Rancho Mission Viejo Riding Park Project Biological Resources Assessment

City of San Juan Capistrano, Orange County, California



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1.0 INTRODUCTION

At the request of the City of San Juan Capistrano, Wood Environment & Infrastructure Solutions, Inc. (Wood) conducted a biological resources assessment for the Rancho Mission Viejo (RMV) Riding Park at San Juan Capistrano (RMV Riding Park) Restoration Project (project) located in the City of San Juan Capistrano, Orange County, California (Figure 1). The proposed project includes removal of an Arizona crossing and restoration of the southern bank of San Juan Creek, adjacent to the RMV Riding Park. Additionally, the project may include long term maintenance dredging of an ephemeral stream that passes through the RMV Riding Park.

This document is a review and assessment of the biological resources that have been observed or reported from the vicinity, or have the potential to occur on the project site. It discusses the conservation status of special status species, suitable habitat for these species, and the potential for each to occur on or near the project site. This biological resources assessment consisted of a review of pertinent literature, consultation with biologists having experience on or in close proximity to the site, and a reconnaissance level site survey to perform a general inventory of flora and fauna and determine habitat suitability for special status flora and fauna.

2.0 PROJECT BACKGROUND AND SITE DESCRIPTION

The RMV Riding Park is located southwest of the corner of Ortega Highway (State Route-74) and Avenida La Pata in San Juan Capistrano, Orange County. The project area is along the south bank of San Juan Creek, located west of the RMV Riding Park, south of Ortega Highway and east of the Reata Park and Event Center. The study site is located between approximately 33.5189° North, 117.6250° West; and 33.5145° North, 117.6283° West within the San Juan Capistrano U.S. Geological Survey (USGS) 7.5 minute quadrangle (Figure 2).

Land use to the east of San Juan Creek includes the Riding Park, which is an equestrian facility, and a park and residential community to the west. South of the project area lies the City of San Juan Capistrano where the Creek has been altered to control floods. North of the project area, San Juan Creek lies in a more natural state as it flows through the Rancho Mission Viejo Ecological Reserve and the Santa Ana Mountains.

Project elevations range from approximately 150 feet (42.75 meters) at the north end near the Ortega Highway Bridge to 136 feet (41.4 meters) downstream from the Arizona Crossing. The Project area includes the eastern bank of San Juan Creek from south of the Ortega Highway Bridge to the western edge of the Riding Park.



Figure 1. Regional and Vicinity Map





2.1 REGULATORY FRAMEWORK

2.1.1 Federal

Endangered Species Act (ESA) – The United States Fish and Wildlife Service (USFWS) and the National Marine Fisheries Service are the designated federal agencies accountable for administering the ESA. ESA defines species as "endangered" or "threatened" and provides regulatory protection at the federal level.

- Section 9 of the ESA prohibits the "take" of listed (i.e., endangered or threatened) species. The ESA definition of take is "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, collect, or attempt to engage in such conduct." Recognizing that take cannot always be avoided, Section 10(a) includes provisions for take that is incidental to, but not the purpose of, otherwise lawful activities. Specifically, Section 10(a) (1) (A) permits (authorized take permits) are issued for scientific purposes. Section 10(a) (1) (B) permits (incidental take permits) are issued for the incidental take of listed species that does not jeopardize the species.
- Section 7 (a) (2) requires federal agencies to evaluate the proposed project with respect to listed or proposed listed, species and their respective critical habitat (if applicable). Federal agencies must employ programs for the conservation of listed species and are prohibited from authorizing, funding, or carrying out any action that would jeopardize a listed species or destroy or modify its "critical habitat."

As defined by the ESA, "individuals, organizations, states, local governments, and other nonfederal entities are affected by the designation of critical habitat only if their actions occur on federal lands, require a federal permit, license, or other authorization, or involve federal funding.

Migratory Bird Treaty Act (MBTA) – Treaties signed by the U.S., Great Britain, Mexico, Japan, and the republics of the former Soviet Union make it unlawful to pursue, capture, kill, and/or possess, or attempt to engage in any such conduct to any migratory bird, nest, egg or parts thereof listed in this document. As with the ESA, the MBTA also allows the Secretary of the Interior to grant permits for the incidental take of these protected migratory bird species. Impacts include direct disturbance to/destruction of nests, eggs, and birds as well as indirect effects such as loud construction noises (e.g., drilling, operation of heavy equipment, etc. in excess of 60 dB over an hour at the nest site) and increased site activities (e.g., moving vehicles, use of guard dogs, presence of personnel) in close proximity to active nests.

National Environmental Policy Act (NEPA) – Portions of the proposed project could fall under the jurisdiction of a federal agency (i.e., U.S. Army Corps of Engineers). NEPA establishes certain criteria that must be adhered to for any project that is "financed, assisted, conducted or approved by a federal agency. The federal lead agency is required to "determine whether the proposed action will significantly affect the quality of the human environment."

Section 404 of the Clean Water Act – This section of the Clean Water Act, administered by the U.S. Army Corps of Engineers (USACE), regulates the discharge of dredged and fill material into "waters of the United States." The USACE has created a series of nationwide permits that

authorize certain activities within waters of the U.S. provided that the proposed activity does not exceed the impact threshold for each of the permits, takes steps to avoid impacts to wetlands where practicable, minimize potential impacts to wetlands, and provide compensation for any remaining, unavoidable impacts through activities to restore or create wetlands. For projects that exceed the threshold for nationwide permits, individual permits under Section 404 can be issued.

2.1.2 State of California

Regional Water Quality Control Board – The Regional Water Quality Control Board (RWQCB) regulates activities pursuant to Section 401(a)(1) of the CWA. Section 401 of the CWA specifies that certification from the State is required for any applicant requesting a federal license or permit to conduct any activity including, but not limited to, the construction or operation of facilities that may result in any discharge into navigable waters. Through the Porter Cologne Water Quality Control Act, the RWQCB asserts jurisdiction over Waters of the State of California (WSC) which is generally the same as waters of the United States, but may also include isolated waterbodies. The Porter Cologne Act defines WSC as "surface water or ground water, including saline waters, within the boundaries of the state."

Sections 1600-1603 of the State Fish and Game Code – The California Fish and Game Code, pursuant to Sections 1600 through 1603, regulates all diversions, obstructions, or changes to the natural flow or bed, channel, or bank of any river, stream, or lake that supports fish or wildlife resources. Under state code, a stream is defined as a body of water that flows at least periodically, or intermittently, through a bed or channel with hydro geomorphology distinct top-of-embankment to top-of-embankment limits, that may or may not support fish or other aquatic biota. Included in this definition are watercourses with surface or subsurface flows that support, or have supported in the past, riparian vegetation. Specifically, Section 1601 governs public projects, while Section 1603 governs private discretionary actions. The California Department of Fish and Wildlife (CDFW) requires that public and private interests apply for a "Streambed Alteration Agreement" for any project that may impact a streambed or wetland. The CDFW has maintained a "no net loss" policy regarding impacts to streams and waterways and requires replacement of lost habitats of at least a 1:1 ratio.

California Endangered Species Act (CESA) – This legislation is similar to the federal ESA, however it is administered by the CDFW. The CDFW is authorized to enter into "memoranda of understanding" with individuals, public agencies, and other institutions to import, export, take, or possess state-listed species for scientific, educational, or management purposes. The CESA prohibits the take of state-listed species except as otherwise provided in state law. Unlike the federal ESA, the CESA applies the take prohibitions to species currently petitioned for state-listing status (candidate species). State lead agencies are required to consult with the CDFW to ensure that actions are not likely to jeopardize the continued existence of any state-listed species or result in the destruction or degradation of occupied habitat.

