within the future work site to evacuate the area before work begins. Prior to the commencement of work, the excluded work area will be cleared by a biologist before ground-disturbing activities take place. Additionally, in areas that will not be directly impacted, exclusion buffers and nest enclosures will be installed to prevent hatchlings from entering construction areas.

Relocation: In the event that construction will fully remove an occupied aquatic habitat, a relocation plan will be developed including suitable relocation sites approved by the Service occurring within occupied habitat. The biologist will relocate individuals to the nearest predetermined relocation site identified within the relocation plan. If the Service approves of moving the animal, the biologist will be allowed sufficient time to move the northwestern pond turtle(s) from the work site before work activities begin.

CM-21 – San Joaquin Kit Fox Surveys: In areas that have the potential to support kit fox dens, which will include all areas of annual grassland and all ruderal areas adjacent to grasslands and agricultural areas, the following will be implemented:

Initial Den Surveys: During final design of the project, a biologist will conduct surveys to identify potential San Joaquin kit fox dens in the proposed project footprint and surrounding 200 feet (where access is granted), in accordance with the Service's Standardized Recommendations for Protection of the Endangered San Joaquin Kit Fox Prior to or During Ground Disturbance. Different San Joaquin kit fox den types will be defined in accordance with the 2011 Service guidance. For dens that are located within the proposed work area and cannot be avoided, a biologist will determine whether the dens are natal dens, and if they are or were recently occupied using Service guidelines. Occupied or recently occupied natal dens will be documented and reported to FTA and the Service in accordance with Service procedures. If unoccupied dens are located in the proposed project footprint, the biologists will collapse the den by and in accordance with Service procedures. The biologists will prepare a report summarizing the survey observations and results, including maps depicting the locations of potential kit fox dens—and if possible—occupancy. Where possible, the Authority will refine the design of the proposed project to avoid impacts to active natal dens and the area within 200 feet of them.

Pre-construction Den Surveys: Pre-construction surveys will be conducted in any areas identified as containing occupied or recently occupied dens during the initial den surveys. In accordance with the 2011 USFWS Standard Recommendations, pre-construction surveys are to be conducted no less than 14 days and no more than 30 days before the initiation of construction at each environmental footprint (e.g., 1 week ahead of the construction crew for linear components). Construction activities will not take place

within 100 feet of a potential den during the natal period (February 1 through September 30). If a known den or natal or pupping den is present 100 feet outside of the permanent proposed project footprint, then a 200-foot no-disturbance exclusion zone during the natal period (100-foot buffer during the non-natal period) will be established around the den, with orange construction fencing at the edge of the disturbance limits nearest the den. If a known den or natal or pupping den is present in the permanent effects zone of the proposed project footprint or within 200 feet of the proposed project footprint during the natal period (100-foot buffer during the non-natal period), the foxes will be excluded outside of the natal period (from November 1 through January 31). A summary report will be prepared by the biologists following completion of all fox avoidance and exclusion activities.

CM-22 – Protect San Joaquin Kit Fox During Construction and Operations:

Site Inspections and Entrapment Avoidance: In areas where occupied or recently occupied dens are identified during pre-construction surveys (CM-21), site inspections prior to the initiation of work each day will be completed to ensure that foxes are not present and that new dens are not being created. Any new dens will be removed using Service-approved methods described above. Discouraging denning within materials stored on-site will be done by installing fencing or elevating materials off of the ground. Pipes will be capped, and trenches will contain exit ramps to avoid entrapment during construction activities.

Restrictions and the Use of Rodenticides: During construction and operations, the use of second-generation anticoagulant rodenticides, such as brodifacoum, bromadiolone, difenacoum, and difethialone, will be avoided in San Joaquin kit fox habitat areas. Other pesticides may be used in accordance with U.S. Environmental Protection Agency guidelines.

CM-23 – Compensate for the Loss of San Joaquin Kit Fox Denning Habitat: The Authority will compensate for the loss of denning habitat for San Joaquin kit fox in the form of conservation credits purchased at an appropriate Service-approved conservation bank in an amount consistent with the EACCS (zones North, East, and Central-West) before construction activities begin for the proposed project. The proposed mitigation ratio is 3:1 (mitigation area to effect area) based on the habitat effects and guidance in the EACCS. The conservation bank, type of credits, and amount of compensation credit will be coordinated with the Service and will be confirmed following initial den surveys and final design plans.

CM-24 – Palmate-Bracted Bird's Beak Surveys: During final design of the proposed project, a biologist will conduct surveys for palmate-bracted bird's-beak in suitable habitat (all areas of wetland and grassland habitat with alkaline soils) within the proposed project footprint and a 250-foot buffer (where access is granted) of the proposed project footprint. Suitable habitat will be delineated based on desktop review, although general field surveys will be conducted in advance of focused plant surveys to refine the area of potential habitat for palmate-bracted bird's beak. The focused surveys will be conducted during an appropriate identification period in accordance with California Department of Fish and Wildlife protocols. The identification period of palmate-bracted bird's beak is anticipated to be during its reported flowering period between June and August (Jepson Flora Project 2024); a known reference population within five miles of the action area or less will be checked within one week of conducting surveys to confirm that it is identifiable at the time of survey. The results of the surveys will be documented in brief

reports or technical memoranda. If feasible, the project design will be modified to avoid impacts to palmate-bracted bird's beak, if they are discovered in the proposed project footprint.

CM-25 – Protect Palmate-Bracted Bird's Beak During Construction:

Avoidance of Palmate-bracted Bird's Beak: If palmate-bracted bird's-beak plants are found in the proposed project footprint and can be avoided, a 50-foot no-disturbance buffer will be installed around the plants. If palmate-bracted bird's-beak plants are present in the area and cannot be avoided (work within 50 feet), then a propagation and monitoring plan will be prepared by the Authority and reviewed by FTA prior to coordination with the Service, as described below. Affected areas containing palmate-bracted bird's-beak will be documented by a biologist. Documentation will include density and percent cover; abundance; key habitat characteristics, including soil type, associated species, hydrology, and topography; and photographs of pre-construction conditions.

CM-26 – Develop Palmate-Bracted Bird's Beak Propagation and Monitoring Plan:

Propagation and Monitoring Plan: If palmate-bracted bird's-beak plants are present in the proposed project footprint and cannot be avoided (work within 50 feet), then a salvage, propagation and monitoring plan will be prepared by the Authority and submitted to FTA and the Service for review and approval before construction occurs in those areas. The plan may include provisions for performance that address survivability requirements, maintenance, monitoring, implementation, and annual reporting requirements.

Monitoring and success criteria applicable to federally listed plant salvage, relocation, or propagation will require the following:

- At least two surveys must be conducted per monitoring year.
- At least 80 percent of the planted area must support vegetation composition and density consistent with reference population conditions.
- At least 80 percent of the planted area must support target species amounts similar to reference feature conditions.
- A minimum of five consecutive years of monitoring must be conducted to ensure that success criteria are met.
- Remedial actions must be performed to restore the intended ecological function of planted areas that fail to meet the success criteria for three consecutive years.
- A worker environmental training program (CM-1) will be conducted to brief construction personnel on the need to avoid effects on sensitive biological resources.

Action Area

The action area is defined in 50 CFR § 402.02, as “all areas to be affected directly or indirectly by the federal action and not merely the immediate area involved in the action.” For the proposed project, the action area is approximately 4,108 acres including the proposed project footprint with a 500-foot-wide buffer.

The proposed project footprint, consisting of the area where physical impacts from construction and maintenance are expected, encompasses approximately 848 acres. This includes staging areas, access roads used for project activities, and any areas used for operating, storing, and fueling construction equipment. The footprint includes 659 acres for the track, stations, and

layover facilities and 189 acres for the operations and maintenance facility on Schulte Road in San Joaquin County, California. The action area includes a 500-foot buffer extending out from the edge of the proposed project footprint for a total of 4,108 acres. The 500-foot distance was used to capture the farthest extent of effects generated by proposed project activities, including noise, vibration, dust, water quality, and/or geomorphological effects relevant for federally listed species.

