United States Department of the Interior
U.S. FISH AND WILDLIFE SERVICE
Ecological Services
Carlsbad Fish and Wildlife Office
2177 Salk Avenue, Suite 250
Carlsbad, California 92008

In Reply Refer to:
2023-0113961-S7-F-SD

March 5, 2024
Sent Electronically

David Nagy
Senior Environmental Planner
California Department of Transportation – District 11
4050 Taylor Street, MS-120
San Diego, California 92110

Attention: Rush Abrams, Biologist

Subject: Biological Opinion for the SR-79 Asset Management Project, San Diego County, California

Dear David Nagy:

This document was prepared in accordance with section 7 of the Endangered Species Act of 1973 (Act), as amended (16 U.S.C. 1531 *et seq.*) in response to correspondence from the California Department of Transportation (Caltrans) dated November 8, 2023, requesting formal consultation for the State Route 79 (SR-79) Asset Management Project (project) and its potential effects on the federally endangered arroyo toad {a. southwestern t. [*Anaxyrus californicus* (*Bufo microscaphus c.*)]; arroyo toad}. The project is receiving Federal funding through the Federal Highway Administration (FHWA). The California Department of Transportation (Caltrans) has assumed FHWA's responsibilities under the Act for this consultation in accordance with Renewed 23 U.S.C. 326 and 23 U.S.C. 327 and as described in the National Environmental Policy Act assignment Memorandum of Understanding between FHWA and Caltrans (effective October 1, 2012). We initiated consultation on November 8, 2023, the day we received your request for consultation.

Based on conservation measures committed to by Caltrans, we concur with your determination that the proposed project is not likely to adversely affect designated critical habitat for the arroyo toad and is not likely to adversely affect the federally endangered least Bell's vireo (*Vireo bellii pusillus*), southwestern willow flycatcher (*Empidonax traillii extimus*), Quino checkerspot butterfly (*Euphydryas editha quino*), as well as the federally threatened coastal California gnatcatcher (*Polioptila californica californica*) and Stephen's kangaroo rat (*Dipodomys stephensi*). These determinations are described in the Appendix. Therefore, these species and their designated critical habitat are not addressed in this biological opinion.

This biological opinion is based on information provided in the *Natural Environment Study Asset Management Project – Culvert Anchor*, dated October 2023 and other sources of information

including survey reports and email correspondence. A complete project file of this consultation is maintained at the Carlsbad Fish and Wildlife Office (CFWO).

CONSULTATION HISTORY

The following chronology reflects a summary of significant events:

August 8, 2023	The CFWO provided Caltrans a list of federally threatened and endangered species and their critical habitats expected to be present in or near the proposed action area.
November 8, 2023	Caltrans provided the Service a letter dated November 8, 2023, requesting initiation of formal consultation for potential project impacts to arroyo toad.
December 4, 2023	Caltrans provided updated effect determinations for listed species and their critical habitat.
December 5, 2023	Caltrans provided temporary impact acreages for arroyo toad designated critical habitat.
December 6, 2023	Caltrans adjusted the project footprint acreages to account for no longer installing rock slope protections to certain culverts as originally designed. Arroyo toad designated critical habitat acreages were further refined.
December 8, 2023	We transmitted our acknowledgement of receipt of the November 8, 2023, formal consultation request.

BIOLOGICAL OPINION

DESCRIPTION OF THE PROPOSED ACTION

The project will result in improvements to 38 drainage/culvert systems on SR-79 that are in poor condition and in need of repair between post mile (PM) 20.3 and PM 53.0. Culvert deficiencies will be repaired through recommended rehabilitation strategies on a culvert-by-culvert basis. Expected strategies include reinforced concrete pipe replacement, plastic pipe replacement, concrete repair, invert repair, joint sealing and repair, cured-in-place pipe lining, and section replacement. Additional project improvements will occur at 11 PM locations without culverts for a total of 49 work locations. These improvements include:

1. Bike and pedestrian crosswalks;
2. Installing transit stops;
3. Installing solar shade panels;
4. Roadside rehabilitation;

5. Upgrading sign structures, sign panels, and lighting; and

6. Installing Midwest Guardrail System (MGS).

The project will temporarily impact up to 0.84 acre of sensitive vegetation communities. These impacts are primarily a result of culvert cleaning out and repair, which will generally require a 20 by 20-foot area in order to work effectively around each culvert opening. This action will require trimming and temporary removal of vegetation, which will be revegetated following culvert repair. Additional project improvements listed above will occur on existing developed lands and is not expected to result in additional temporary impacts. No permanent impacts are anticipated from this project. Project construction is anticipated to begin in 2024.

Conservation Measures

Caltrans has agreed to implement the following general and species-specific conservation measures (CM) as part of the proposed action to avoid and minimize impacts to federally listed species:

General Conservation Measures

CM 1. Caltrans will offset temporary impacts to sensitive habitat through on-site restoration/enhancement of the temporary impact areas. Caltrans will submit a habitat restoration plan to the CFWO for review and approval at least 30 days prior to initiating project impacts. The plan will include the following information and conditions:

a. All habitat restoration sites will be prepared for planting in a way that mimics natural habitat to the maximum extent practicable. All plantings will be installed in a way that mimics natural plant distribution and not in rows.

b. Planting palettes (plant species, size, and number/acre) and seed mixes (plant species and pounds/acre) will be limited to locally native species (e.g., species found in or near the biological study area for the project). The source location of all plant material and seed will be provided to the CFWO prior to use in restoration activities.

c. If container plants are used, container plant survival will be 80 percent of the initial plantings for the first 3 years. At the first and second anniversary of plant installation, all dead plants will be replaced unless their function has been replaced by plants from seed or natural recruitment.

d. A final implementation schedule will indicate when all impacts, as well as restoration planting and irrigation will begin and end.

e. The final restoration plan will include 3 years of success criteria for restoration areas including: percent cover, evidence of natural recruitment of multiple

species for all habitat types, 0 percent coverage for all woody California Invasive Plant Council's (Cal-IPC's) "Invasive Plant Inventory" species (e.g., trees and shrubs), and no more than 10 percent coverage for other exotic/weed species.

f. A minimum of 3 years of maintenance and monitoring of restoration areas, unless final success criteria are met earlier, and all artificial water supplies have been off for at least 2 years.

g. A qualitative and quantitative vegetation monitoring plan with a map of proposed sampling locations. Photo points will be used for qualitative monitoring and stratified-random sampling will be used for all quantitative monitoring.

h. Contingency measures to be implemented in the event of restoration failure.

i. Annual mitigation maintenance and monitoring reports will be submitted to the CFWO no later than December 1 of each year.