Section 2081 of the State Fish and Game Code – Under Section 2081 of the California Fish and Game Code, the CDFW authorizes individuals or public agencies to import, export, take, or possess state endangered, threatened, or candidate species in California through permits or memoranda of understanding. These acts, which are otherwise prohibited, may be authorized through permits or "memoranda of understanding" if (1) the take is incidental to otherwise lawful activities, (2) impacts of the take are minimized and fully mitigated, (3) the permit is consistent with regulations adopted in accordance with any recovery plan for the species in question, and (4) the applicant ensures suitable funding to implement the measures required by the CDFG. The CDFW shall make this determination based on the best scientific information available and shall include consideration of the species' capability to survive and reproduce.

California Environmental Quality Act (CEQA) – The basic goal of the California Environmental Quality Act (CEQA) is to retain a high-quality environment now and in the future. The specific goals are for California's public agencies to:

- Identify the significant environmental effects of their actions; and, either
- Avoid those significant environmental effects, where feasible; or
- Mitigate those significant environmental effects, where feasible.

CEQA applies to "projects" proposed to be undertaken or requiring approval by State and/or local governmental agencies. Projects are activities which have the potential to have a physical impact on the environment and may include the enactment of zoning ordinances, the issuance of conditional use permits and the approval of tentative subdivision maps. Where a project requires approvals from more than one public agency, the CEQA requires one of these public agencies to serve as the "lead agency."

A "lead agency" must complete the environmental review process required by the CEQA. The most basic steps of the environmental review process are:

- Determine if the activity is a "project" subject to the CEQA;
- Determine if the "project" is exempt from the CEQA;
- Perform an Initial Study to identify the environmental impacts of the project and determine whether the identified impacts are "significant." Based on its findings of "significance," the lead agency prepares one of the following environmental review documents:
 - Negative Declaration if it finds no "significant" impacts;
 - Mitigated Negative Declaration if it finds "significant" impacts but revises the project to avoid or mitigate those significant impacts;
 - Environmental Impact Report (EIR) if it finds "significant" impacts.

While there is no ironclad definition of "significance," Article 5 of the State CEQA Guidelines provides criteria to lead agencies in determining whether a project may have significant effects.

The purpose of an EIR is to provide state and local agencies and the general public with detailed information on the potentially significant environmental effects which a proposed project is likely to have and to provide ways in which those effects may be minimized and indicate alternatives to the project.

Sections of the State Fish and Game Code pertaining to the protection of birds – Section 3503 makes it unlawful to take, possess, or needlessly destroy the nest or eggs of any bird. Section 3505.5 makes it unlawful to take, possess, or destroy any birds in the order Falconiformes or Strigiformes (birds-of-prey, i.e.: owls, hawks, eagles, etc.) or to take, possess, or destroy the nest or eggs of any bird-of-prey. Section 3513 makes it unlawful to take or possess any migratory non-game bird as designated in the Migratory Bird Treaty Act (MBTA).

The Native Plant Protection Act (NPPA) – The NPPA includes measures to preserve, protect, and enhance rare and endangered native plant species. Definitions for "rare and endangered" are different from those contained in the CESA. However, the list of species afforded protection in accordance with the NPPA includes those listed as rare and endangered under the CESA. The NPPA provides limitations on take as follows: "no person will import into this state, or take, possess, or sell within this state" any rare or endangered native plants, except in accordance with the provisions outlined in the act. If a landowner is notified by the CDFW, pursuant to section 1903.5 that a rare or endangered plant species is growing on their property, the landowner shall notify the CDFW at least 10 days prior to the changing of land uses to allow the CDFW to salvage the plants.

Natural Community Conservation Planning (NCCP) Program – The NCCP, which is managed by the CDFW, is intended to conserve multiple species and their associated habitats, while also providing for compatible use of private lands. Through local planning, the NCCP planning process is designed to provide protection for wildlife and natural habitats before the environment becomes so fragmented or degraded by development and other factors that species listing are required under the CESA. Instead of conserving small, often isolated "islands" of habitat for just one listed species, agencies, local jurisdictions, and/or other interested parties have an opportunity through the NCCP to work cooperatively to develop plans that consider broad areas of land for conservation that would provide habitat for many species. Partners enroll in the programs and, by mutual consent, areas considered to have high conservation priorities or values are set aside and protected from development. Partners may also agree to study, monitor, and develop management plans for these high value "reserve" areas. The NCCP provides an avenue for fostering economic growth by allowing approved development in areas with lower conservation value.

2.1.3 Orange County

County of Orange (Central/Coastal) NCCP/HCP – The Natural Community Conservation Plan (NCCP) and Habitat Conservation Plan (HPC) is a comprehensive, multi-jurisdictional effort that includes central and coastal Orange County. The project site and the City of San Juan Capistrano are not included in the NCCP/HCP.

2.1.4 Cities

The project is located within City of San Juan Capistrano. The city also has a tree protection ordinance (City of San Juan Capistrano 9-2.349).

3.0 METHODS

3.1 Literature Review

A literature review was conducted to identify biological resources known from the vicinity (within an approximate 2-mile radius) of the project. This included review of literature and searches of the CDFW's California Natural Diversity Data Base (CNDDB) (CDFW 2019a), the California Native Plant Society's (CNPS) Inventory of Rare and Endangered Plants of California (CNPS 2019), Soil Survey data (USDA 2016), National Wetlands Inventory (USFWS 2019a), the Critical Habitat portal (USFWS 2019b), and pertinent documents from the Wood library and project files. A complete list of literature and references is included below.

3.2 Biological Resources and Habitat Assessment

The field reconnaissance survey of project area was conducted on January 24, 2019 by Wood senior biologist Nathan Moorhatch. The survey was done on foot. All flora and fauna detected (e.g., through direct observation, vocalizations, presence of scat, tracks, and/or bones) on the project site during the course of the survey were recorded in field notes and are included in Appendix B. Representative photographs of the project site are included in Appendix A. Mr. Moorhatch also monitored the ephemeral stream that passes through RMV Riding Park on January 30 and 31, 2019.

4.0 RESULTS

The literature review and field surveys revealed the following information about critical habitat, wetlands and waterways, soils, vegetation, and special status species in the project area.

4.1 Soils

Eight soil types are found within the survey area (Figure 3). The soils are dominated by sandy loams, well drained clays, and riverwash associated soil types. Of particular interest are the Riverwash and Corralitos loamy sand, both on the Hydric soils list for California (USDA, 2018).

4.2 Vegetation Communities

The vegetation communities were mapped using the Sawyer, Keeler-Wolf method which is recommended by CDFW as well as the California Native Plant Society (CNPS) (Figure 4). Some categories such as landscaping and developed areas are not defined as species associations in Sawyer, Keeler-Wolf.

4.2.1 Black Willow Thicket

This category represents the riparian community found onsite along San Juan Creek. This is a tree and shrub-dominated vegetation community that is composed largely of deciduous species that range from 5 to 20 feet in height. The most common and widespread species within black willow thicket are Gooddling's black willow (*Salix gooddingii*) and (*Baccharis salicifolia*). Other common shrub species include blue elderberry (*Sambucus nigra* ssp. *caerulea*), desert wild grape (*Vitis girdiana*), and arroyo willow (*Salix lasiolepis*). The project area contains large stands of the invasive giant reed (*Arundo donax*). Some areas within San Juan Creek are being actively controlled for giant reed (*Arundo donax*) through a County of Orange led effort.

4.2.2 Disturbed/Developed Land

This category represents areas that have been developed, cleared, or otherwise altered and include roadways, existing buildings, dressage arenas, and horse stables.