Analytical Framework for the Jeopardy Determination

Section 7(a)(2) of the Act requires that federal agencies ensure that any action they authorize, fund, or carry out is not likely to jeopardize the continued existence of listed species. “Jeopardize the continued existence of” means to engage in an action that reasonably would be expected, directly or indirectly, to reduce appreciably the likelihood of both the survival and recovery of a listed species in the wild by reducing the reproduction, numbers, or distribution of that species (50 CFR § 402.02).

The jeopardy analysis in this biological opinion considers the effects of the proposed federal action, and any cumulative effects, on the rangewide survival and recovery of the listed species. It relies on four components: (1) the *Status of the Species*, which describes the current rangewide condition of the species, the factors responsible for that condition, and its survival and recovery needs; (2) the *Environmental Baseline*, which analyzes the current condition of the species in the action area without the consequences to the listed species caused by the proposed action, the factors responsible for that condition, and the relationship of the action area to the survival and recovery of the species; (3) the *Effects of the Action*, which determines all consequences to listed species that are caused by the proposed federal action; and (4) the *Cumulative Effects*, which evaluates the effects of future, non-federal activities in the action area on the species. The *Effects of the Action* and *Cumulative Effects* are added to the *Environmental Baseline* and in light of the status of the species, the Service formulates its opinion as to whether the proposed action is likely to jeopardize the continued existence of the listed species.

Status of the Species

Vernal Pool Fairy Shrimp

For the most recent comprehensive assessment of the species’ rangewide status, please refer to the Vernal Pool Fairy Shrimp (*Branchinecta lynchi*), Vernal Pool Tadpole Shrimp (*Lepidurus packardii*), Conservancy Fairy Shrimp (*Branchinecta conservatio*) 5-Year Review: Summary and Evaluation (Service 2024; 5-Year Review). No change in the species’ listing status was recommended in this 5- year review. Threats evaluated during that review and discussed in the final document have continued to act on the species since the 2024 5-year review was finalized, with loss of habitat being the most significant effect. Vernal pool fairy shrimp was included in the 2005 Recovery Plan for Vernal Pool Ecosystems of California and Southern Oregon (Service 2005; Recovery Plan).

California Tiger Salamander

For the most recent comprehensive assessment of the range-wide status of the California tiger salamander, please refer to the 5-Year Review for the Central California Distinct Population Segment of the California Tiger Salamander (*Ambystoma californiense*) (Service 2023a; 5-Year Review). No change in the species’ listing status was recommended in this 5-year review.

Threats evaluated in the 5-Year Review have continued to act on the species since the 2023 5-Year Review was finalized, with loss of habitat being the most significant effect.

California Red-legged Frog

For the most recent comprehensive assessment of the range-wide status of the California red-legged frog, please refer to the California Red-Legged Frog 5-Year Review: Summary and Evaluation (Service 2022; 5-Year Review). No change in the species' listing status was recommended in the December 2022 5-Year Review. Threats evaluated in the 5-Year Review have continued to act on the species since the 2022 5-Year Review was finalized, with loss of habitat being the most significant effect.

San Joaquin Kit Fox

For the most recent comprehensive assessment of the species' rangewide status, please refer to the Species Status Assessment Report for the San Joaquin Kit Fox (*Vulpes macrotis mutica*) (Service 2020b; SSA) and San Joaquin Kit Fox (*Vulpes macrotis mutica*) 5-Year Review: Summary and Evaluation (Service 2020a; 5-Year Review). No change in the species' listing status was recommended in this 5-Year Review. Threats evaluated in the 5-Year Review and SSA have continued to act on the species since the 2020 5-Year Review and SSA were finalized, with loss of habitat and infection with the mange disease being the most significant effects.

Palmate-bracted Bird's Beak

For the most recent comprehensive assessment of the range-wide status of the palmate-bracted bird's beak, please refer to the Palmate-Bracted Bird's Beak (*Cordylanthus palmatus*) 5-year Review: Summary and Evaluation (Service 2023b; 5-Year Review). No change in the bird's beak listing status was recommended in the 2023 5-year review. Threats evaluated during that review and discussed in the final document have continued to act on the species since the 2023 5-year review was finalized, with loss of habitat being the most significant effect. Since the bird's beak was listed in 1986, eight additional threats that further differentiate habitat loss effects were identified, including: urban expansion, changes in the hydrologic regime, random or catastrophic events (e.g., uncontrolled burns or unseasonable floods), road maintenance, unauthorized fill of wetlands, encroachment by exotic plants, off-road vehicle use, and livestock wallowing in seasonal ponds. While there have been continued losses of bird's beak habitat throughout the various recovery units, to date no project has proposed a level of effects for which the Service has issued a biological opinion of jeopardy for the species. Critical habitat has not been designated for the palmate-bracted bird's beak.

Environmental Baseline

Environmental baseline refers to the condition of the listed species or its designated critical habitat in the action area, without the consequences to the listed species or designated critical habitat caused by the proposed action. The environmental baseline includes the past and present impacts of all federal, state, or private actions and other human activities in the action area, the anticipated impacts of all proposed federal projects in the action area that have already undergone formal or early section 7 consultation, and the impact of state or private actions which are contemporaneous with the consultation in process. The consequences to listed species or designated critical habitat from ongoing agency activities or existing agency facilities that are not within the agency's discretion to modify are part of the environmental baseline.

The proposed project spans the Inner Coast Range and the western San Joaquin Valley from the cities of Pleasanton and Dublin at the western end to Mountain House Community in the east. Vegetation communities in the action area include a variety of upland and wetland types that are common to this region of California. In the action area, vegetation ranges from developed/landscaped and ruderal in the western portion to open grassland and wetlands in the eastern portion. Table 2 depicts the vegetation and land cover types in the action area.

Table 2: Vegetation Communities and Land Cover Types in the Action Area

General Vegetation Community/Land Cover Type	Includes Subcategories	Acreage
Agricultural	None	663
Ruderal	None	225
Developed/Landscaped	Urban	1,511 (including 1,322 of Urban)
Non-native Grassland	None	1,572
Scrub	None	1
Aquatic (Open Water)	Riverine Depressional (Ponds)	28
Riparian	Mixed Riparian Woodland Mixed Willow Riparian Scrub	5
Wetland (Potential)	Alkali Seasonal Wetland Freshwater Marsh Seasonal Wetland/ Riverine Seasonal Wetland Vernal Pool	103
Total		4,108

Vernal pool fairy shrimp

Thirteen records of this species have been documented within ten miles of the proposed project, with the nearest record approximately 0.3 miles north of I-580, and north of Northfront Road in the eastern portion of the City of Livermore. There are a cluster of records between Altamont Creek and Altamont Pass Road, north of Greenville Road and I-580. None of these occurrences overlap with the proposed project.

Based on the resources within the action area, vernal pool fairy shrimp may occur in depressional vernal habitats within the grasslands and agricultural lands in the action area, although the overall potential is considered low. Habitat-based modeling resulted in 16 acres of habitat that exhibits characteristics that could provide essential resources for the vernal pool fairy shrimp to complete life cycle functions. These potentially suitable habitat areas are located within the area north of I-580 between Fallon and Dolan Roads, north of I-580 between Portola Avenue and Springtown Boulevard, and east of Greenville Road through the Altamont Pass to the California Aqueduct. Therefore, based on the biology and ecology of the species, the Service has determined that vernal pool fairy shrimp may be present in the action area.