CM 2. A biologist (Project Biologist) approved by the CFWO will be on site: (a) during all vegetation clearing, and (b) weekly during project construction within 500 feet of native habitat to monitor compliance with all conservation measures. Caltrans will submit the biologist's name, contact information, and work schedule on the project to the CFWO at least 15 working days prior to initiating project impacts. The Project Biologist will be provided with a copy of this consultation. The Project Biologist will be available during pre-construction and construction phases to address protection of sensitive biological resources, monitor ongoing work, and maintain communications with construction personnel to facilitate the appropriate and lawful management of issues relating to biological resources. The Project Biologist will report any non-compliance issue to the Resident Engineer and Caltrans Project Biologist such that work can be halted if necessary, and the issue can be discussed with the CFWO to ensure the proper implementation of species and habitat protection measures. The Caltrans Project Biologist will report all non-compliance issues to the CFWO within 1 business day of notification.

CM 3. The Project Biologist will submit monthly email reports (including photographs of impact areas) to the CFWO during clearing of, and construction within, 500 feet of native habitat. The monthly reports will document that authorized impacts were not exceeded and general compliance with all conditions. The reports will also outline the location of construction activities, the type of construction that occurred, and equipment used. These reports will specify numbers and locations of listed species, their observed behavior (especially in relation to construction activities), and remedial measures employed to avoid and minimize impacts to these species. Raw field notes should be available upon request by the CFWO.

CM 4. The Project Biologist will submit a final report to the CFWO within 120 days of project completion including photographs of impact areas and adjacent habitat, documentation that authorized impacts were not exceeded, and documentation that general compliance with all conservation measures was achieved. The report will specify numbers and locations of listed species (if observed); observed listed species behavior (especially in relation to project activities); and remedial measures employed to avoid and minimize impacts to listed species and critical habitat. Raw field notes should be available upon request by the CFWO.

CM 5. All native or sensitive habitats outside and adjacent to the construction limits will be designated as Environmentally Sensitive Areas (ESAs) on project maps. ESAs will be temporarily fenced during construction with orange plastic snow fence, orange silt fencing, or in areas of flowing water, with stakes and flagging. No personnel, equipment, or debris will be allowed within the ESAs. Temporary ESA fencing and flagging will be installed in a manner that does not impact habitats to be avoided and such that it is clearly visible to personnel on foot and operating heavy equipment. Caltrans will submit to the CFWO, at least 5 days prior to initiating project impacts (except for impacts resulting from clearing to install temporary fencing), the final plans for initial clearing and grubbing of habitat and project construction. These final plans will include photographs that show the fenced and flagged limits of impact and all areas to be impacted or avoided. Field maps indicating the location of temporary ESA fencing and/or staking will also be provided. If work occurs within habitat beyond the fenced or demarcated limits of impact, all work will cease until the problem has been remedied to the satisfaction of the CFWO. Temporary ESA fencing and markers will be maintained in good repair until the completion of project work and removed upon completion of project work.

CM 6. An employee education program will be developed and implemented by the Project Biologist. Each employee (including temporary, contractors, and subcontractors) will receive a training/awareness program prior to working on the proposed project. They will be advised of the potential impact to the listed species and the potential penalties for taking such species. At a minimum, the program will include the following topics: occurrence of the listed and sensitive species in the area (including photographs), their general ecology, sensitivity of the species to human activities, legal protection afforded these species, penalties for violations of Federal and State laws, reporting requirements, and project features designed to reduce the impacts to these species and promote continued successful occupation of the project area.

CM 7. During project construction all invasive species included on the National Invasive Species Management Plan, the State of California Noxious Weed List, and the California Invasive Plant Council's Invasive Plant Inventory list (Cal-IPC 2006) found growing within the project impact area will be identified and removed at least once a month. Special care will be taken during transport, use, and disposal

of soils containing invasive weed seeds and all weedy vegetation removed during construction will be properly disposed of to prevent spread into areas outside of the construction area. All heavy equipment will be washed and cleaned of debris prior to entering a new area to minimize the spread of invasive weeds.

CM 8. No invasive species listed in the National Invasive Species Management Plan, State of California Noxious Weed List, or Cal-IPC Invasive Plant Inventory list (Cal-IPC 2006) will be used in the landscaping plans for the project. Landscaping plans for the project will be submitted to the CFWO for review and approval at least 15 days prior to commencing vegetation clearing and construction work.

CM 9. Nighttime (dusk-dawn) construction and associated lighting adjacent to natural areas, especially riparian areas, will be avoided to the maximum extent practicable. If nighttime construction is necessary, all project lighting (e.g., staging areas, equipment storage sites, roadway) will be of the lowest illumination necessary for human safety, selectively placed, and directed onto the construction site and away from sensitive habitats. Light glare shields will be used to reduce the extent of illumination into sensitive habitats.

CM 10. Permanent project lighting will be of the lowest illumination necessary for safety and will be directed toward the paved roadway and away from sensitive habitats. Light glare shields will be used to reduce the extent of illumination into sensitive habitats. Caltrans will review the permanent lighting plans for the project and then submit them to the CFWO.

CM 11. A construction Storm Water Pollution Prevention Plan (SWPPP) and soil erosion and sedimentation plan will be developed to identify best management practices that will be implemented during construction to minimize erosion, prevent sediment and debris from entering drainages, and maintain water quality. Sediment will not be stockpiled in areas where material could be washed into drainages by rainfall. Erosion and sediment control devices used for the proposed project, including fiber rolls and bonded fiber matrix, will be made from biodegradable materials such as jute, with no plastic mesh, to avoid creating a wildlife entanglement hazard.

CM 12. All equipment maintenance, staging, and dispensing of fuel, oil, coolant, or any other such activities will be restricted to designated areas located within previously disturbed upland. They will be located such that runoff from the designated areas will not enter listed species habitat.

CM 13. Impact from fugitive dust will be minimized through watering and other appropriate measures.

CM 14. The project site will be kept as clear of debris as possible. All food-related trash items will be enclosed in sealed containers and regularly removed from the site.

CM 15. Project personnel will be prohibited from bringing domestic pets to construction sites to ensure that domestic pets do not disturb or depredate wildlife in adjacent native habitats.

CM 16. Fire suppression equipment, including extinguishers and shovels, will be available on-site during construction.