4.2.3 Landscaping

This category represents non-native vegetation including lawn, and planted shrubs and trees. Common plants observed include freeway iceplant (*Carpobrotus edulis*), Peruvian pepper tree (*Schinus molle*) and golden wattle (*Acacia longifolia*).

4.2.4 Upland Mustard and other Ruderal Forbs

This category represents the disturbed slopes in the southeast corner of the survey area south of the Riding Park. The area is highly disturbed and dominated by black mustard (*Brassica nigra*). Other non-native species observed include red-stemmed filaree (*Erodium cicutarium*), poison hemlock (*Conium maculatum*), and red brome (*Bromus madritensis* ssp. *rubens*).

4.2.5 Plants and Wildlife

Species encountered during field visits in the survey area included a mix of native and non-native (*) (introduced) species common to inland southern California and occurring in a wide variety of habitats. A complete list of the flora and fauna observed during the field visit is included in Appendix B.









Representative plant species observed included, but were not limited to, Goodding's black willow arroyo willow, mulefat (*Baccharis salicifolia*), Russian thistle (*Salsola tragus*), black mustard, redstem filaree, and red brome.

Representative vertebrate species included, but were not limited to, red-tailed hawk (*Buteo jamaicensis*), Anna's hummingbird (*Calypte anna*), mourning dove (*Zenaida macroura*), black phoebe (*Sayornis nigricans*), American crow (*Corvus brachyrhynchos*), red-winged blackbird (*Agelaius phoeniceus*), Audubon's cottontail (*Sylvilagus audubonii*), and California ground squirrel (*Otospermophilus beecheyi*).

4.3 Critical Habitat

Critical habitat is designated within the project area for the following federally listed species: arroyo toad (*Anaxyrus californicus*). Critical habitat for California gnatcatcher (*Polioptila californica*) and thread-leaved brodiaea (*Brodiaea filifolia*) has been designated within two miles of the project area (Figure 5 and Figure 6).

4.4 Special Status Biological Resources

Plant or animal taxa may be designated as having "special status" by the various regulatory agencies (i.e., USFWS and CDFW) and/or other conservation organizations (i.e., CNPS) due to declining populations, vulnerability to habitat change or loss, or because of restricted/limited distributions. Some species have been listed as "threatened" or "endangered" and/or a candidate for listing by the USFWS and/or the CDFW, and are thus protected by the federal and state Endangered Species Acts respectively. The literature review of the CNDDB, CNPS Inventory, and other biological reports identified a total of thirty-one (31) special status biological resources known from the vicinity of the project site (Figures 7-A and 7-B). These include nine (9) plants, one (1) vegetation communities, three (3) invertebrates, one (1) fish, two (2) amphibians, five (5) reptiles, eight (8) birds, and two (2) mammals.















Figure 7-B. CNDDB Map, Animals

4.5 Special Status Plant Species

Of the 9 special status plant species known from the general project area, 8 are assumed to have a low occurrence potential due to poor quality habitat. One special status plant, white rabbittobacco (*Pseudognaphalium leucocephalum*) is believed to have a moderate potential to occur onsite. Nuttall's scrub oak is considered absent from the project site.

Species	Status (F=Federal, C=California)	Habitat	Flowering Period	BSA Occurrence Probability
<i>Atriplex coulteri</i> Coulter's saltbush	F: ND C: S1S2 CNPS: 1B.2	Perennial herb, subshrub found in alkalie or clay soils in open sites and scrub	Mar-Oct	Low No suitable habitat
<i>Brodiaea filifolia</i> thread-leaved brodiaea	F: THR C: END , S1 CNPS: 1B.1	Grasslands and vernal pools with clay soils	Mar - June	Low No suitable habitat.
<i>Calochortus weedii var. intermedius</i> intermediate mariposa-lily	F: ND S: S2 CNPS: 1B.2	Dry, rocky, open slopes	June-July	Low No suitable habitat.
<i>Dudleya multicaulis</i> many-stemmed dudleya	F: ND S: S2 CNPS: 1B.2	Heavy clay soils in coastal plains and sandstone outcrops	May – June	Low No suitable habitat.
<i>Dudleya viscida</i> sticky dudleya	F: ND S: S2 CNPS: 1B.2	Bluffs and rocky cliffs	May - July	Low No suitable habitat.
<i>Imperata brevifolia</i> California satintail	F: ND S: S3 CNPS: 2B.1	Wet springs, meadows	Sept-May	Low No suitable habitat. Only one observation in Orange County.
Pseudognaphalium leucocephalum white rabbit-tobacco	F: ND S: S2 CNPS: 2B.2	Sandy or gravely benches, dry stream bottoms.	July-Oct	Moderate Suitable habitat is present. It was not observed during site visits.
<i>Quercus dumosa</i> Nuttall's scrub oak	F: ND S: S3 CNPS: 1B.1	Shrub generally found on sandy solis or sandstone near coast within chaparral or coastal sage scrub.	Mar-May	Absent No suitable habitat present. Species not observed during site visits.
Sidalcea neomexicana salt spring checkerbloom	F: ND S: S2 CNPS: 2B.2	Perennial herb found in alkaline springs and marshes	April-June	Low No suitable habitat.

 Table 1. Special Status Plant Species Potential for Occurrence

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KEY TO TABLE 1

Definitions of occurrence probability:

Moderate: Reported sightings in surrounding region, or site is within the known range of the species and habitat on the site is a type occasionally used by the species.

Low: Site is within the known range of the species but habitat on the site is rarely occupied by the species.

Absent: A focused study failed to detect the species, or, no suitable habitat is present.

Federal designations: (F = federal Endangered Species Act or federal agency designations)

END: Federally listed, Endangered THR: Federally listed, Threatened CAN: Candidate for Federal listing BLM = Bureau of Land Management Sensitive FS: Forest Service sensitive ND: No designation

<u>State designations</u>: (C = California Endangered Species Act or CDFG designations) END: State listed, Endangered THR: State listed, Threatened CAN: Candidate for State listing RARE: State listed, Rare FP: Fully Protected Species SSC: Species of Special Concern WL: Watch List Species ND: No designation

CDFW state rankings are a reflection of the overall condition of an element throughout its California range. The number after the decimal point represents a <u>threat</u> designation attached to the rank:

S1 = Critically Imperiled. Less than (<) 6 Element Occurrences (EOs) OR < 1,000 individuals OR < 2,000 acres

- S1.1 = very threatened
- S1.2 = threatened
- S1.3 = no current threats known

S2 = Imperiled. 6-20 EOs OR 1,000-3,000 individuals OR 2,000-10,000 acres

- S2.1 = very threatened
- S2.2 = threatened
- S2.3 = no current threats known
- S3 = Vulnerable. 21-80 EOs OR 3,000-10,000 individuals OR 10,000-50,000 acres
 - S3.1 = very threatened
 - S3.2 = threatened
 - S3.3 = no current threats known

California Native Plant Society (CNPS) designations (Rare Plant Ranks):

Primary Categories (Lists)

1A: Plants presumed extirpated in California and either rare or extinct elsewhere

1B: Plants rare, threatened, or endangered in California and elsewhere

- 2A: Plants presumed extirpated in California, but common elsewhere
- 2B: Plants rare, threatened, or endangered in California, but more common elsewhere
- 3: Plants about which more information is needed a Review List
- 4: Plants of limited distribution a Watch List
- Subdivisions within Categories (threat ranks)

0.1: Seriously threatened in California

- 0.2: Moderately threatened in California
- 0.3: Not very threatened in California

According to the CDFW (Special Plants): "all California Rare Plant Rank 1 and 2 and some Rank 3 and 4 plants may fall under Section 15380 of CEQA."