California tiger salamander

California tiger salamanders may occur within wetlands and water features identified within the action area that are likely to have a seasonal wet/dry cycle that can support the species. The California Natural Diversity Database has 330 records of this species within ten miles of the proposed project footprint, including six records within the proposed project footprint. Records that overlap the proposed project footprint include aquatic features at the intersection of Altamont Pass Road and Dyer Road, Cayetano Creek north of I-580, and between Dublin Road and I-580 in the western portion of the proposed project footprint. This species was not visually observed or detected in July 2024 via eDNA at any of the sampled locations, including Tassajara Creek, Arroyo Los Positas or its unnamed tributary.

Potentially suitable aquatic breeding habitat for California tiger salamander includes any natural and unnatural ponded areas in the action area, including ponded areas along seasonal drainages. Perennial waterways, such as Tassajara Creek and Arroyo Las Positas, are not expected to be potential breeding sites for this species. These features are most likely to be located north of I-580 between Fallon Road and Springtown Boulevard, and from Laughlin Road through the Altamont Pass area west of the California Aqueduct. Suitable upland habitat in the action area for California tiger salamander includes all non-native grassland, scrub, riparian habitat that falls within the California Wildlife Habitat Relationships Predicted Habitat layer for California tiger salamander, and select ruderal habitat that is adjacent to suitable aquatic/upland habitat. Therefore, California tiger salamander also could occur in grassland, riparian woodland, and wetland in the action area. Habitat-based modeling resulted in approximately 56 acres of potentially suitable breeding habitat and approximately 1,500 acres of upland habitat within the action area. Therefore, based on the biology and ecology of the species, the Service has determined that the California tiger salamander may be present in the action area.

California red-legged frog

There are 338 records of California red-legged frogs within ten miles of the proposed project, including eight records within the proposed project footprint. Records that overlap the proposed project include aquatic features at the intersection of Altamont Pass Road and Dyer Road, Cayetano Creek north of I-580, and between Dublin Road and I-580 in the western portion of the proposed project. This species was not visually observed at any of the sampled locations in July 2024, but was detected via eDNA sampling in an unnamed tributary to Arroyo Las Positas. The species was not detected in Tassajara Creek or the mainstem of Arroyo Las Positas.

Based on desktop evaluation and habitat modeling, aquatic and wetland habitats may provide suitable aquatic breeding and nonbreeding habitat, while non-native grassland, scrub, riparian, and select ruderal habitat (specifically, those not entirely encircled by developed/landscaped habitat, and which are adjacent to natural land cover types) may provide upland aestivation and dispersal habitat. Based on the resources within the action area, suitable aquatic breeding and/or nonbreeding habitat for California red-legged frog includes any of the named and unnamed streams and their tributaries, flood control channels, aqueducts (excluding the Delta-Mendota Canal and Governor Edmund G Brown California Aqueduct), and natural and unnatural ponds in the action area, including Arroyo Las Positas, Arroyo Seco, Cayetano Creek, Cottonwood Creek, Mountain House Creek, One Hundred and Fifty-five Canal, and South Bay Aqueduct. In general, those aquatic features that are inundated by winter rains and hold water for a minimum of 20 weeks are likely to support suitable aquatic breeding habitat, while aquatic features that are intermittent or hold water for less than 20 weeks will be considered aquatic nonbreeding habitat.

A waterbody's designation as breeding or nonbreeding habitat may vary depending on its position in the watershed, whether the segment is natural or channelized, whether it is managed for flood control purposes, and other characteristics of the waterbody present at that specific location. Suitable upland habitat in the action area for California red-legged frog includes all non-native grassland, scrub, and riparian habitat that falls within the California Wildlife Habitat Relationships predicted habitat layer for California red-legged frog and select ruderal habitat that is adjacent to suitable aquatic/upland habitat. Therefore, California red-legged frogs also have the potential to occur in grassland, riparian woodland, and wetland in the action area. Habitat-based modeling resulted in approximately 45 acres of potentially suitable breeding habitat and approximately 1,531 acres of upland habitat within the action area. Therefore, based on the biology and ecology of the species, the Service has determined that the California red-legged frog may be present in the action area and use it for breeding, foraging and dispersal.

San Joaquin kit fox

The San Joaquin kit fox could be found in grassland, ruderal, and agricultural land habitats in the action area. The California Natural Diversity Database has 49 records for this species within ten miles of the action area; however, none of them overlap with the proposed project footprint and only two overlap with the action area. Of all 49 records, the most recent was observed in 2002, approximately three miles north of the action area, northeast of Livermore and east of North Vasco Road. The most proximal record of occurrence (observation year 1975) for this species is within 100 feet of the proposed project footprint between the MOW facility and the Mountain House Community Station, just west of the California Aqueduct. Of the 49 records for this species within 10 miles of the proposed project footprint, 26 mention the presence of dens; however, the most recent record of denning within ten miles is from 2000. The nearest record for a den is a 1989 occurrence 1.5 miles southeast of the action area.

Based on the best available data, there are no recent occurrences of San Joaquin kit fox in the vicinity of the action area and no known dens within the proposed project footprint. As described above, active dens have not been documented within ten miles of the proposed project footprint since 2000. However, approximately 487 acres of grasslands, ruderal, and agricultural land throughout the action area may provide suitable foraging and denning habitat for the species. This potentially suitable habitat is concentrated in the eastern portion of the action area, as the western portion of the action area is heavily developed. Although the species can move large distances across the landscape, the limited number of recent occurrences in the region indicates that there is a low potential for the San Joaquin kit fox to be present within the action area. Therefore, based on the biology and ecology of the species, the Service has determined that the San Joaquin kit fox may be present in the action area and may use it for foraging and dispersal.

Palmate-bracted bird's-beak

The palmate-bracted bird's-beak has a potential to occur in alkaline grasslands and wetlands in the action area, specifically alkaline grasslands that are seasonally flooded. Nearly all occurrences of palmate-bracted bird's beak are known from either the Sacramento or San Joaquin Valley of California. The one California Natural Diversity Database occurrence located outside of these valleys was reported within ten miles of the proposed project footprint, consisting of a large population of palmate-bracted bird's-beak approximately 0.5 mile north of the proposed project footprint. This occurrence was last updated in 2022 and is located within an isolated alkali sink in Springtown Wetland Reserve north of Livermore and I-580 and west of

North Vasco Road. This occurrence has greatly declined in population size between 1990 and 2022, particularly in the eastern portion of the occupied area.

Based on the best available data, the palmate-bracted bird's-beak has a potential to occur in alkaline grasslands and wetlands in the action area, and more specifically, in alkaline grasslands that are seasonally flooded. Alkaline grasslands and wetlands are present within the action area north of I-580 between Isabella Avenue and Springtown Boulevard, Laughlin Road and Altamont Pass Road, north and south of Altamont Pass Road from Greenville Road east to the proposed project's realignment with I-580, and north and south of the alignment from the proposed project's realignment with I-580 east to the California Aqueduct. However, based on California Natural Diversity Database records of occurrence, there are no records of this species occurring within the action area. Therefore, based on the biology and ecology of the species, the Service has determined that the palmate-bracted bird's-beak may occur in the action area.

Effects of the Action

Effects of the action are all consequences to listed species or critical habitat that are caused by the proposed action, including the consequences of other activities that are caused by the proposed action. A consequence is caused by the proposed action if it would not occur but for the proposed action and it is reasonably certain to occur. Effects of the action may occur later in time and may include consequences occurring outside the immediate area involved in the action. Table 3 depicts the federally listed species effects of the proposed project for each habitat type, further described in the species specific sections below.