Arroyo Toad Conservation Measures

CM 17. Temporary silt fencing will be installed around the perimeter of all work areas within potential arroyo toad upland habitat. The purpose of the fence is to exclude arroyo toads from the work sites. Such fencing will consist of woven nylon netting approximately 3 feet in height attached to wooden stakes. Prior to installing the fencing, a narrow trench approximately 1 to 2 inches in depth will be excavated and the fence buried, to prevent burrowing beneath the fence. All fencing materials (i.e., mesh, stakes, etc.) will be removed following construction. Ingress and egress of construction equipment and personnel will be kept to a minimum, but, when necessary, equipment and personnel will use a single access point to the site. This access point will be as narrow as possible and will be closed off by exclusionary fencing when personnel are not on the project site.

CM 18. Prior to construction activities, but after exclusionary fencing has been installed, at least two surveys for arroyo toads will be conducted within the fenced area by a Service-approved biologist. Surveys will be conducted during appropriate climatic conditions and during the appropriate time of day or night to maximize the likelihood of encountering arroyo toads. If climatic conditions are not appropriate for arroyo toad movement during the surveys, a qualified biologist may attempt to illicit a response from the arroyo toads, during nights (i.e., at least 1 hour after sunset) with temperatures above 50 degrees Fahrenheit, by spraying the project area with water to simulate a rain event. If arroyo toads are found within the project area they will be captured and translocated, by the biologist, to the closest area of suitable habitat within the San Luis Rey River watershed. The biologist will coordinate with appropriate property owners and with the Service to determine a specific translocation site prior to moving any arroyo toads. The date, time of capture, specific location of capture (using Geographic Positioning Systems), approximate size, age and health of the individual will be recorded and provided to the Service, within 2 weeks of the translocation, in both hard copy and digital format.

CM 19. The applicant will submit, in writing, the names, any permit numbers, résumés, and at least three references (of people who are familiar with the relevant qualifications of the proposed biologist), of all biologists who might need to handle, move, or monitor arroyo toads for the proposed project. This information will be submitted to the Service for approval at least 15 days prior to the initiation

of any arroyo toad surveys. Proposed activities will not begin until an authorized biologist has been approved by the Service.

Action Area

Regulations implementing the Act (50 CFR § 402.02) describe the action are as all areas to be affected directly or indirectly by the Federal action and not merely the immediate area involved in the action. Subsequent analyses of the environmental baseline, effects of the action, and levels of incidental take are based upon the action area. For this project, we have defined the action area to be the project impact area at the 49 work locations for drainage and culvert repair (located between PM 20.3 and 53.0), additional improvements, and surrounding habitat within about 300 feet which may be exposed to project-related effects such as increased noise, light, and dust levels and human activity during project construction.

ANALYTICAL FRAMEWORK FOR THE SECTION 7(A)(2) DETERMINATIONS

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 relies on four components: (1) the Status of the Species, which describes the range-wide condition of the species, the factors responsible for that condition, and its survival and recovery needs; (2) the Environmental Baseline, which analyzes the condition of the species in the action area, 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 are all consequences to listed species caused by the proposed action that are reasonably certain to occur; and (4) the Cumulative Effects, which evaluate the effects of future, non-Federal activities in the action area on the species.

For the section 7(a)(2) determination regarding jeopardizing the continued existence of the species, the Service begins by evaluating the effects of the proposed Federal action and the cumulative effects. The Service then examines those effects against the current status of the species to determine if implementation of the proposed action is likely to reduce appreciably the likelihood of both the survival and recovery of the species in the wild.

STATUS OF THE SPECIES

Arroyo Toad

An estimated 19 populations of arroyo toad are known in the United States, from Monterey County south to the Mexican border. These populations persist primarily as small, isolated populations in the headwaters of streams (Service 2023).

Arroyo toads typically breed from February to July on streams with persistent water (Griffin *et al*. 1999). Eggs hatch in 4 to 5 days, and the larvae are essentially immobile for an additional 5 to 6 days. Larvae then begin to disperse from the pool margin into the surrounding shallow water, where they spend an average of 10 weeks. After metamorphosis (June–July), the juvenile toads remain on the bordering gravel bars until the pool no longer persists (usually from 8 to 12 weeks depending on site and yearly conditions; Sweet 1992).

During the non-breeding season, arroyo toads seek shelter during the day and other periods of inactivity by burrowing into the sandy areas of upland terraces. They also use the marginal zones between stream channels and upland terraces for burrowing, especially during late fall and winter (Sweet 1992). Upland habitats frequently used include, but are not limited to, chaparral, native and non-native grasslands, and oak woodlands (Service 1999). Disturbed areas with friable (loose) soils may also be used for aestivation/foraging. At night, arroyo toads forage in the habitat surrounding a watercourse for native ants and beetles (Service 1999). Juveniles and adult toads may range up to 1.2 miles from the watercourse into the surrounding uplands (Service 1999). In addition, arroyo toads have been observed to move 0.7–0.8 mile in a stream course within a season (Service 2005).

The primary threats to the recovery of the arroyo toad include urban development, agriculture, operation of dams and water diversions, mining and prospecting, livestock grazing, roads and road maintenance, recreation, non-native invasive plants, non-native aquatic predator species, drought, fire and fire suppression, and effects of climate change (Service 2014).

ENVIRONMENTAL BASELINE

The regulations implementing the Act (50 CFR § 402.02) define the environmental baseline as 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 (50 CFR § 402.02).

Site Characteristics and Surrounding Land Uses

The action area consists of the 32.7-mile alignment of SR-79 and a 300-foot buffer beyond each of the 49 work locations. The action area is dominated by upland vegetation communities, with non-native grasslands and chaparral as the predominant vegetation types. Riparian habitat also occurs within the action area, with wet montane marsh being the most prominent. A full list of the vegetation communities present within the action area are provided in Table 1.

Table 1. Upland and Riparian Habitat within the Project's Action Area.