4.6 Special Status Vegetation Communities

One vegetation community, Southern Sycamore Alder Riparian Woodland is listed in the CNDDB within the project site. The vegetation with the riparian area of San Juan Creek would be better described as black willow thicket. Only one white alder tree was observed within the survey area.

Table 2. Special Status Vegetation Communities Potential for Occurrence

Community	Status (F=Federal, C=California)	Habitat	Occurrence Probability
Southern Sycamore Alder Riparian Woodland	F: ND C: S4 NCCP: No	A tall, open, woodland dominated by western sycamore and often white alder (<i>Alnus rhombifolia</i>).	Absent

KEY TO TABLE 2

Definitions of occurrence probability:

Absent: A focused study failed to detect the species, or, no suitable habitat is present.

<u>Federal designations</u>: (F = federal Endangered Species Act or federal agency designations) ND: No designation

<u>State designations</u>: (C = California Endangered Species Act or CDFG designations)

CDFW state rankings are a reflection of the overall condition of an element throughout its California range. The number after the decimal point represents a <u>threat</u> designation attached to the rank:

S4 = Apparently Secure. Uncommon but not rare in the state; some cause for long-term concern.

4.7 Special Status Animals

Invertebrates – Of the three special status invertebrates known from the study area, all three are thought to have a low probability of occurrence on the project site. There are not any suitable vernal pool areas for fairy shrimp found onsite. Wintering monarch butterflies are not expected to occur because there is a lack of milkweed, their main food source for the larva, and no large trees to be utilized as over-wintering roosts. None of these three species were observed during the site visits.

Fish – One special status fish species, arroyo chub (*Gila orcuttii*), has the potential to occur within the standing pools observed along San Juan Creek. No arroyo chub were observed onsite. Non-native mosquito fish were observed during the site visits.

Amphibians – Two special status amphibians, western spadefoot (*Spea hammondii*) and arroyo toad, have the potential to occur. The project site contains Critical Habitat for the arroyo toad at the northern edge of San Juan Creek, adjacent to the Arizona Crossing, and is adjacent to a larger designated critical habitat area upstream of the project area.

Reptiles – Of the five special status reptiles known from the vicinity of the project site, three could potentially occur. These include: (Belding's) orange-throated whiptail (*Aspidoscelis hyperythra*), coast (San Diego) horned lizard (*Phrynosoma blainvillii*), and two-striped gartersnake (*Thamnophis hammondii*). None of the three that may occur are listed as threatened and/or endangered. None were observed during the site visits.

Birds – Eight special status bird species are known to occur in the vicinity of the project site. One species, Cooper's hawk (*Accipiter cooperi*) was observed onsite. Four other species have a moderate to high potential to occur: white-tailed kite (*Elanus leucurus*), yellow-breasted chat (*Icteria virens*), yellow warbler (*Setophaga petechia*), and least bell's vireo (*Vireo bellii pusillus*). All native bird species are protected by the federal MBTA and by the state fish and game code. The federal Threatened coastal California gnatcatcher is not expected to occur on the project site due to lack of suitable coastal sage scrub habitat.

Mammals – Two special status mammal species are known to occur in the vicinity of the project site. Only pallid bat has a moderate potential to occur. The bats could use the riparian woodlands or the bridge adjacent to the project site for overnight roosting.

Species	Protective Status (F=Federal; C=California)	Habitat	Occurrence Probability
Invertebrates			
<i>Branchinecta</i> <i>sandiegonensis</i> San Diego fairy shrimp	F: END C: S2	Found in temporary pools in vernal pool habitat between Santa Barbra and Baja California.	Low No suitable habitat observed
Streptocephalus woottoni Riverside fairy shrimp	F: END C: S1S2	Found in vernal pools or other seasonal pools at least 30 centimeters in depth.	Low No suitable habitat observed
<i>Danaus plexippus</i> Monarch butterfly- Winter Pop	F: ND C: S2S3S1	Restricted to areas of Delhi sands with sparse vegetation	Low No milkweed observed. No know overwintering sites onsite.
Fish			
<i>Gila orcuttii</i> arroyo chub	F: FS C: SSC, S2	Native to streams from Malibu Creek to San Luis Rey River basin.	Low Some small pools present with mosquito fish. No arroyo chub observed.
Amphibians			
Anaxyrus californicus arroyo toad	F: END C: SSC, S2	Inhabits areas alongside creeks and rivers with shallow pebble-like rocks near sandy terrains.	Moderate Potential habitat was observed along San Juan Creek
Spea hammondii western spadefoot	F: BLM C: SSC, S3	Occurs primarily in grassland habitats, but can be found in valley-foothill hardwood woodlands. Vernal pools are essential for breeding and egg-laying.	Low No vernal pool habitat present. Mosquito fish present in standing pools in San Juan Creek.

Table 3. Special Status Animals Potential for Occurrence

Species	Protective Status (F=Federal; C=California)	Habitat	Occurrence Probability
Reptiles			
<i>Arizona elegans occidentalis</i> California Glossy Snake	F: ND C: SSC, S2	Inhabits arid scrub, rocky washes, grasslands, and chaparral. Prefer microhabitats of open areas and areas with soil loose enough for easy burrowing.	Low/Absent Suitable habitat is present along San Juan Creek.
Aspidoscelis hyperythra (Belding's) orange- throated whiptail	F: FS C: WL, S2S3	Prefers chaparral, coastal sage scrub, juniper woodland, and oak woodland.	Moderate Suitable habitat is present along San Juan Creek.
Crotalus ruber (northern) red- diamond rattlesnake	F: FS C: SSC, S3	Chaparral, woodland, grassland, & desert areas. occurs in rocky areas and dense vegetation. Needs rodent burrows, cracks in rocks or surface cover objects.	Low There is limited suitable habitat onsite
<i>Phrynosoma blainvillii</i> coast (San Diego) horned lizard	F: BLM C: SSC, S3S4	Occurs in many scrub and woodland habitats, grasslands; loose soils. Prefers open country, especially sandy areas, washes, and floodplains. Requires open areas for sunning, bushes for cover, ants.	Moderate Potential habitat present in sandy areas along San Juan Creek.
<i>Thamnophis</i> <i>hammondii</i> two-striped garter snake	F: BLM, FS C: SSC, S3S4	Highly aquatic. Only in or near permanent sources of water. Streams with rocky beds supporting willows or other riparian vegetation.	High Suitable habitat is present along San Juan Creek.
Birds			
<i>Accipiter cooperi</i> Cooper's hawk	F: MBTA C: WL, S4, FGC	Woodland, chiefly of open, interrupted or marginal type. Nest sites mainly in riparian growths of deciduous trees, as in canyon bottoms on river flood-plains; also, live oaks.	Present Observed onsite during 2018 surveys.
Agelaius tricolor tricolored blackbird	F: BCC, BLM, MBTA C: CAN , SSC, S1S2, FGC	Breeds near fresh water, in emergent wetland with tall, dense cattails or tules, also in thickets of shrubs or tall herbs. Feeds in grassland and cropland habitats.	Nesting: Low No suitable nesting or foraging habitat.
<i>Athene cunicularia</i> burrowing owl	F: BCC, BLM, MBTA C: SSC, S3, FGC	Occupies ground squirrel burrows in open, dry grasslands, agricultural, railroad rights- of-way, and margins of highways, golf courses, and airports. Often utilizes man- made structures, such as earthen berms, cement culverts, cement, asphalt, rock, or wood debris piles. Nests in burrows, drainpipes, and piles of debris in grasslands, scrub habitats, and agricultural areas.	Low Very limited habitat present
Elanus leucurus white-tailed kite	F: BLM, MBTA C: FP, S3S4, FGC	Rolling foothills and valley margins with scattered oaks & river bottomlands or marshes next to deciduous woodland. Open grasslands, meadows, or marshes for foraging close to isolated, dense-topped trees for nesting and perching.	Low Suitable foraging and nesting habitat is present
<i>Empidonax traillii extimus</i> southwestern willow flycatcher	F: END , MBTA C: END , S1, FGC	Breeds in mature riparian woodlands.	Low Riparian habitat is of low quality based on preferences of the species.