Table 3: Federally Listed Species Effects Determinations

<i>Species</i>	<i>Habitat Use</i>	<i>Habitat Type</i>	<i>Total Potential Habitat in the Action Area (acres)</i>	<i>Permanent Effects (acres)</i>	<i>Temporary Effects (acres)</i>	<i>Total Effects (acres)</i>
<i>Vernal pool fairy shrimp (Threatened)</i>	<i>Breeding</i>	<i>Vernal Pools</i>	<i>16</i>	<i>2</i>	<i>1</i>	<i>3</i>
<i>California tiger salamander (Threatened)</i>	<i>Breeding</i>	<i>Waters/ Wetlands</i>	<i>56</i>	<i>5</i>	<i>4</i>	<i>9</i>
<i>California tiger salamander (Threatened)</i>	<i>Dispersal/ Burrows</i>	<i>Grassland/ Upland</i>	<i>1,500</i>	<i>108</i>	<i>71</i>	<i>180</i>
<i>California red-legged frog (Threatened)</i>	<i>Breeding</i>	<i>Waters/ Wetlands</i>	<i>45</i>	<i>5</i>	<i>4</i>	<i>9</i>
<i>California red-legged frog (Threatened)</i>	<i>Dispersal/ Estivation</i>	<i>Riparian/ Upland</i>	<i>1,351</i>	<i>96</i>	<i>64</i>	<i>160</i>

<i>Species</i>	<i>Habitat Use</i>	<i>Habitat Type</i>	<i>Total Potential Habitat in the Action Area (acres)</i>	<i>Permanent Effects (acres)</i>	<i>Temporary Effects (acres)</i>	<i>Total Effects (acres)</i>
<i>San Joaquin kit fox (Threatened)</i>	<i>Foraging/Denning</i>	<i>Grassland Agricultural/Ruderal</i>	487	353	175	528
<i>Palmate-bracted bird's-beak</i>	<i>NA</i>	<i>Vernal Pools</i>	2	2	<i>NA</i>	2

Vernal pool fairy shrimp

Project Effects: The proposed project could affect vernal pool fairy shrimp through habitat loss or degradation, impacts on individuals if present in vernal pool features, and habitat fragmentation over the long term. Standard and species-specific conservation measures will be implemented to reduce potential adverse effects on the vernal pool fairy shrimp. Routine maintenance activities and operation of a new transit service will not affect vernal pool fairy shrimp because these activities will take place in areas disturbed and developed as part of the construction phase. For purposes of this analysis, the vernal pool features in the action area are assumed to be occupied until future surveys have determined them to be unoccupied.

Effects to this species and its potential habitat will be reduced through the implementation of general conservation measures consisting of protecting habitat during construction activities (CM-2), vegetation removal and restoration (CM-3), preventing invasive species entry into native habitat (CM-4), controlling dust emissions (CM-6), BMPs (CM-7), and implementing a noise and vibration-reduction plan (CM-8).

Harm of Individuals: Soil or ground disturbance in the features could incidentally remove cysts, which could be present year-round, or individual shrimp, which are active during the rainy season (typically between November and early May). Soil compaction associated with access or staging in vernal pool features could prevent cysts from hatching if they become buried too deeply in the soil or are displaced to areas without suitable aquatic habitat by being transported in the wheels of construction vehicles and equipment. Construction activities within 250 feet of vernal pool features are not expected to alter habitat conditions in a way that makes them unsuitable for cysts or individuals to survive. The loss of cysts or individuals could decrease reproductive success and reduce the size of the local population of vernal pool fairy shrimp in the action area, which will adversely affect the species.

Impacts to cysts and individuals cannot be quantified due to their difficulty of being detected and fluctuation of local populations, but it is assumed that a small quantity of cysts and individuals will be subject to take based on the estimated amount of habitat impacts (3 acres). Conservation measures identified for habitat impacts will help reduce potential impacts on cysts or individuals in adjacent habitat, but unavoidable, adverse effects are expected in the disturbed vernal pool features.

Habitat Loss or Degradation: Construction activities will involve vegetation removal and soil disturbance in and near vernal pool features, which could remove vernal pool habitat and degrade adjacent habitat. Based on habitat mapping, an estimated three acres could be disturbed

out of the potential 16 acres of vernal pool habitat in the action area. Most impacts will take place along the proposed tracks (about two acres), with some impacts associated with the Altamont MOW staging area and Mountain House LF (about one acre). Temporary impacts could occur from access and staging activities, which could temporarily modify the function and quality of the vernal pools through alteration of runoff and increased sedimentation or pollutants in the features. Permanent impacts or a loss of vernal pool habitat will result from excavation, grading, and placement of fill in the features, which will eliminate functional habitat capable of supporting vernal pool fairy shrimp. Impacts may also occur to vernal pool features within 250 feet of the proposed project footprint, such as through introduction or spread of invasive plants, changes in the soil characteristics due to alteration of hydrology and sedimentation of aquatic habitat features, changes in the available water due to diversion of surface runoff, changes in soil compaction, and exposure to construction and urban contaminants and dust.

Temporary impacts to vernal pool features will be minimized by limiting work in and near the features to the dry season (typically May to October) and requiring wetland mats or similar materials to be used when staging in or driving across the features at any time year-round. Once vernal pool features are verified in the field, they will be avoided and fenced outside of the proposed project footprint when possible (CM-2). With implementation of these measures, the soil will not become compacted or altered in a way that makes the features unsuitable for vernal pool fairy shrimp over the long term, and temporarily affected vernal pool features will continue to provide potential habitat for the species after construction. Temporary impacts are considered insignificant.

Based on the current design, the proposed tracks and a small portion of the Altamont MOW staging area and Mountain House LF will result in a permanent loss of two acres of vernal pool features potentially occupied by vernal pool fairy shrimp. This estimate is based on the overlap of the proposed project footprint with mapped habitat. The actual amount of loss will be confirmed through surveys during final design, with efforts made to minimize the loss through adjustment of design elements and protection of vernal pool features during construction (CM-11). This loss will remove potential habitat for vernal pool fairy shrimp, reducing available breeding habitat and preventing the shrimp from occupying the habitat in the future (if it is not actually occupied and is suitable). To offset this loss, compensatory mitigation is proposed to preserve or enhance similar habitat through a conservation bank (CM-12).

Standard construction practices and best management practices implemented throughout the construction phase (CM-7) and stormwater treatment measures incorporated into the design will help reduce the potential for effects in adjacent vernal pool features. Temporary dust or pollutants in stormwater runoff will not have a measurable effect on features further from the proposed project footprint, and closer features will be exposed to negligible concentrations of dust and pollutants with the measures in place. Restoration of temporarily disturbed areas with native vegetation (CM-3) will help prevent the spread of invasive plants into nearby vernal pool features. These effects are considered insignificant. Alteration of soil and hydrologic conditions in the proposed project footprint could affect adjacent vernal pool features.

Habitat Fragmentation: Based on the current design of the proposed project, the segments of the track at ground level and two facilities could fragment vernal pool habitat by removing portions of individual vernal pools or altering hydrologic patterns through soil compaction and converting native soil to track or developed areas that degrades adjacent features and disrupts vernal pool complex functions. Most of the proposed track will be along existing roads (72 percent) or on an elevated viaduct or bridge (15 percent), with the remaining 13 percent of the track at the ground

level. Based on the few expected vernal pool features or complexes in and near the proposed project footprint, long-term effects from habitat fragmentation will be minor and will not substantially reduce future available habitat or distribution of the vernal pool fairy shrimp.

California tiger salamander and California red legged frog

Project Effects: Construction of the proposed project has the potential to affect California tiger salamander and California red-legged frog individuals which may be present in the action area, through injury or mortality or through behavioral changes due to construction activities. Operation of the proposed project has the potential to effect California tiger salamander and California red-legged frog by permanently altering habitat within the proposed project footprint.

Effects to these species and their potential habitat will be reduced through the implementation of general conservation measures consisting of protecting habitat during construction activities (CM-2), preventing invasive species entry into native habitat (CM-4), controlling dust emissions (CM-6), implementing best management practices (CM-7), implementing a noise and vibration-reduction plan (CM-8), and avoiding entrapment of listed species (CM-9).