Upland or Riparian	Land Cover/Vegetation Type	Acres
Upland	Urban/Developed	132.5
Upland	Orchard/Vineyard	13.4
Upland	Field/Pasture	72.3
Upland	Row Crop	97.8
Upland	Alluvial Fan Scrub	1.9
Upland	Sagebrush Scrub	98.2
Upland	Diegan Coastal Sagebrush Scrub	17.8
Upland	Chaparral	476.9
Upland	Grassland	585.1
Upland	Coast Live Oak Woodland	224.9
Upland	Engelmann Oak Woodland	3.2
Riparian	Wet Montane Marsh, Alkali Seep	63.3
Riparian	Southern Riparian Forest	17.9
Riparian	Southern Riparian Scrub	7.5
Riparian	Non-vegetated Channel	3.1
Riparian	South Coast Live Oak Riparian Forest	34.8

The project alignment is within the San Luis Rey River watershed and primarily runs through Santa Ysabel, Warner Ranch, and Warner Springs. Lake Henshaw (PM 27.5–PM 29) and the surrounding uplands are the primary topographic features in the action area. Biological communities within the action area are somewhat fragmented by development, and SR-79 acts as a barrier for wildlife movement going east and west. Elevations within the action area range from approximately 2,450 to 3,280 feet above mean sea level. There are several soil types within the action area, including Sheephead rocky fine sandy loam with 30 to 65 percent slopes, Tollhouse

rocky coarse sandy loam with 30 to 65 percent slopes, Holland stony fine sandy loam with 5 to 30 percent slopes, Crouch rocky coarse sandy loam with 30 to 70 percent slopes, and Boomer stony loam with 30 to 65 percent slopes. Agua Caliente Creek (PM 36.55) and Santa Ysabel Creek (PM 21.3) are notable creeks near the project alignment.

Characteristics of SR-79 along the 32.7-mile alignment include frequent vehicle use, noise from vehicles, existing lighting, increased runoff from impervious surfaces, and edge habitat containing non-native species along the margins of the alignment. The project abuts private, and tribal land, including commercial, residential, agricultural, and undeveloped lands.

Status of Arroyo Toad in the Action Area

We define suitable foraging, dispersal, and aestivation habitat for the arroyo toad within the action area as riparian scrub and the upland habitat immediately adjacent to it, which includes most of the action area that is not developed. Though protocol surveys for arroyo toad have not been conducted, the action area encompasses several historical arroyo toad detections near certain reaches of SR-79. Therefore, it is possible that the project footprint may support aestivating, dispersing, and/or foraging juvenile and adult arroyo toads, especially in wet years when arroyo toads are more likely to disperse further from consistently occupied breeding habitat. Specifically, sightings of arroyo toad exist within the action area of work location PM 35.95 and PM 40.65 from over a decade ago. The following work locations overlap with designated arroyo toad designated critical habitat PMs 37.20, 38.75, 43.60, 50.23 and 50.40, and these work locations are considered potentially occupied by arroyo toad for the purpose of this consultation.

Quantifying the number of arroyo toads within the action area and the project footprint is difficult for a number of reasons. First and foremost is that we do not have current surveys of this drainage. The exact distribution is difficult to estimate due to the dynamic conditions associated with their habitat. Suitable habitat may change from year to year depending on climatic conditions, flooding, or other natural or human-related events (Service 1999), which in turn influence reproductive success and juvenile survival. Therefore, it is anticipated that the arroyo toad population within the action area will experience population fluctuations making it difficult to determine the precise number of arroyo toads that could be adversely affected at any given time.

In addition, except during the early juvenile stage (first 4–5 weeks), arroyo toads forage at night and burrow during the day. Nocturnal activity is usually associated with rainfall and moderate temperatures and some nights of very high relative humidity (Service 1999). Juveniles and adult toads may range up to 1.2 miles from the watercourse into the surrounding uplands (Service 1999). Therefore, detection of arroyo toads outside of the breeding season is very difficult, with limited ability for anticipating when the species may be active. Lastly, no reliable survey method exists for determining the locations or densities of arroyo toads that may be burrowed within upland habitat. Due to these constraints, the precise number of arroyo toads that may be located within the project area is not known.

We do not have estimates of density within the project area, but we do have estimates of arroyo toad density (4.6 arroyo toads/acre) from surveys along the Santa Margarita River on Camp

Pendleton (Service 2010). These densities represent our best estimate of arroyo toads because the project area is within the San Luis Rey River watershed, and the San Luis Rey River is comparable river in size, proximity, and known ability to support arroyo toads within northern San Diego County.

The Project's action area encompasses 126.6 acres of potential riparian habitat of which 0.12 acre is in the project footprint. Based on the estimated density of arroyo toads in the riparian environment near the Santa Margarita River of 4.6 arroyo toads/acre, excluding metamorphs which are likely to be present only from June through August, we liberally estimate approximately 500 arroyo toads could be within the riparian habitat in the action area. The Project's action area also encompasses 1,591.5 acres of potential upland habitat of which 0.72 acre is in the project footprint. Based on the density of arroyo toads in the upland environment near the Santa Margarita River of 0.72 arroyo toads/acre, we liberally estimate 1,146 arroyo toads could be within the upland habitat in the action area.

Based on the densities cited above, two arroyo toads could occur within the project footprint (one in the riparian areas and one in upland areas); however, given the uncertainties, our conservative estimate of individuals that may be in the project footprint is four (two in the uplands and two in the riparian habitat).

EFFECTS OF THE ACTION

Regulations implementing the Act (50 CFR § 402.02) define the effects of the action as 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 (50 CFR § 402.17).

The regulations for section 7(a)(2) note that "a conclusion of reasonably certain to occur must be based on clear and substantial information, using the best scientific and commercial data available" [50 CFR § 402.17(a)]. When considering whether activities caused by the proposed action (but not part of the proposed action) or activities reviewed under cumulative effects are reasonably certain to occur, we consider factors such as (1) past experiences with activities that have resulted from actions that are similar in scope, nature, and magnitude to the proposed action; (2) existing plans for the activity; and (3) any remaining economic, administrative, and legal requirements necessary for the activity to go forward.

Project impacts will be spread across the 49 work locations in the 32.7-mile alignment between PM 20.3–PM 53.0. Temporary impacts to sensitive habitat will be revegetated following project completion, and no permanent impacts are anticipated.

Habitat Loss and Construction-Related Injury and Mortality

The project will temporarily impact up to 0.72 acre of upland habitat and 0.12 acre of riparian habitat (Table 2) that is suitable habitat for arroyo toad.

Table 2. Temporary Impacts from Project Implementation.

Habitat Type	Temporary Impacts (acres)
Coastal Sage Scrub	0.04
Chaparral	0.27
Grassland	0.09
Coast Live Oak Woodland	0.1
Southern Riparian Forest	0.03
South Coast Live Oak Riparian Forest	0.09

As discussed in the *Environmental Baseline* section above, we estimate up to four arroyo toads may occur within the project footprint. However, as described below, we anticipate that avoidance and minimization measures will reduce the number of arroyo toads that are killed or injured during project activities.