 Table 3.
 Special Status Animals Potential for Occurrence (continued)

Table 3. Special Status Animals Potential for Occur	rrence (continued)
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Species	Protective Status (F=Federal; C=California)	Habitat	Occurrence Probability
<i>Icteria virens</i> yellow-breasted chat	F: MBTA C: SSC, S3, FGC	Inhabits sage scrub in low-lying foothills and valleys, and sparse chaparral habitats.	Absent No potential habitat patches present in survey area.
<i>Polioptila californica</i> coastal California gnatcatcher	F: THR , MBTA C: SSC, S2, FGC	Inhabits sage scrub in low-lying foothills and valleys, and sparse chaparral habitats.	Absent No potential habitat patches present in survey area.
Setophaga petechia yellow warbler	F: BCC, MBTA C: SSC, S3S4, FGC	Riparian plant associations in close proximity to water. Also nests in montane shrubbery in open conifer forests in Cascades and Sierra Nevada. Frequently found nesting and foraging in willow shrubs and thickets, and in other riparian plants including cottonwoods, sycamores, ash,& alders	High Suitable breeding and foraging habitat is present along San Juan Creek.
<i>Vireo bellii pusillus</i> least Bell's vireo	F: END , MBTA C: END , S2, FGC	Inhabits riparian forests and willow thickets. Nests from central California to northern Baja California and winters in southern Baja California.	High Suitable breeding and foraging habitat is present along San Juan Creek.
Mammals			
Antrozous pallidus pallid bat	F: BLM, FS C: SSC, S3 WBWG: H	Deserts, grasslands, shrublands, woodlands & forests. Most common in open, dry habitats with rocky areas for roosting. Roosts must protect bats from high temperatures. Very sensitive to disturbance of roosting sites.	Moderate Potential habitat is present
Myotis yumanensis Yuma myotis	F: BLM, S C: S4 WBWG: LM	Occurs in variety of western lowland habitats, from arid thorn scrub to coniferous forest, but always close to standing water such as lakes and ponds. Roosts in caves, attics, buildings, mines, underneath bridges, and other similar structures.	Low Limited standing water and roosting habitat within the survey area.

KEY TO TABLE 3

Definitions of occurrence probability:

Occurs: Observed on the site by Amec Foster Wheeler biologists, or recorded on-site by other qualified biologists. *High:* Observed in similar habitat in region by qualified biologists, or habitat on the site is a type often utilized by the species and the site is within the known range of the species.

Moderate: Reported sightings in surrounding region, or site is within the known range of the species and habitat on the site is a type occasionally used by the species.

Low: Site is within the known range of the species but habitat on the site is rarely occupied by the species.

Absent: A focused study failed to detect the species, or, no suitable habitat is present.

Unknown: Distribution and habitat use has not been clearly determined.

Federal designations: (F = federal Endangered Species Act or federal agency designations)

END: Federally listed, Endangered

THR: Federally listed, Threatened

CAN: Candidate for Federal listing

MBTA: Migratory Bird Treaty Act

BEPA: Bald Eagle Protection Act (also protects Golden Eagles)

BCC: Birds of Conservation Concern BLM = Bureau of Land Management Sensitive

FS: Forest Service sensitive

ND: No designation

State designations: (C = California Endangered Species Act or CDFG designations)

END: State listed, Endangered THR: State listed, Threatened

CAN: Candidate for State listing RARE: State listed, Rare

FP: Fully Protected Species

SSC: Species of Special Concern

WL: Watch List Species

FGC: Bird species protected by Fish and Game Code

ND: No designation

CDFW state rankings are a reflection of the overall condition of an element throughout its California range. The number after the decimal point represents a <u>threat</u> designation attached to the rank:

- S1 = Critically Imperiled. Less than (<) 6 Element Occurrences (EOs) OR < 1,000 individuals OR < 2,000 acres
 - **S1.1** = very threatened
 - **S1.2** = threatened
 - **S1.3** = no current threats known
- S2 = Imperiled. 6-20 EOs OR 1,000-3,000 individuals OR 2,000-10,000 acres
 - **S2.1** = very threatened
 - S2.2 = threatened
 - S2.3 = no current threats known

S3 = Vulnerable. 21-80 EOs OR 3,000-10,000 individuals OR 10,000-50,000 acres

- S3.1 = very threatened
- S3.2 = threatened
- S3.3 = no current threats known
- S4 = Apparently Secure. Uncommon but not rare in the state; some cause for long-term concern.

S5 = Secure. Common, widespread, and abundant in the state.

SH = All known California sites are historical, not extant

Western Bat Working Group (WBWG) designations:

- H = High: Species which are imperiled or are at high risk of imperilment based on available information on distribution, status, ecology and known threats.
- M: = Medium: Species which warrant a medium level of concern and need closer evaluation, more research, and conservation actions of both the species and possible threats. A lack of meaningful information is a major obstacle in adequately assessing these species' status and should be considered a threat.
- L: = Low: Species for which most of the existing data support stable populations, and for which the potential for major changes in status in the near future is considered unlikely. There may be localized concerns, but the overall status of the species is believed to be secure. Conservation actions would still apply for these bats, but limited resources are best used on High and Medium status species.
- P: = Periphery: This designation indicates a species on the edge of its range, for which no other designation has been determined.

4.8 Wildlife Linkages

Wildlife linkages (corridors) link together areas of suitable habitat that are otherwise separated by rugged terrain, changes in vegetation, or human disturbance. The fragmentation of open space areas by urbanization creates isolated "islands" of wildlife habitat. In the absence of habitat linkages that allow movement to adjoining open space areas, various studies have concluded that some wildlife species, especially the larger and more mobile mammals, will not likely persist over time in fragmented or isolated habitat areas because they prohibit the infusion of new individuals and genetic information. Linkages effectively act as links between different populations of a species.

Linkages mitigate the effects of habitat fragmentation by: (1) allowing animals to move between remaining habitats, which allows depleted populations to be replenished and promotes genetic diversity; (2) providing escape routes from fire, predators, and human disturbances, thus reducing the risk that catastrophic events (such as fires or disease) will result in population or local species extinction; and (3) serving as travel routes for individual animals as they move within their home ranges in search of food, water, mates, and other needs.

The survey area was assessed to determine if a wildlife linkage occurs on or within a portion of the project site. The black willow thicket area along San Juan Creek is likely a wildlife corridor for animals moving from areas north of Ortega Highway to areas south of the project site. The site could also be used by aquatic species to move up or downstream during periods of high flow.

4.9 Wetlands and Jurisdictional Drainages

National Wetland Inventory (NWI) wetlands have been mapped in the project area (USFWS, 2018) and include (Figure 8):

- R3UBF Riverine, Upper Perennial, Unconsolidated Bottom, Semi-permanently Flooded
- R3USC Riverine, Upper Perennial, Unconsolidated Bottom, Seasonally Flooded
- PFOA Palustrine, Forested, Temporarily Flooded
- PSS/USA Palustrine, Scrub-Shrub/Unconsolidated Shore, Temporarily Flooded
- PSS/USC Palustrine, Scrub-Shrub/Unconsolidated Shore, Seasonally Flooded

One main drainage, San Juan Creek and several small drainage channels are present within the project area. A jurisdictional delineation report will also be prepared separately for the project.