Harm of Individuals: If occupied aquatic breeding habitat or upland aestivation habitat are present in the proposed project footprint, individuals could be injured or killed if the aquatic or terrestrial habitats are removed through excavation and other ground disturbance, or if occupied burrows or refugia are collapsed on the occupants due to the movement of heavy equipment. Due to the cryptic nature of these species, which hide in underground refugia during the dry season, the exact number of individuals affected is difficult to quantify and will be difficult to observe during construction. Implementation of conservation measures will reduce adverse effects to these amphibian species as a result of construction and operation of the proposed project.

Aside from the potential for injury, effects of construction noise and vibration (e.g., equipment involved in site preparation, grading, and earthwork and the installation of the rail tracks and infrastructure) and nighttime lighting on the California tiger salamander and California red-legged frog could occur in the immediate area of construction. While there are currently no criteria for assessment of impacts from vibration on wildlife, during construction some activities may cause perceptible ground-borne vibration, most notably pile driving for structures and vibratory compaction for ground improvements. Potential vibration impacts are expected to be limited to annoyance effects, or may temporarily reduce foraging by masking the noise or vibrations produced by prey. Nighttime lighting associated with construction of the proposed project could also disturb individuals or could increase predation by predators that are visually oriented if the lighting is in proximity to suitable aquatic resources. These effects will be minimized through the implementation of the conservation measures.

There is also potential for effects to individuals through changes to water quality during construction due to sedimentation, as well as other potential effects from contaminants and dust. Dust settling on the skin of amphibians could affect osmotic regulation, although this has not been well-studied. Implementation of best management practices and conservation measures (CM-6 and CM-7) will prevent adverse effects from sedimentation and dust.

Equipment that was recently used in wetlands or waterbodies could also harbor amphibian pathogens if they are not properly cleaned. Disease-causing agents for amphibians (pathogens and parasites) may be transmitted between habitats on the hands, footwear, or equipment of

construction/fieldworkers. Implementation of CM-17 will reduce the potential for the proposed project to spread amphibian disease to a discountable level.

Habitat Loss or Degradation from Construction: The proposed project will result in permanent modification and temporary effects to grassland, ruderal, and agricultural land cover that may provide upland estivation, burrowing, and/or dispersal habitat.

For California tiger salamanders, the proposed project is anticipated to result in permanent modification to approximately five acres of potential aquatic breeding habitat and approximately 108 acres of upland dispersal/burrowing habitat. Permanent modification of potential aquatic breeding habitat will result from construction of the rail trackway (3.3 acres); stations, MOW facilities, and other (0.8 acre); retaining walls (0.4 acre); and roadway widening/access road (0.5 acre). Permanent modification of potential upland dispersal/burrowing habitat will result from construction of the rail trackway (38.1 acres); stations, MOW facilities, and other (28.5 acres); retaining walls (26 acres); and roadway widening/access road (15.4 acres). The proposed project is anticipated to result in temporary impacts to approximately four acres of potential aquatic breeding habitat and approximately 71 acres of upland dispersal/burrowing habitat due to temporary staging and clearing.

For California red-legged frog, the proposed project is anticipated to result in permanent modification to approximately five acres of potential aquatic breeding habitat and approximately 96 acres of upland dispersal/estivation habitat. Permanent modification of potential aquatic breeding habitat will result from construction of the rail trackway (3.2 acres); stations, MOW facilities, and other (one acre); retaining walls (0.3 acre); and roadway widening/access road (0.5 acre). Permanent modification of potential upland dispersal/estivation habitat will result from construction of the rail trackway (29.9 acres); stations, MOW facilities, and other (24.5 acres); retaining walls (26.4 acres); and roadway widening/access road (15.2 acres). The proposed project is anticipated to result in temporary impacts to approximately four acres of potential aquatic breeding habitat and approximately 64 acres of upland dispersal/estivation habitat due to temporary staging and clearing.

Movement and Habitat Fragmentation: Based on the preliminary design, approximately 72 percent of the proposed project aligns with the existing freeway, which already presents a barrier to these species. Additionally, 15 percent of the proposed project will be constructed on viaduct and/or bridge structures, allowing for unimpeded movement beneath the tracks in these areas. The viaducts are concentrated where the proposed project swings away from the I-580 corridor through the Altamont Pass area. However, the proposed project may still contribute to creating a partial impediment to dispersal and movement between aquatic bodies by the installation of retaining walls, impeding movement of the California tiger salamander and California red-legged frog across portions of the action area. However, retaining walls will be installed along steep hill slopes, not valley bottoms or drainages that are more likely to be movement corridors for these species (the location of many of the viaducts). Where the track is installed at grade, it is anticipated that there will be sufficient gaps between the rail and gravel bed to permit amphibians to pass underneath the rail. It is also anticipated that California red-legged frogs will be capable of jumping over the rail, if needed. The sections of the proposed project that include viaducts will also allow for unimpeded movement of amphibians. Due to these considerations, the proposed project's effect on landscape permeability for these amphibian species will be minimal.

Habitat Degradation from Operations: The effects of nighttime lighting on the California tiger salamander and California red-legged frog will be limited to the immediate area of the proposed project footprint. Nighttime lighting associated with operations or maintenance of the proposed project could disturb individuals or could increase predation by predators that are visually oriented if the lighting is in proximity to suitable aquatic resources. This potential effect will be minimized through implementation of CM-5.

While habituation to transportation noise, such as at airports, highways, and urban centers, is commonly seen in some species, the effect of trainset noise and vibration on amphibians is unclear as it has not been thoroughly studied. The proposed project will operate an electric train, which will generate less noise and vibration compared to diesel trains. For the majority of the proposed project's alignment, the Valley Link train will be operated in close proximity to I-580 and/or the Union Pacific Railroad (UPRR) freight corridor, both of which are significant existing sources of noise and vibration. As a result of these factors, the proposed project's contribution to noise and vibration is expected to be minimal and not affect aquatic habitats in the action area. Additionally, operational maintenance activities could result in habitat modification associated with vegetation maintenance and the maintenance of drainage structures (such as the clearing of clogged culverts). This effect will be minimized by timing such activities to occur outside of the wet season (CM-16) when amphibians may be dispersing across the landscape surface.

There is potential for effects to water quality during operation as a result of sedimentation as well as other potential effects from contaminants and dust that may enter aquatic habitats. The proposed project will operate an electric train, which does not produce any exhaust or particulates, aside from potential brake dust. However, the train will utilize regenerative braking systems, using the trains motors to facilitate braking. As a result, the amount of brake dust or other particulates generated is expected to be minimal.

Due to the anticipated impacts to potentially occupied aquatic breeding and upland aestivation and dispersal habitat within the action area, the proposed project is anticipated to adversely affect California tiger salamander and California red-legged frog both through habitat modification and the potential for individuals to be killed by construction while estivating in burrows and other subterranean features. However, these effects will be minimized by the conservations measures and suitable habitat will still exist in the project area after the project is constructed. The rail line will not create a new barrier to dispersing amphibians and the preserved habitat credits at a nearby conservation bank will help offset the permanent loss of habitat from the project.

San Joaquin kit fox

Project Effects: Construction of the proposed project has the potential to affect San Joaquin kit fox that may be present in the action area through injury or mortality, or through behavioral changes due to construction activities. Operation of the proposed project has the potential to affect San Joaquin kit fox by permanently altering habitat within the proposed project footprint. Effects to the species' potential habitat will be reduced through the implementation of the proposed conservation measures.

Harm of Individuals: If occupied dens are present in the proposed project footprint, individuals could be injured or killed if the den is collapsed on the occupants. There is a low but not entirely discountable potential for occupied dens to be present in the action area. With implementation of CM-21, pre-construction surveys will be completed to ensure that occupied dens are not

impacted by construction activities. As a result, injury or mortality of San Joaquin kit fox is not expected to occur.