The project has incorporated measures to avoid and minimize impacts to arroyo toads. All construction will be limited to footprints defined in this consultation (CMs 5, 12, and 17), limiting the potential to affect additional arroyo toads beyond the footprint. Access to the work locations will be via the existing roads where the culverts are located, staging equipment will be placed on existing developed surfaces or disturbed upland habitat (CM 12) and construction activities will be avoided, to the extent feasible, during nighttime hours (CM 9) when arroyo toads are most active. Arroyo toad exclusionary fencing will be installed at the boundary of active construction to control erosion, and this fencing will all act as a barrier to arroyo toad movement into and out of the project footprint (CM 17). Mandatory pre-construction surveys will occur for work locations that overlap with potential arroyo toad habitat (PMs 35.95, 40.65, 37.20, 38.75, 43.60, 50.23, and 50.40), and any individuals observed will be translocated out of the fenced project footprint to proximal and safe suitable habitat prior to vegetation removal and grading (CM 18).

Capture and relocation measures have the potential to effectively minimize death and injury of arroyo toads during project construction. Toads often release their bladder contents upon capture (Stebbins and McGinnis 2012) and may experience increased stress levels; these responses could reduce arroyo toad survival and reproduction following capture and relocation. However, foraging and aestivating arroyo toads are not known to be territorial, so individuals have the potential to continue foraging or aestivating without substantial disruption following relocation.

We have little data on the proportion of arroyo toads likely to be captured within the proposed exclusion areas. Based on our best professional judgment, we believe that about 50 percent of arroyo toads within the impact area will be detected, captured, and relocated. If 50 percent (two individuals) of the estimated four arroyo toads in the project footprint are successfully translocated, then 50 percent (two individuals) within the impact area will remain. We assume that any arroyo toad remaining in the impact area will be killed or injured as a result of being crushed by heavy equipment.

There is also the potential for arroyo toads to be killed, injured, or stressed during capture and relocation efforts. However, trapping and relocation efforts will be conducted by individuals familiar with arroyo toad biology and ecology (CM 18), whose qualifications will be subject to review by the Service, and few arroyo toads (no more than two) are anticipated to be captured and relocated. Therefore, we do not anticipate any arroyo toads will be killed or injured during capture and relocation efforts.

Based on the limited extent of the project footprint and the implementation of conservation measures, the number of individuals impacted by the project will be low (i.e., no more than four individuals in the project footprint) and will comprise a small fraction of the arroyo toad population within the San Luis Rey River watershed. Therefore, the proposed project is not likely to result in an appreciable reduction in the reproduction, numbers, or distribution of the arroyo toad population in the project vicinity or the species as a whole. In addition, temporarily impacted habitat will be restored upon project completion, and because arroyo toads are not dependent on mature vegetation, we expect temporarily impacted areas to be re-occupied shortly following project completion.

Project-Related Pollution, Light, Noise, and Human Activity

Habitat suitable for arroyo toad breeding, aestivation, foraging, and dispersing is within the indirect impact area of project construction. Indirect impacts could result in degradation of occupied arroyo toad habitat, but arroyo toads are still anticipated to breed, forage, aestivate, and disperse in suitable habitat within the area of indirect effects.

Implementation of the project has the potential to increase pollution and siltation as a result of sediment moving, grading, and operating heavy equipment in proximity to adjacent waterways. Changes to water quality in adjacent arroyo toad breeding habitat could result due to construction-related sedimentation and pollution. Increased sedimentation has the potential to kill arroyo toad eggs and larvae through asphyxiation (Sweet 1992; Service 1999). Changes to the water quality (temperature and chemical composition) can lead to reduced oxygen uptake, reduced feeding, and a general decline in species health, which can lead to disease, decreased growth and reproduction, or death. To minimize the potential for water quality impacts to adjacent waterways from the project, measures will be implemented to prevent construction-related siltation and runoff from entering sensitive arroyo toad habitat. A SWPPP and soil erosion and sedimentation plan will be developed to identify best management practices that will be implemented during construction to minimize erosion, prevent sediment and debris from entering drainages, and maintain water quality (CM 11). To avoid increases in pollution, staging areas will be located such that runoff from the designated areas will not enter suitable arroyo toad habitat (CM 12). In addition, sediment will not be stockpiled in areas where arroyo toads might burrow into the loose material, or where material could be washed into drainages by rainfall (CM 11). Implementation of these conservation measures are anticipated to minimize the

impacts of pollution and siltation resulting from project implementation on arroyo toad habitat to the point where such effects are insignificant[1].

Some project work may be conducted at night and would use construction lighting that could impact the adjacent arroyo toad habitat. Light that alters natural light patterns in ecosystems can lead to increased predation, disorientation, and disruption of inter-specific interactions (Longcore and Rich 2004). Night lighting for construction will be of the lowest illumination necessary for human safety, directed at the immediate work area, and away from adjacent sensitive habitats (CM 9). Light glare shields will be used to reduce the extent of illumination into sensitive habitats (CM 10). With implementation of these measures, we anticipate that the effects of lighting on arroyo toads will be minimized to the point where such effects are insignificant.

The project could result in an increase in the introduction of invasive plant species into native habitats adjacent to the facility. Invasive species are recognized as a threat to biodiversity in native plant communities, second only to direct habitat loss and fragmentation (Pimm and Gilpin 1989; Scott and Wilcove 1998). Non-native, weedy species often out-compete and exclude native species, potentially altering the structure of the vegetation, degrading or eliminating habitat utilized by the arroyo toad, and providing food and cover for undesirable non-native animals (Bossard *et al*. 2000; Service 2009). The project has incorporated measures to prevent the spread of invasive species. During project construction, invasive species found growing within the project impact area will be identified and removed at least once a month (CM 7), and landscaping for the project will be limited to locally native species (CM 8). Implementation of these conservation measures are anticipated to minimize the impacts of invasive species introduction resulting from project implementation on arroyo toad habitat to the point where such effects are insignificant.

Additional indirect effects include increased construction noise and vibration, and human encroachment by construction personnel. Noise and vibration associated with the use of heavy equipment during construction has the potential to result in disruption of arroyo toad behaviors in adjacent habitat; however, this disturbance would be temporary, and the arroyo toad translocation effort, performed by experienced biologists, is expected to reduce arroyo toad exposure to loud construction activity (CM 18 and 19). Fugitive dust will be minimized through watering and other appropriate measures (CM 13). Human activity in the project area during construction may result in accumulation of trash and food, attracting predators that may prey on arroyo toads. However, the project measures require that trash and debris be removed from the site regularly to avoid attracting predators (CM 14). Project personnel will also be prohibited from bringing domestic pets to construction sites to ensure that domestic pets do not disturb or depredate wildlife in adjacent native habitats (CM 15). Also, temporary fencing will be installed along the project footprint during construction which should limit encroachment into adjacent habitat by construction personnel (CM 5). The project biologist will develop and implement an employee education program to make all personnel aware of listed species within the action area and their responsibility to reduce impacts to these species (CM 6). The project biologist will also

[1] For the purposes of section 7 consultation, an insignificant effect is one that is sufficiently small that a person would not be able to meaningfully measure, detect, or evaluate it.

fulfill their monthly reporting requirements regarding general compliance of all conditions, as well as produce a final report documenting how general compliance with all conservation measures was achieved (CMs 2, 3, and 4). With implementation of these measures, we anticipate that these effects will be minimized to the point where such effects are insignificant.