5.0 DISCUSSION

The majority of the survey area contains disturbed or developed areas of the RMV Riding Park. The project impacts will be temporary impacts that occur during implementation of the restoration of the south bank of the San Juan Creek, removal of the Arizona crossing, and potential longterm maintenance of the ephemeral stream.

Indirect impacts are also a potential issue, primarily for birds. The MBTA and state code protect virtually all native birds, both common and special status species. Impacts to nesting birds would have the highest potential during the nesting period from February 1 to August 31. The majority of nesting in the black willow thicket area would most likely occur from mid-March through May.

6.0 RECOMMENDATIONS

Preconstruction surveys by a qualified biologist should always precede direct impacts in areas where potential special-status species habitat is present. A worker environmental awareness program (WEAP) should be presented prior to any work to outline issues and mitigation measures. Other standard best management practices (BMP) should be implemented to avoid impacts including trash management, project speed limits, and measures to protect the creek from sediment or chemical contamination. We recommend the following specific measures to reduce or eliminate potential impacts to listed and other special status species.

6.1 Soils

The only recommendation regarding soils applies to the riverwash areas which are present in San Juan Creek. Special attention should be given to preserve areas of sand and pebbles that could be utilized by arroyo toads. Also, the footprint of impacts by heavy equipment should be minimized as much as possible during the removal of the Arizona Crossing.

6.2 Vegetation Communities

Access to the work areas should be planned to minimize impacts to existing vegetation, including native stands of black willow and mulefat.

6.3 Nesting Birds

Impacts to nesting birds, both direct and indirect, can be minimized or eliminated by conducting work activities outside of the local breeding season. Although nesting can occur in any month in Southern California, in the project area breeding would primarily be expected from about February 1st through August 31st. Work from about September 1st through January 31st would therefore be expected to avoid most nesting activity. If work must be done during the breeding season, potential nesting areas should be examined by a qualified biologist prior to disturbance, especially where there could be any direct impacts. If active nests are found, they should be avoided until young have fledged. While there is no established protocol for nest avoidance, when consulted the CDFW generally recommends avoidance buffers of about 500 feet for raptors and threatened/endangered species and 100 - 300 feet for other birds. The use of noise attenuation

barriers when adjacent to nesting habitat or known nests may allow such buffers to be reduced or eliminated.

6.4 Special Status Biological Resources

6.4.1 Special Status Plant Species

Only one CNPS list 2B.2 plant, white rabbit-tobacco is thought to have a moderate potential to occur within the project site. It is anticipated that additional surveys will be needed during the blooming period to determine if the species is present (July to October).

6.4.2 Special Status Vegetation Communities

Any impact to the black willow thicket habitat will be temporary as part of the installation of bank restoration measures. Access to the work areas should be planned to minimize impacts to existing vegetation.

6.4.3 Special Status Animals

Amphibians – Only two special status amphibians, arroyo toad and western spadefoot, have potential to occur within the project site. Due to the Critical Habitat on site and suitable breeding habitat, additional protocol surveys for arroyo toad are recommended.

Birds –For listed/candidate species which occur or potentially occur:

• Least Bell's vireo, has a high potential to occur in the black willow thicket along San Juan Creek. Focused surveys for the species are recommended to be conducted in the spring. The survey will determine if the project site is utilized for foraging or nesting.

6.5 Critical Habitat

The majority of the proposed restoration area is located outside of the Critical Habitat Area for arroyo toad (see Figure 5). Direct impacts are unavoidable to a small area at the north end of the Arizona Crossing and the bank restoration area nearest to the Ortega Highway Bridge. Due to impacts in Critical Habitat and requirements for USACE permits for the proposed work, focused surveys and/or consultation with USFWS may be required.

6.6 Wetlands and Jurisdictional Drainages

Impacts to federal and state regulated waters will occur as a result of the proposed project. It is likely that permits will be required from the USACE and RWQCB under the Clean Water Act, and from CDFW under the Section 1602 of the Fish and Game Code.

6.7 Survey Protocols for Special Status Plants and Animals

It is recommended to complete protocol surveys for both least Bell's vireo and arroyo toad due to suitable habitat. Copies of protocols that will be utilized for focused surveys (if required) are attached as Appendix C.

7.0 LITERATURE CITED AND REFERENCES

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APPENDIX A

SITE PHOTOGRAPHS



Photo 1. Black willow thicket habitat under the Ortega Highway bridge along San Juan Creek.



Photo 2. Clear Arundo area within the black willow thicket area along San Juan Creek.



Photo 3. Small pool observed within San Juan Creek.



Photo 4. Horse stables within the Rancho Mission Viejo Riding Park.



Photo 5. Arizona Crossing to be removed in San Juan Creek.



Photo 6. Drainage channel and landscaping within the Rancho Mission Viejo Riding Park.



Photo 7. Upland mustard and other ruderal forbs area southeast of the riding park.



Photo 8. Landscaping and drainage channel area.

Rancho Mission Viejo Riding Park Biological Resources Assessment March 2019

APPENDIX B

PLANT AND VERTEBRATE SPECIES LIST

Appendix B: Plant Species Compendia

Scientific Name	Common Name	Special Status
EUDICOTS		
Adoxaceae - Muskroot family		
Sambucus nigra	Blue elderberry	
Aizoaceae - Fig-marigold family		
* Carpobrotus edulis	Freeway iceplant	
Anacardiaceae - Sumac Or Cashew family		
Rhus ovata	Sugar bush	
* Schinus molle	Pepper tree	
Toxicodendron diversilobum	Western poison oak	
Apiaceae - Carrot family		
* Conium maculatum	Poison hemlock	
Asteraceae - Sunflower family		
Artemisia californica	California sagebrush	
Artemisia douglasiana	Mugwort	
Baccharis pilularis	Coyote brush	
Baccharis salicifolia	Mule fat	
* Centaurea melitensis	Tocalote	
* Encelia farinosa	Brittlebush	
* Erigeron bonariensis	Flax-leaved horseweed	
Heterotheca sp.	False goldenaster	
Isocoma menziesii	Coastal goldenbush	
* Lactuca serriola	Prickly lettuce	
Lepidospartum squamatum	California broomsage	
Pleurocoronis pluriseta	Bush arrowleaf	
Pluchea sericea	Arrow-weed	
Pseudognaphalium sp.	Cudweed	
* Sonchus asper	Prickly sow thistle	
* Sonchus oleraceus	Common sow thistle	
* Taraxacum officinale	Common dandelion	
Xanthium strumarium	Cocklebur	
Betulaceae - Birch family		
Alnus rhombifolia	White alder	
Boraginaceae - Borage family		
Phacelia sp.	Phacelia	
Brassicaceae - Mustard family		
* Brassica nigra	Black mustard	

Scientific Name	Common Name	Special Status
* Hirschfeldia incana	Shortpod mustard	
Cactaceae - Cactus family		
* Opuntia ficus-indica	Mission prickly-pear	
Opuntia littoralis	Coastal prickly-pear	
Chenopodiaceae - Goosefoot family		
* Chenopodium album	Lamb's quarters	
* Salsola tragus	Russian thistle, tumbleweed	
Cleomaceae - Spiderflower family		
Peritoma arborea	Bladderpod	
Cucurbitaceae - Gourd family		
Marah macrocarpa	Chilicothe	
Euphorbiaceae - Spurge family		
Ditaxis neomexicana	Common ditaxis	
* Ricinus communis	Castorbean	
Fabaceae - Legume family		
* Acacia longifolia	Sydney golden wattle	
Fagaceae - Oak family		
Quercus agrifolia	Coast live oak	
Geraniaceae - Geranium family		
* Erodium cicutarium	Redstem filaree	
Grossulariaceae - Gooseberry family		
Ribes aureum	Golden currant	
Lamiaceae - Mint family		
* Marrubium vulgare	Horehound	
Malvaceae - Mallow family		
* Malva parviflora	Cheeseweed, little mallow	
Montiaceae - Miner's Lettuce family		
Claytonia perfoliata	Miner's lettuce	
Oxalidaceae - Oxalis family		
* Oxalis pes-caprae	Bermuda buttercup	
Papaveraceae - Poppy family		
Dendromecon rigida	Bush poppy	
Platanaceae - Plane Tree, Sycamore family		
Platanus racemosa	Western sycamore	
Polygonaceae - Buckwheat family		
Eriogonum fasciculatum	California buckwheat	
Rosaceae - Rose family		
Rosa californica	California rose	