San Joaquin kit fox within the action area may have behavioral reactions to construction noise and the presence of heavy equipment and personnel during construction. However, resident kit foxes have been documented to continue utilizing construction sites and other disturbed areas despite the intensive construction activities causing noise and vibration on the site. Therefore, effects caused by construction noise and vibration (e.g., equipment involved in site preparation, grading, and earthwork and the installation of the rail tracks and infrastructure) are expected to be limited and not result in the permanent displacement of individuals, if they are present.

In addition, the use of pesticides to control rodents and other pests may impact the species directly through poisoning or indirectly through reduction of prey abundance. However, available data indicates that San Joaquin kit fox do not regularly use the action area, and aside from the areas within the proposed project footprint, potential dens within the portion of the action area outside of the proposed project footprint will not be disturbed. The use of second-generation anticoagulant rodenticides will be avoided in potential habitat as stated in CM-22, preventing the potential for secondary poisoning of kit fox that may be present.

Habitat Loss or Degradation from Construction: The proposed project will result in permanent modification to approximately 353 acres of grassland, ruderal, and agricultural land cover that may provide foraging habitat and denning opportunities. Permanent modification of potential habitat will result from construction of the rail trackway (41.2 acres); stations, MOW facilities, and other (265 acres); retaining walls (27.1 acres); and access roads and roadway widening (19.7 acres). Habitat loss due to the proposed project will occur along a narrow corridor and not appreciably alter habitat availability or suitability at the regional level.

The proposed project is anticipated to result in temporary effects to approximately 175 acres of potential foraging and denning habitat due to construction staging and clearing. All temporarily effected areas will be restored through reseeded (CM-3) and will be suitable habitat for San Joaquin kit fox within one growing season of restoration. Additional general conservation measures to reduce or avoid effects include protecting habitat during construction activities (CM-2), reducing lighting effects (CM-5), controlling dust emissions (CM-6), implementing general construction BMPs (CM-7), implementing a noise and vibration-reduction plan (CM-8), and avoiding entrapment of listed species (CM-9).

During construction, the proposed project may impact potential den sites, limiting den availability in the action area. Although kit foxes are able to dig new dens, the creation of a network of dens required to successfully occupy an area may take months or even years. Lower den availability can decrease the use of an area by individuals, which in turn further reduces the distribution of the species.

Movement and Habitat Fragmentation: The grassland, ruderal, and agricultural land cover types within the action area support prey populations as well as a means for the species to move and disperse across the landscape. Despite the lack of recent documented occurrences within the action area, the ongoing, incremental loss and fragmentation of potential habitat for the species presents a risk to the San Joaquin kit fox, and the potential habitat within the action area may be important to the species to maintain the connectivity of occupied areas. The majority of the rail track will be unfenced and present a minimal obstacle to the species. Fragmentation will be minimal as the at-grade tracks are not expected to present a movement barrier, and

approximately 15 percent of the proposed project will be on viaduct and/or bridge structure allowing for movement without crossing the tracks. The viaducts are concentrated where the proposed project swings away from the I-580 corridor through the Altamont Pass area. In addition to movement under viaducted areas, San Joaquin kit fox will also be able to cross over at-grade tracks unimpeded, so the proposed project is not expected to affect landscape permeability for the species.

Based on the preliminary design, approximately 72 percent of the proposed project aligns with the existing freeway, which already presents a barrier to this species. This is particularly true for approximately half of the proposed project footprint that is west of Greenville Road, where heavy development has already occurred along the I-580 corridor. Past and continuing habitat fragmentation and degradation within the range of the species can result in lower suitability of the remaining habitat for the species. Similarly, reducing the occupancy of habitat reduces routine maintenance of existing dens, which causes them to begin to deteriorate and eventually disappear due to lack of use, resulting in lowered den availability.

Habitat Degradation from Operations: Nighttime lighting associated with operations or maintenance of the proposed project could disturb individuals or could increase predation by predators that are visually oriented if the lighting is in proximity to suitable aquatic resources. This potential effect will be minimized through implementation of CM-5.

The proposed project will permanently alter 353 acres of habitat potentially supporting occasional foraging and denning opportunities for the species. However, prey species such as ground squirrels, gophers, and mice are often seen occupying areas directly adjacent to railways and other developed areas, indicating that operation of the proposed project will not decrease the regional availability of potential prey for the species.

Based on the lack of recent documented occurrences within ten miles of the action area and the measures to be implemented for avoidance of natal dens, and the measures implemented to collapse dens only when they are unoccupied, injury or mortality of San Joaquin kit fox is not expected to occur. Since the at-grade portions of the rail track will not be fenced, and much of the rail will be built adjacent to existing barriers such as I-580, fragmentation of potential San Joaquin kit fox habitat will have an insignificant effect on any population, if it is present. The proposed project will permanently alter 353 acres of habitat potentially supporting occasional foraging and denning opportunities for the species. This habitat loss will occur along a narrow corridor and not appreciably alter habitat availability or suitability at the regional level for the species.

Palmate-bracted bird's-beak

Project Effects: The proposed project may result in removal of individuals, permanent and temporary effects to alkaline grassland and wetland habitats that are suitable for palmate-bracted bird's-beak, and habitat degradation. Locating the proposed project infrastructure adjacent to existing transportation infrastructure, utility corridors, and other development will minimize potential impacts to the palmate-bracted bird's-beak.

Harm to Individuals: If present within the project footprint, the proposed project may result in removal of individual plants and or seeds. Implementation of CM-24 will identify locations where this plant and/or seed occur within the proposed project footprint and surveys will be conducted during final project design, and if present, avoidance of removal of this species will be

considered (CM-25). If unavoidable, effects will be minimized to the extent feasible, and CM-26 (implementation of propagation and monitoring plan) will be implemented.

Habitat Loss or Degradation: If this species occurs within the action area, potential effects may include habitat degradation from invasive plants, sedimentation of wetland habitat features, grading or other ground disturbance that results in changes in surface runoff patterns, habitat fragmentation, and exposure to urban contaminants and dust. Due to the potential for effects, any ground-disturbing work occurring within 50 feet of palmate-bracted bird's beak is assumed to potentially affect palmate-bracted bird's beak. However, effects of the proposed project, particularly invasive species and changes in surface runoff patterns, could potentially be realized up to 250 feet from ground disturbance.

There is potential for effects to water quality during construction due to sedimentation as well as other potential effects from contaminants and dust. Implementation of general conservation measures will prevent adverse effects from sedimentation and dust including protecting habitat during construction activities (CM-2), preventing invasive species entry into native habitat (CM-4), controlling dust emissions (CM-6), and construction BMPs (CM-7).

The proposed project is anticipated to result in permanent modification to approximately two acres of potential vernal pool habitat that may support palmate-bracted bird's beak. Direct permanent modification of potential habitat will result from construction of the rail trackway (one acre); stations, MOW facilities, and other (0.8 acre); and retaining walls (0.2 acre). However, it is anticipated effects to potential habitat will be reduced through the implementation of conservation measures. Permanent changes to ground topography or permeability within the drainage areas of vernal features may result in changes to the extent and duration of flooding within that feature, which may affect habitat suitability for this species.

There is potential for effects to water quality during operation as a result of sedimentation as well as other potential effects from contaminants and dust that may enter aquatic habitats. The proposed project will operate an electric train, which does not produce any exhaust or particulates, aside from potential brake dust. However, the train will utilize regenerative braking systems, using the train's motors to facilitate braking. As a result, the amount of brake dust or other particulates generated is expected to be insignificant.

Within the action area, but outside of areas where habitat modification will occur, potential effects will include habitat degradation from the introduction or spread of invasive plants; changes in the soil regime due to alteration of hydrology and sedimentation of vernal pool features; changes in the available water due to diversion of surface runoff; and soil compaction. These effects will likely result in the decrease of suitability and functionality of vernal pool habitat over time and impair or eliminate them as a functional habitat that may support the species. Effects will be reduced or avoided with the implementation of conservation measures including protecting habitat during construction activities (CM-2), preventing invasive species entry into native habitat (CM-4), controlling dust emissions (CM-6), managing water quality and runoff from construction operations, and construction BMPs (CM-7) and species-specific conservation measures (CM-25 and CM-26).