Habitat Restoration

Following construction, temporary impacts to 0.84 acre of suitable arroyo toad habitat for aestivation, dispersal, and foraging will be restored at a 1:1 ratio through a restoration plan (CM 1). Additionally, during construction, monthly weeding of plants included on the National Invasive Species Management Plan, the State of California Noxious Weed List, and the California Invasive Plant Council's Invasive Plant Inventory list will occur (CM 7 and 8). There is the possibility that arroyo toads could be killed or injured during restoration activities, such as during container planting and weeding, but the restoration areas will already be disturbed due to construction, so we anticipate that few toads will be present in the restoration areas, and the project has incorporated measures to minimize impacts to arroyo toads from restoration activities. Thus, the potential for impacts to arroyo toads from project-related restoration activities is discountable in that it is extremely unlikely to occur, and we anticipate that the restoration effort will improve arroyo toad habitat quality in the long-term.

Effect on Recovery

The project will have no permanent impacts to arroyo toad habitat, and the temporary loss of 0.84 acre of small, disconnected patches of habitat is not expected to substantively affect the long-term quality and distribution of arroyo toad habitat or the arroyo toad population near the San Luis Rey River, especially following restoration and implementation of avoidance and minimization measures. Temporary impacts will be restored following construction and will be maintained and monitored for a minimum of 3 years. Thus, the project will help accomplish recovery task 1 of the arroyo toad recovery plan, which is to secure existing populations by “protecting, maintaining, restoring, and enhancing breeding and upland habitats” (Service 1999).

CUMULATIVE EFFECTS

Cumulative effects are effects of future State or private activities, not involving Federal activities, that are reasonably certain to occur within the action area of the Federal action subject to consultation (50 CFR § 402.02). 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. We are unaware of any future non-Federal actions that are reasonably certain to occur within the action area and may affect arroyo toads.

CONCLUSION

After reviewing the current status of the arroyo toad, the environmental baseline for the action area, the effects of the proposed activities, and the cumulative effects, we have determined that the activities considered in this biological opinion are not likely to jeopardize the continued existence of the arroyo toad. We have reached this conclusion for the following reasons:

1. Temporary impacts to 0.84 acre of upland and riparian habitat with arroyo toad foraging, dispersal, and aestivation potential are small, spread out, and are not anticipated to preclude the species from utilizing and moving through the higher quality habitat within the San Luis Rey River watershed while construction and habitat restoration are occurring.

2. With implementation of the conservation measures, including pre-construction surveys, exclusionary fencing, and translocation, impacts to arroyo toads are expected to be minimized and are not expected to appreciably reduce the numbers, reproduction, or distribution of the arroyo toad in the action area or throughout the species' range.

3. The construction-related death and injury of up to two arroyo toads in the project footprint will not appreciably reduce the overall numbers or reproduction of the San Luis Rey River population of arroyo toads and, therefore, will not affect the distribution of the species as a whole.

4. Capture and relocation of up to two arroyo toads within the project site will not substantially reduce the overall population of arroyo toads within the area and thus will not impede the overall recovery of the species.

5. Temporary impacts are limited to 0.84 acre of small, disconnected patches of habitat, and permanent impacts will not occur. This temporary impact to arroyo toad foraging, dispersal, and aestivation habitat is relatively minor considering the many thousands of acres of arroyo toad foraging, dispersal, and aestivation habitat rangewide.

INCIDENTAL TAKE STATEMENT

INTRODUCTION

Section 9 of the Act and Federal regulation pursuant to section 4(d) of the Act prohibit the take of endangered and threatened animal 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. Harm in the definition of "take" in the Act means an act which actually kills or injures wildlife. Such [an] act may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering (50 CFR 17.3). Under the terms of section 7(b)(4) and section 7(o)(2), taking that is incidental to and not the purpose of the agency action is not considered to be prohibited taking under the Act provided that such taking is in compliance with the proposed protective measures and the terms and conditions of an incidental take statement and occurs as a result of the action as proposed.

The measures described below are non-discretionary and must be undertaken by Caltrans for the exemption in section 7(o)(2) to apply. Caltrans has a continuing duty to regulate the activity covered by this incidental take statement. If Caltrans fails to assume and implement the terms and conditions, the protective coverage of section 7(o)(2) may lapse. In order to monitor the impact of incidental take, Caltrans 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)].

AMOUNT OR EXTENT OF TAKE

The exact distribution and population size of arroyo toads is difficult to estimate due to the dynamic conditions associated with their habitat and biology and because detection of individuals outside of the breeding season is difficult. However, as described in the "Effects of the Action" section, we estimate that up to four arroyo toads could occur within construction footprint. Moreover, finding dead or injured arroyo toads within the construction area is unlikely as the individuals may be underground during construction activities, and the species is cryptic making them difficult to recognize or detect.

We anticipate that 50 percent, or two arroyo toads, will be captured and relocated. The remaining 50 percent, or two arroyo toads, are expected to be crushed or otherwise killed or injured during construction activities because heavy equipment will be used to remove essential feeding and sheltering habitat, but because any arroyo toads remaining in the project footprint are likely to be aestivating and difficult to observe, we estimate that no more than two arroyo toads will be observed killed or injured during construction activities.

Thus, take of arroyo toad associated with construction activities is exempted as follows:

IT 1. Capture and relocation of up to two arroyo toads; and

IT 2. Death or injury of up to two arroyo toads from construction activities resulting in 0.84 acre of temporary impacts.

The amount or extent of incidental take will be exceeded if more than two arroyo toads are captured, more than two arroyo toads are observed dead or injured as a potential result of construction activities, or more than 0.84 acre of suitable arroyo toad habitat is impacted.

REASONABLE AND PRUDENT MEASURES

Caltrans is implementing significant conservation measures as part of the proposed action to minimize the incidental take of arroyo toads. In addition, the following reasonable and prudent measure is necessary and appropriate to minimize the impact of the incidental take of arroyo toad:

RPM 1. Caltrans will monitor and report any project-related incidental take of arroyo toads to the CFWO.