Scientific Name	Common Name	Special Status
Salicaceae - Willow family		
Salix exigua	Narrowleaf willow	
Salix gooddingii	Goodding's black willow	
Salix lasiolepis	Arroyo willow	
Solanaceae - Nightshade family		
Datura wrightii	Sacred thorn-apple	
* Nicotiana glauca	Tree tobacco	
Solanum xanti	Chaparral nightshade	
Urticaceae - Nettle family		
Urtica dioica	Stinging nettle	
Viscaceae - Mistletoe family		
Phoradendron leucarpum	American mistletoe	
Vitaceae - Grape family		
Vitis girdiana	Desert wild grape	
MONOCOTS		
Cyperaceae - Sedge family		
* Cyperus involucratus	Unbrella plant	
Poaceae - Grass family		
* Bromus madritensis ssp. rubens	Red brome	
* Cortaderia jubata	Purple pampas grass	
Hordeum sp.	Barley	
Typhaceae - Cattail family		
Typha latifolia	Broad-leaved cattail	

Common Name

Legend

*= Non-native or invasive species

Special Status:

Federal: FE = Endangered FT = Threatened

State: SE = Endangered ST =Threatened

CRPR – California Rare Plant Rank
1A. Presumed extinct in California
1B. Rare or Endangered in California and elsewhere
2. Rare or Endangered in California, more common elsewhere
3. Plants for which we need more information - Review list
4. Plants of limited distribution - Watch list

Threat Ranks

.1 - Seriously endangered in California

.2 – Fairly endangered in California

Appendix B: Wildlife Species Compendia

Scientific Name	Common Name	Special Status
INVERTEBRATES		
Insects		
Sympetrum corruptum	Variegated Meadowhawk	
VERTEBRATES		
Fish		
Gambusia affinis	Western Mosquitofish	
Amphibians		
Pseudacris hypochondriaca	Baja California Tree Frog	
Reptiles		
Sceloporus occidentalis	Western Fence Lizard	
Birds		
Cathartes aura	Turkey Vulture	
Accipiter cooperii	Cooper's Hawk	
Buteo lineatus	Red-shouldered Hawk	
Buteo jamaicensis	Red-tailed Hawk	
Zenaida macroura	Mourning Dove	
Aeronautes saxatalis	White-throated Swift	
Calypte anna	Anna's Hummingbird	
Selasphorus sasin	Allen's Hummingbird	
Melanerpes formicivorus	Acorn Woodpecker	
Picoides nuttallii	Nuttall's Woodpecker	
Colaptes auratus	Northern Flicker	
Sayornis nigricans	Black Phoebe	
Sayornis saya	Say's Phoebe	
Tyrannus vociferans	Cassin's Kingbird	
Corvus brachyrhynchos	American Crow	
Corvus corax	Common Raven	
Psaltriparus minimus	Bushtit	
Thryomanes bewickii	Bewick's Wren	
Regulus calendula	Ruby-crowned Kinglet	
Sialia mexicana	Western Bluebird	
Catharus guttatus	Hermit Thrush	
Mimus polyglottos	Northern Mockingbird	

Scientific Name	Common Name	Special Status
Toxostoma redivivum	California Thrasher	
*Sturnus vulgaris	European Starling	
Bombycilla cedrorum	Cedar Waxwing	
Vermivora celata	Orange-crowned Warbler	
Dendroica coronata	Yellow-rumped Warbler	
Geothlypis trichas	Common Yellowthroat	
Pipilo maculatus	Spotted Towhee	
Passerculus sandwichensis	Savannah Sparrow	
Melospiza melodia	Song Sparrow	
Zonotrichia leucophrys	White-crowned Sparrow	
Euphagus cyanocephalus	Brewer's Blackbird	
*Molothrus ater	Brown-headed Cowbird	
Carpodacus mexicanus	House Finch	
Carduelis psaltria	Lesser Goldfinch	
Mammals		
Sylvilagus audubonii	Desert Cottontail	
Spermophilus beecheyi	California Ground Squirrel	
Canis latrans	Coyote	
Procyon lotor	Northern Raccoon	
Lynx rufus	Bobcat	

Legend

*= Non-native or invasive species

Special Status:

Federal: FE = Endangered FT = Threatened

State: SE = Endangered ST =Threatened CSC = California Species of Special Concern CFP = California Fully Protected Species Rancho Mission Viejo Riding Park Biological Resources Assessment March 2019

APPENDIX C

SURVEY PROTOCOLS



United States Department of the Interior

FISH AND WILDLIFE SERVICE

May 19, 1999

SURVEY PROTOCOL FOR THE ARROYO TOAD

The following guidelines are provided to facilitate accurate assessments of the presence or absence of the federally listed endangered arroyo toad (*Bufo microscaphus californicus*). Accurate survey data are needed to provide the U.S. Fish and Wildlife Service (Service) with sufficient information to respond to requests for Federal permits and licenses. Currently, surveys performed in accordance with these guidelines will not require a permit under section 10(a)(1)(A) of the Endangered Species Act of 1973, as amended. However, permits to conduct arroyo toad surveys may be required in the future. In all cases, extreme care must be taken when conducting surveys to avoid inadvertently injuring or killing toads, or damaging their habitat. These guidelines are not meant to be used for long-term monitoring of projects or the overall status of populations; guidelines for such monitoring efforts should be developed with the assistance of the Service for specific cases.

The Service recommends that the following survey guidelines be used to determine if arroyo toads are present in the vicinity of proposed activities, but cautions that negative surveys during a year of severe weather (e.g., drought, extended rainy season, cold weather) may be inconclusive. Contact the appropriate field office (addresses and phone numbers below) before conducting surveys for additional information.

- 1) Areas within one kilometer (1 km) of arroyo toad sites (documented by the presence of eggs, larvae, juveniles, or adults) that have suitable habitat shall be presumed to have arroyo toads.
- 2) If the sole purpose of surveys is to determine the presence or absence of the arroyo toad, surveys shall cease immediately upon determination that arroyo toad eggs, larvae, juveniles, or adults are present in the survey area. The arroyo toad locations shall be recorded on a USGS 1:24,000 (7.5 minute) map.
- 3) To be reasonably confident that arroyo toads are not present at a site, at least six (6) surveys must be conducted during the breeding season, which generally occurs from

March 15 through July 1, with at least seven (7) days between surveys. Extreme weather conditions can cause variations in the breeding season; these conditions should be fully considered when developing a schedule of surveys. If uncertainty exists as to whether environmental conditions are suitable (see guideline #9 below), contact the appropriate field office for further information.