Cumulative Effects

Cumulative effects include the effects of future state, Tribal, local, or private actions that are reasonably certain to occur in the action area considered in this biological opinion. Future federal

actions that are unrelated to the proposed action are not considered in this section because they require separate consultation pursuant to section 7 of the Act. During this consultation, no specific non-federal projects are planned in the action area, but various development and road improvement projects may take place over the same timeframe as the proposed project. The City of Dublin established the Fallon Road Economic Development Zone on approximately 285 acres east of Fallon Road adjacent to I-580. This zone will accommodate development of industrial parks, general commercial/campus offices, and medium density residential (City of Dublin 2024), although specific projects have not been identified at this time. The City of Livermore established the Local Roadway Safety Plan & Vision Zero to reduce fatalities and severe injuries on city roadways and intersections. Individual projects have not currently been identified as part of this plan (City of Livermore 2024), but some may overlap with the action area. Private housing and businesses and infrastructure projects may also take place over the next several years.

These other projects may result in the incremental degradation of habitat for federally listed species, including both upland and wetland areas. Such degradation may include habitat fragmentation, increases in impervious surfaces resulting in altered hydrology of areas with wetlands, or the conversion of natural habitats to urban or developed areas. For projects that are entirely lacking a federal nexus, it is likely that compliance with the California Environmental Quality Act will require other projects in the action area to implement measures to reduce potentially significant impacts to federally listed species or offset habitat loss.

In the portions of the action area where future development is expected (the Dublin-Pleasanton, Livermore, and Mountain House areas), the proposed project footprint is parallel to and in close proximity to I-580 and other developed areas, which will help reduce any cumulative contribution to habitat fragmentation and degradation in the region.

Conclusion

After reviewing the current status of vernal pool fairy shrimp, California tiger salamander, California red-legged frog, San Joaquin kit fox, and palmate-bracted bird's-beak, the environmental baseline for the action area, the effects of the proposed project, and the cumulative effects, it is the Service's biological opinion that the Valley Link Commuter Rail Project, as proposed, is not likely to jeopardize the continued existence of the vernal pool fairy shrimp, California tiger salamander, California red-legged frog, San Joaquin kit fox, and palmate-bracted bird's-beak. The Service reached this conclusion because the project-related effects to the species, when added to the environmental baseline and analyzed in consideration of all potential cumulative effects, will not rise to the level of precluding recovery or reducing the likelihood of survival of these species. This conclusion is based on the very minimal proposed impacts to habitat over the construction duration, project-level best management practices, the compensatory mitigation proposed, and conservation measures to avoid and minimize adverse effects for each species.

INCIDENTAL TAKE STATEMENT

Section 9 of the Act and federal regulation pursuant to section 4(d) of the Act prohibit the take of endangered and threatened species, respectively, without special exemption. Take is defined as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect, or to attempt to engage in any such conduct. Harass is defined by Service regulations at 50 CFR 17.3 as an intentional or negligent act or omission which creates the likelihood of injury to wildlife by annoying it to such

an extent as to significantly disrupt normal behavior patterns which include, but are not limited to, breeding, feeding, or sheltering. Harm is defined by the same regulations as an act which actually kills or injures wildlife. Harm is further defined to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing essential behavior patterns, including breeding, feeding, or sheltering. Incidental take is defined as take that is incidental to, and not the purpose of, the carrying out of an otherwise lawful activity. Under the terms of section 7(b)(4) and section 7(o)(2), taking that is incidental to and not intended as part of the agency action is not considered to be prohibited taking under the Act provided that such taking is in compliance with the terms and conditions of this Incidental Take Statement.

The measures described below are non-discretionary and must be undertaken by FTA and the Authority so that they become binding conditions of any grant or permit issued to the applicant, as appropriate, for the exemption in section 7(o)(2) to apply. FTA and the Authority have a continuing duty to regulate the activity covered by this incidental take statement. If FTA and the Authority (1) fails to assume and implement the terms and conditions or (2) fails to require the applicant to adhere to the terms and conditions of the incidental take statement through enforceable terms that are added to the permit or grant document, the protective coverage of section 7(o)(2) may lapse. In order to monitor the impact of incidental take, FTA and the Authority must report the progress of the action and its impact on the species to the Service as specified in the incidental take statement [50 CFR §402.14(i)(3)].

Listed Plants

Sections 7(b)(4) and 7(o)(2) of the Act generally do not apply to listed plant species; however, limited protection of listed plants is provided at section 9(a)(2) to the extent that the Act prohibits the removal and reduction to possession of federally listed plants or the malicious damage of such plants on areas under Federal jurisdiction, or the destruction of listed plants on non-Federal areas in violation of State law or regulation or in the course of a violation of a State criminal trespass law. Also, “take” as defined in section 3(19) of the Act does not apply to listed plant species; thus, this Incidental Take Statement does not include discussion of covered plants.

Amount or Extent of Take

Vernal pool fairy shrimp

The incidental take of vernal pool fairy shrimp anticipated for the proposed activities could result from habitat loss or degradation, impacts on individuals if present in vernal pool features, and habitat fragmentation over the long term. Proposed activities could result from the destruction of the cysts from the ground disturbance within pools. The life stage affected by this action will be the listed vernal pool fairy shrimp's cysts, which are embedded in the soil of the pools they occupy. Due to the fact that it is not possible to know how many cysts are in the soil of any storm drain feature, or how many cysts will occupy any storm drain feature later in time, the Service cannot quantify the total number of listed vernal pool fairy shrimp cysts that we anticipate will be taken as a result of the proposed action. In instances in which the total number of cysts anticipated to be taken cannot be determined, the Service may use the acreage of habitat impacted as a surrogate; since the take of cysts anticipated will result from the destruction or temporary alteration of the listed vernal pool fairy shrimp's habitat, the quantification of habitat acreage serves as a direct surrogate for the listed vernal pool fairy shrimp that will be lost. Therefore, the Service anticipates take incidental to this project as the three acres of vernal pool

fairy shrimp habitat that will be disturbed by construction activities. Reinitiation will be triggered if the amount of incidental take is exceeded by the FTA and the Authority. Upon implementation of the Reasonable and Prudent Measures, incidental take associated with the proposed activities in the form of harm, harassment, capture, injury, and death of vernal pool fairy shrimp caused by the proposed project will become exempt from the prohibitions described under section 9 of the Act.

California tiger salamander

The Service anticipates that incidental take of the California tiger salamander will be difficult to detect because when these amphibians are not located in breeding habitat, they inhabit the burrows of ground squirrels, other rodents, or other microhabitat features. It may be difficult to locate these species due to their cryptic appearance and behavior; the sub-adult and adult animals may be located a distance from breeding habitat; dispersal and migration occurs during rainy nights in the fall, winter, or spring; and the finding of an injured or dead individual is unlikely because of their relatively small body size. Losses of this species also may be difficult to quantify due to seasonal fluctuations in numbers, random environmental events, changes in water regimes at breeding sites, or other environmental disturbances. In instances when take is difficult to detect, the Service may estimate take in numbers of California tiger salamander per acre of habitat lost or degraded as a result of the action as a surrogate measure for quantifying individuals. Therefore, the Service anticipates that all California tiger salamanders inhabiting the approximately 188 acres of habitat within the project will be subject to incidental take in the form of non-lethal harm, harassment, and capture over the construction duration. The Service anticipates that a maximum of three (3) California tiger salamander individuals over the construction duration will be killed or injured as a result of project-related activities. Reinitiation will be triggered if the amount of incidental take is exceeded by FTA and the Authority. Upon implementation of the Reasonable and Prudent Measures, incidental take associated with the proposed action in the form of harm, harassment, capture, injury, and death of California tiger salamanders caused by the project will become exempt from the prohibitions described under section 9 of the Act.