TERMS AND CONDITIONS

To be exempt from the prohibitions of section 9 of the Act, Caltrans must comply with the following terms and conditions, which implement the reasonable and prudent measures described above and outline monitoring and reporting requirements. These terms and conditions are non-discretionary.

TC 1.1. Within 30 calendar days of the completion of project activities within arroyo toad habitat, Caltrans will provide the CFWO with a report documenting the area of arroyo toad habitat impacted, the number of dead or injured toads observed in the

action area, and the number of arroyo toads captured and released. The report will include information on the gender, life history stage, and general condition of all arroyo toads that were killed, injured, and captured/released. It will also include an assessment of how or why arroyo toads may have been injured or killed and information on where toads were captured and released and observed physiological responses of relocated arroyo toads.

TC 1.2. Caltrans will include any observations of arroyo toads and potential effects to arroyo toads in annual reports describing the progress of the temporary impact area restoration.

TC 1.3. Caltrans will report incidences of take (observed death or injury or capture and relocation of arroyo toads) to the CFWO within 3 days. All field notes and other documentation generated by the biological monitor will be made available to the CFWO upon request.

TC 1.4. If the level of take exempted in this biological opinion is exceeded at any time, the CFWO-approved biologist will immediately contact the CFWO.

DISPOSITION OF SICK, INJURED, OR DEAD SPECIMENS

Upon locating dead, injured, or sick individuals of threatened or endangered species, initial notification must be made to our Division of Law Enforcement in either San Diego, California, at 619-557-5063 or in Torrance, California, at 310-328-6307 within 3 working days. Notification should also be sent by telephone and writing to this office in Carlsbad, California, at 2177 Salk Avenue, Suite 250 Carlsbad, California 92008, 760-431-9440. Written notification must be made within 5 calendar days and include the collection date and time, the location of the animal, and any other pertinent information. Care must be taken in handling sick or injured animals to ensure effective treatment and care, and in handling dead specimens to preserve biological material in the best possible state. The remains of intact specimens shall be placed with educational or research institutions holding the appropriate State and Federal permits. Remains shall be placed with the San Diego Natural History Museum, San Diego. Arrangements regarding proper disposition of potential museum specimens shall be made with the institution by the authorized biologist prior to implementation of the action.

CONSERVATION RECOMMENDATIONS

Section 7(a)(1) of the Act directs Federal agencies to use 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. We have no conservation recommendations at this time.

REINITIATION NOTICE

This concludes formal consultation regarding the SR-79 Assets Management Project (PM 20.3 to PM 53.0) as outlined in materials submitted to us. 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 this biological opinion; 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 or comments about this letter or the consultation process in general, please contact Dimitri Pappas[2] of this office over electronic mail.

Sincerely,

SCOTT SOBIECH

Digitally signed by SCOTT SOBIECH
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Scott A. Sobiech
Field Supervisor

Appendix

cc:
Rush Abrams, Caltrans

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APPENDIX

Section 7 Consultation for the State Route 79 Assets Management Project (PM 23.0 to PM 53.0) San Diego County, California

The following information supports the U.S. Fish and Wildlife Service's concurrence with the California Department of Transportation's (Caltrans) not likely to adversely affect determination for arroyo toad {a. southwestern t. [*Anaxyrus californicus* (*Bufo microscaphus c.*)]} designated critical habitat and not likely to adversely affect determination for the federally endangered least Bell's vireo (*Vireo bellii pusillus*; vireo), southwestern willow flycatcher (*Empidonax traillii extimus*; flycatcher), and Quino checkerspot butterfly (*Euphydryas editha quino*; Quino) as well as the federally threatened coastal California gnatcatcher (*Polioptila californica californica*; gnatcatcher) and Stephen's kangaroo rat (*Dipodomys stephensi;* kangaroo rat) in accordance with section 7 of the Endangered Species Act, as amended (16 U.S.C. 1531 *et seq.*), for the State Route 79 (SR-79) Assets Management Project (PM 20.3 to PM 53.0), San Diego County, California (project).

In addition to the general conservation included in the biological opinion for this project, the following species-specific conservation measures will be implemented for vireo, flycatcher, gnatcatcher, and kangaroo rat:

Vireo, Flycatcher, Gnatcatcher, and Kangaroo Rat-specific Conservation Measures

CM 20. If project construction, excluding clearing and grubbing, is necessary during the vireo and flycatcher breeding season (March 15 to September 15) or the gnatcatcher breeding season (February 15 to August 31) that will generate noise in excess of 60 dBA hourly Leq, or ambient noise levels, whichever is greater, within their nesting habitat, measures will be implemented to reduce noise disturbance to listed bird species. A noise abatement plan will be submitted to the CFWO for review and approval 30 days prior to commencing project work. The noise abatement plan will include the following information: (a) a description of the noise abatement measures that will be implemented by the project (e.g., mufflers, use of a vibratory driver, shroud for pile driver, soft start, cushion block, sound wall or curtain, placement of project generators away from the riparian area and behind k-rail, etc.) and (b) noise levels that are anticipated within the adjacent vireo, flycatcher, and gnatcatcher nesting habitat. The Project Biologist will oversee implementation of the noise abatement plan and may conduct noise monitoring and listed bird surveys as needed, based on their judgment and knowledge of the species, site, and proposed activities, to minimize noise impacts to listed bird species.

CM 21. Where species are present, vegetation clearing will occur outside of the breeding season for the gnatcatcher (February 15 through August 31), vireo, and flycatcher (March 15 through September 15).

CM 22. If maintenance of a riparian restoration area is necessary between March 15 and August 31, a qualified biologist will survey for vireos and flycatchers within the restoration area, access paths to it, and other areas susceptible to disturbances by restoration site maintenance. Surveys will consist of three visits separated by 2 weeks each maintenance/monitoring year. Restoration work will be allowed to continue on the site during the survey period. However, if vireos and flycatchers are found during any of the visits, the Caltrans Project Biologist will notify and coordinate with the CFWO to identify measures to avoid and/or minimize effects to vireo and flycatcher (e.g., nests and an appropriate buffer will be flagged by the biologist and avoided by the maintenance work).

CM 23. If maintenance of a coastal sage scrub restoration area is necessary between February 15 and September 15, a qualified biologist will survey for gnatcatchers within the restoration area, access paths to it, and other areas susceptible to disturbances by restoration site maintenance. Surveys will consist of three visits separated by 2 weeks each maintenance/monitoring year. Restoration work will be allowed to continue on the site during the survey period. However, if gnatcatchers are found during any of the visits, the Caltrans Project Biologist will notify and coordinate with the CFWO to identify measures to avoid and/or minimize effects to gnatcatcher (e.g., nests and an appropriate buffer will be flagged by the biologist and avoided by the maintenance work).