California red-legged frog

The Service anticipates that incidental take of the California red-legged frog will be difficult to detect because of their life history, biology, and ecology. Specifically, California red-legged frogs are difficult to locate due to their cryptic appearance and behavior; they may be located a distance from aquatic features; and the finding of an injured or dead individual is unlikely because of their relatively small body size, the large amount of project ground disturbance expected, and the possibility of carcasses being eaten by scavengers. Therefore, the Service anticipates that all California red-legged frogs inhabiting the approximately 169 acres of habitat within the project will be subject to incidental take in the form of non-lethal harm, harassment, and capture over the construction duration. The Service anticipates that a maximum of three (3) California red-legged frog individuals over the construction duration will be killed or injured as a result of project-related activities. Reinitiation will be triggered if the amount of incidental take is exceeded by the FTA and the Authority. Upon implementation of the Reasonable and Prudent Measures, incidental take associated with the proposed action in the form of harm, harassment, capture, injury, and death of the California red-legged frogs caused by the project will become exempt from the prohibitions described under section 9 of the Act.

San Joaquin kit fox

The Service anticipates that incidental take of the San Joaquin kit fox will be difficult to detect due to the low number of individuals in the action and area, the relatively small size of the species, and the life history of the species where it may not be seen since it is usually only active at night. Therefore, the Service anticipates that all San Joaquin kit foxes in approximately 353 acres will be subject to incidental take in the form of harassment due project activities. Upon implementation of the Reasonable and Prudent Measures, incidental take associated with the proposed action in the form of harassment of the San Joaquin kit fox caused by the project will become exempt from the prohibitions described under section 9 of the Act.

Effect of the Take

In the accompanying biological opinion, the Service determined that this level of anticipated take is not likely to result in jeopardy to the vernal pool fairy shrimp, California tiger salamander, California red-legged frog, San Joaquin kit fox.

Reasonable and Prudent Measures

All necessary and appropriate measures to avoid or minimize effects on the vernal pool fairy shrimp, California tiger salamander, California red-legged frog, and San Joaquin kit fox resulting from implementation of this project have been incorporated into the project's proposed conservation measures. Therefore, the Service believes the following reasonable and prudent measure is necessary and appropriate to minimize incidental take of the vernal pool fairy shrimp, the California tiger salamander, the California red-legged frog, and the San Joaquin kit fox:

1. All conservation measures, as described in the *Description of the Proposed Action* section of this biological opinion, shall be fully implemented, and adhered to. Further, this reasonable and prudent measure shall be supplemented by the *Terms and Conditions* below.

Terms and Conditions

In order to be exempt from the prohibitions of section 9 of the Act, the FTA and the Authority must ensure compliance with the following terms and conditions, which implement the reasonable and prudent measure described above. These terms and conditions are nondiscretionary.

1. FTA and the Authority will include full implementation and adherence to the conservation measures as a condition of any permit or contract issued for the proposed project.
2. FTA and the Authority will require that all personnel associated with this project are made aware of the conservation measures and the responsibility to implement them fully.
3. The FTA and the Authority should acquire, preserve, and manage lands (as described in the project description) containing the vernal pool fairy shrimp, California tiger salamander, California red-legged frog, and San Joaquin kit fox within 18 months of the issuance of this biological opinion, preferably prior to the start of construction.

4. The FTA and the Authority will submit relocation plans to the Sacramento Fish and Wildlife Office at least 30 days before construction.
5. If requested, the applicant will ensure the Service or their authorized agents can examine the action area for compliance with the Description of the Proposed Action, Conservation Measures, and Terms and Conditions of this biological opinion before, during, or after project completion.

Monitoring:

1. FTA or the Authority will immediately contact the Service's Sacramento Fish and Wildlife Office (SFWO) at (916) 414-6623 to report direct encounters between listed species and project workers and their equipment whereby incidental take in the form of harassment, harm, injury, or death occurs. If the encounter occurs after normal working hours, FTA or the Authority will contact the SFWO at the earliest possible opportunity the next working day. When injured or killed individuals of the listed species are found, FTA or the Authority will follow the steps outlined in the Salvage and Disposition of Individuals section below.
2. For those components of the action that will require the capture and relocation of any listed species, FTA or the Authority will immediately contact the SFWO at (916) 414-6623 to report the action. If capture and relocation need to occur after normal working hours, FTA or the Authority will contact the SFWO at the earliest possible opportunity the next working day.
3. For those components of the action that will result in habitat degradation or modification whereby incidental take in the form of harm is anticipated, FTA or the Authority will provide a precise accounting of the total acreage of habitat impacted to the Service after completion of construction.
4. To avoid transferring disease or pathogens while handling amphibians, qualified biologists must follow the recommendations from the Declining Amphibian Population Task Force's Code (https://www.fws.gov/southwest/es/NewMexico/documents/SP/Declining_Amphibian_Task_Force_Fieldwork_Code_of_Practice.pdf).
5. A post-project completion report will be provided to the Service documenting with photographs the successful restoration of all habitats temporarily disturbed within the action area and any observations of listed species within the action area.

Salvage and Disposition of Individuals

Injured listed species must be cared for by a licensed veterinarian or other qualified person(s), such as the qualified approved biologist. Dead individuals must be sealed in a resealable plastic bag containing a paper with the date and time when the animal was found, the location where it was found, and the name of the person who found it, and the bag containing the specimen frozen in a freezer located in a secure site, until instructions are received from the Service regarding the disposition of the dead specimen. The Service contact person is the Coast Bay Division Supervisor at the Sacramento Fish and Wildlife Office at (916) 414-6623.

CONSERVATION RECOMMENDATIONS

Section 7(a)(1) of the Act directs federal agencies to utilize their authorities to further the purposes of the Act by carrying out conservation programs for the benefit of endangered and threatened species. Conservation recommendations are discretionary agency activities to minimize or avoid adverse effects of a proposed action on listed species or critical habitat, to help implement recovery plans, or to develop information. The Service recommends the following actions:

1. Observations of listed species should be submitted to the California Natural Diversity Database (<https://wildlife.ca.gov/Data/CNDBD>) within sixty days of observation. A copy of the reporting form and a topographic map clearly marked with the location the animals were observed should also be provided to the Service.
- In order for the Service to be kept informed of actions minimizing or avoiding adverse effects or benefiting listed species or their habitats, the Service requests notification of the implementation of any conservation recommendations.

REINITIATION—CLOSING STATEMENT

This concludes formal consultation on the Valley Link Commuter Rail Project. As provided in 50 CFR §402.16(a), reinitiation of consultation is required and will be requested by the federal agency or by the Service where discretionary federal involvement or control over the action has been retained or is authorized by law, and:

- 1) If the amount or extent of taking specified in the incidental take statement is exceeded;
- 2) If new information reveals effects of the action that may affect listed species or critical habitat in a manner or to an extent not previously considered;
- 3) If the identified action is subsequently modified in a manner that causes an effect to the listed species or critical habitat that was not considered in the biological opinion; or written concurrence, or
- 4) If a new species is listed or critical habitat designated that may be affected by the identified action.

If you have any questions regarding this biological opinion, please contact Bridget Giblein, Fish and Wildlife Biologist (bridget_giblein@fws.gov) or at (916) 414-6624 or Ryan Olah, Coast Bay Division Supervisor (ryan_olah@fws.gov), at (916) 414-6623.

Sincerely,

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AMBER AGUILERA
Date: 2025.05.01
09:15:21 -07'00'

Amber Aguilera
Acting Field Supervisor

cc:
Kathleen Kelly, U.S. Department of Transportation, Los Angeles, CA

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