CM 24. A qualified biologist[3] approved by the CFWO will be on-site at the work locations with suitable kangaroo habitat (PM 28.70 and PM 38.75): (a) during all vegetation clearing and grubbing; and (b) weekly during project construction within 500 feet of kangaroo rat habitat to ensure compliance with all conservation measures. The biologist will be familiar with kangaroo rat and their habitat and will have experience monitoring this species. Caltrans will submit the name, address, telephone, number, and work schedule of the biologist on the project to CFWO at least 15 working days prior to initiating project impacts. The biologist will have a copy of the Biological Opinion prior to project construction.

Vireo

Vireo have not been detected within the action area but have been observed within 1,000 feet of PM 39.55. Up to 0.12 acre of potentially suitable vireo breeding habitat will be temporarily impacted at the following work locations (PMs 24.80, 25.09, 25.10, 25.15, 25.60, and 26.90). Construction adjacent to occupied habitat when vireos are present could result in disturbance to vireo breeding. However, Caltrans proposes to avoid project construction at PM 39.55 during the vireo breeding season (March 15 to September 15). No breeding territories will be disturbed from 0.12 acre of temporary impacts to riparian habitat (CM 20 and CM 21), and vegetation will be restored on-site following construction (CM 1). Maintenance of restoration areas during their

[3] The names, permit resumes, and at least three references of people who are familiar with the relevant qualifications of the proposed biologist will be submitted to the CFWO for approval at least 15 days prior to the initiation of kangaroo rat surveys or monitoring efforts.

breeding season will also be avoided to the greatest extent possible (CM 22). Therefore, potential project impacts to vireo survival and reproduction as a result of project implementation are anticipated to be insignificant, such that they are unable to be effectively measured, detected, or evaluated.

Flycatcher

There are no known flycatcher sightings within the action area, but potentially suitable flycatcher habitat will be temporarily impacted at the following work locations (PMs 24.80, 25.09, 25.10, 25.15, 25.60, and 26.90). Construction adjacent to occupied habitat when flycatchers are present could result in disturbance to flycatcher breeding. However, Caltrans proposes to avoid project construction at sensitive work locations (PMs 24.80, 25.09, 25.10, 25.15, 25.60, and 26.90) during the flycatcher breeding season (March 15 to September 15). No breeding territories will be disturbed from 0.12 acre of temporary impacts to riparian habitat (CM 20 and CM 21), and vegetation will be restored on-site following construction (CM 1). Maintenance of restoration areas during their breeding season will also be avoided to the greatest extent possible (CM 22). Therefore, potential project impacts to flycatcher survival and reproduction as a result of project implementation are anticipated to be discountable in that they are extremely unlikely to occur.

Gnatcatcher

There are no known gnatcatcher sightings within the action area, but 0.04 acre of coastal sage scrub (PMs 26.10 and 26.60) and 0.68 acre of upland habitat with gnatcatcher foraging potential will be temporarily impacted on-site. Construction adjacent to occupied habitat when gnatcatchers are present could result in disturbance to gnatcatcher breeding. However, Caltrans proposes to avoid project construction at these sensitive work locations (PMs 26.10 and 26.60) during the gnatcatcher breeding season (February 15 to September 15). No breeding territories will be disturbed from temporary impacts (CM 20 and CM 21), and vegetation will be restored on-site following construction (CM 1). Maintenance of restoration areas during their breeding season will also be avoided to the greatest extent possible (CM 23). Therefore, potential project impacts to gnatcatcher survival and reproduction as a result of project implementation are anticipated to be discountable in that they are extremely unlikely to occur.

Kangaroo Rat

Up to 0.72 acre of upland habitat with kangaroo rat habitat potential will be temporarily impacted through project implementation. Kangaroo rat have not been detected within the action area, but they have been observed within a 1/4 mile of three work locations (PMs 33.88, 34.20, and 40.65). Kangaroo rat habitat suitability surveys were performed on 35 of the project's 49 work locations in 2023, and only 2 work locations were identified as having potentially suitable kangaroo rat habitat, PMs 28.70 and 38.75 (Vergne 2023). Construction adjacent to occupied kangaroo rat habitat could disturb nearby species. However, Caltrans will have a qualified kangaroo rat biologist at these sensitive work locations (PMs 28.70 and 38.75) during initial vegetation clearing to avoid potential impacts to kangaroo rat (CM 24) and demarcate environmentally sensitive areas (CM 5). Vegetation will be restored on-site following construction (CM 1).

Therefore, potential project impacts to kangaroo rat survival and reproduction as a result of project implementation are anticipated to be discountable in that they are extremely unlikely to occur.

Quino

A Quino observation from 1992 overlaps with the action area of three work locations (PMs 50.23, 50.40, and 51.20). However, neither host plants nor food sources have been observed at these locations. As a result, no permanent or temporary impacts are expected to occur to Quino or Quino habitat. Construction-borne dust could potentially harm nearby Quino, but fugitive dust will be controlled on-site (CM 13). Therefore, potential project impacts to Quino survival and reproduction as a result of project implementation are anticipated to be discountable, such that they are unable to be effectively measured, detected, or evaluated.

Arroyo Toad Designated Critical Habitat

The project footprint overlaps with 0.08 acre of arroyo toad designated critical habitat within Unit 14 of arroyo toad designated critical habitat. Unit 14 comprises of 10,115 acres; therefore, the project footprint encompasses less than 0.001 percent of the unit.

The PBFs essential for arroyo toad critical habitat are: (1) rivers or streams with hydrologic regimes that supply water to provide space, food and cover needed to sustain eggs, tadpoles, metamorphosing juveniles, and adult breeding toads; (2) riparian and adjacent upland habitats; (3)a natural flooding regime; and a (4) stream channel and adjacent upland habitats that allow for movement to breeding pools, foraging areas, overwintering sites, and dispersal, and connectivity to areas that contain suitable habitat.

No permanent impacts will occur to any arroyo toad PBFs during Project implementation. Approximately 0.08 acre of temporary impacts are anticipated to occur to upland habitats adjacent to stream channels (PBF 4), but this is less than 0.001 percent of the unit. In addition, there are significant areas of upland habitat available for the arroyo toad both within and adjacent to the project area; therefore, we do not anticipate a measurable impact to this unit of critical habitat during construction. We expect that the revegetation of native riparian and upland habitat on-site will continue to support arroyo toad PBFs in this unit of critical habitat.