- 4) At least one survey shall be conducted per month during April, May, and June.
- 5) Surveys shall include both daytime and nighttime components conducted within the same 24-hour period (except when arroyo toads have been detected in the survey area).
- 6) Daytime surveys shall include an assessment and mapping of: a) arroyo toad habitat suitability, and b) the presence of arroyo toad eggs, larvae, or juveniles. Extreme caution must be used to avoid crushing arroyo toads that are burrowed into sand bars and banks, or lodged in depressions in the substrate (sand, gravel, soil). Arroyo toads will use trails and roads up to several hundred meters from breeding sites while foraging; therefore, caution must be taken to not disturb, injure, or kill arroyo toads when using these roads and trails.
- 7) Daytime surveys shall be conducted by walking slowly along stream margins and in adjacent riparian habitat, visually searching for (but not disturbing) eggs, larvae, and juveniles. If necessary, surveyors may walk within the stream, taking care not to disturb or create silt deposits within breeding pools. If stream crossings are necessary, these should be on the downstream ends of potential breeding pools or in fast-flowing channels to minimize the likelihood of stirring up silt deposits. Arroyo toad eggs are usually laid in shallow water (less than four inches deep), and are susceptible to being smothered by silt that may be raised by walking in or across breeding pools.
- 8) Nighttime surveys (assuming eggs, larvae, and/or juveniles have not been detected) shall be conducted by walking slowly and carefully on stream banks. Surveyors should stop periodically and remain still and silent for approximately 15 minutes at appropriate sites to wait for arroyo toads to begin calling. The same cautions used for daytime surveys to avoid disturbing, injuring, or killing arroyo toads shall be incorporated.
- 9) Nighttime surveys must be conducted between one hour after dusk and midnight, when air temperature at dusk is 55 degrees Fahrenheit or greater. Surveys should not be conducted during nights when a full or near-full moon is illuminating the survey area or during adverse weather conditions such as rain, high winds, or flood flows.
- 10) Nighttime surveys must be conducted as silently as possible, because talking or other human-generated noises may cause arroyo toads to stop calling or leave the creek. Strong headlights or flashlights may be used to visually locate and identify adult arroyo toads, and flash photography may be used to document sightings of solitary individuals; otherwise lighting should be kept to a minimum.

- 11) Pairs of arroyo toads are very sensitive to disturbances, particularly waves or ripples (calling males are less easily disturbed). Therefore, surveyors must not enter the water near amplexing or courting pairs, and must immediately leave the vicinity upon their discovery.
- 12) A final report, to be submitted within 30 days of each field season or positive survey shall be prepared that includes survey dates and times, names of surveyor(s), air temperature, estimated wind speed, lighting conditions, a description of the survey methods used, and survey locations plotted on a USGS 1:24,000 (7.5 minute) map.
- 13) The results of a field survey may not be valid for any of the following reasons:
 a) surveys were conducted in a manner inconsistent with this protocol, b) surveys were incomplete, c) surveys were conducted during adverse conditions or during a season of severe weather conditions, or d) reporting requirements were not fulfilled. In such cases, the Service may request that additional surveys be conducted.

The final report should be provided to the appropriate Service field office:

For surveys in Monterey, San Luis Obispo, Santa Barbara, and Ventura Counties, Los Angeles County west of Highway 405, and the desert portions of Los Angeles and San Bernardino Counties, reports should be sent to the Ventura Fish and Wildlife Office, 2493 Portola Road, Suite B, Ventura, California 93003 (phone: (805) 644-1766).

For surveys in Los Angeles County east of Highway 405 and south of the desert, Orange, Riverside, Imperial, San Diego, and montane and cismontane San Bernardino Counties, reports should be sent to the Carlsbad Fish and Wildlife Office, 2730 Loker Avenue West, Carlsbad, California 92008 (phone: (760) 431-9440).

If a surveyor thinks that a specific project warrants alterations in this protocol, the Service should be contacted prior to the onset of surveys to discuss and possibly grant permission for proposed modifications. We would appreciate receiving any comments or ideas on these guidelines or recommendations for their improvement. For additional information, please contact the Ventura Fish and Wildlife Office at (805) 644-1766 or the Carlsbad Fish and Wildlife Office at (760) 431-9440.

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ield Supervisor



United States Department of the Interior

FISH AND WILDLIFE SERVICE Ecological Services Carlsbad Fish and Wildlife Office 2730 Loker Avenue West



LEAST BELL'S VIREO SURVEY GUIDELINES

Carlsbad, California 92008

The following suggested guidelines are provided to facilitate accurate assessments of the presence/absence of the State and federally endangered least Bell's vireo (*Vireo bellii pusillus*, vireo), to provide the Fish and Wildlife Service with sufficient information to adequately respond to requests for applicable Federal permits and licenses, and to fulfill our mandate to conserve and recover the species. Currently, a recovery permit pursuant to section 10(a)(1)(A) of the Endangered Species Act is not required to conduct presence/absence surveys for the vireo, as long as this protocol is utilized and vocalization tapes are <u>not</u> used. These guidelines include minor modifications to our February 1992 guidelines and provide clarification of what we have been verbally recommending.

- Under normal circumstances, all riparian areas and any other potential vireo habitats should be surveyed at least eight (8) times during the period from April 10 to July 31. However, we may concur, on a case by case basis, with a reduced effort if unusual circumstances dictate that this is a prudent course of action. For instance, intensive surveys of small, marginal or extralimital habitats by experienced personnel may well result in defensible conclusions that eight (or more) individual survey are unnecessary. Under such unusual circumstances, we will consider requests for reductions in the prescribed number of individual surveys. In any case, site visits should be conducted at least 10 days apart to maximize the detection of, for instance, late and early arrivals, females, particularly "non vocal" birds of both sexes, and nesting pairs.
- 2. Although the period from April 10 to July 31 encompasses the period during which most vireo nesting activity occurs, eight surveys are generally sufficient to detect most (if not all) vireo adults in occupied habitats. Precise vireo censuses and estimations of home range likely will not be possible unless surveys are conducted outside of this time window. Although focused surveys conducted in accordance with these guidelines substantially reduce the risk of an unauthorized take* that could potentially occur as a result of land development or other projects, individual project proponents may wish to conduct surveys that are more rigorous than those that would otherwise result from strict adherence to these survey guidelines. If additional information (e.g., extent of occupied habitat, total numbers of adult and juvenile vireos in study area) is desired or necessary, surveys should be extended to August 31 and conducted in such a manner as to collect the data necessary to prepare reports that reflect the methods and standards established in the current scientific literature on this subject. In particular, information collected after July

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15 will reflect a broader extent to the riparian habitat and other adjacent habitat types that the vireo typically utilizes during the latter phase of the breeding season, especially when the young become independent of the adults.

3. Surveys should be conducted by a qualified biologist familiar with the songs, whisper songs, calls, scolds, and plumage characteristics of adult and juvenile vireos. These skills are essential to maximize the probability of detecting vireos and to avoid potentially harassing the species in occupied habitats.

- 4. Surveys should be conducted between dawn and 11:00 a.m. Surveys should not be conducted during periods of excessive or abnormal cold, heat, wind, rain, or other inclement weather that individually or collectively may reduce the likelihood of detection.
- 5. Surveyors should not survey more than 3 linear kilometers or more than 50 hectares of habitat on any given survey day. Although surveyors should generally station themselves in the best possible locations to hear or see vireos, care should be taken not to disturb potential or actual vireo habitats and nests or the habitat of any sensitive or listed riparian species.
- 6. All vireo detections (e.g., vocalization points, areas used for foraging, etc.) should be recorded and subsequently plotted to estimate the location and extent of habitats utilized. These data should be mapped on the appropriate USGS quadrangle map.
- 7. Data pertaining to vireo status and distribution (e.g., numbers and locations of paired or unpaired territorial males, ages and sexes of all birds encountered) should be noted and recorded during each survey. In addition, surveyors should look for leg bands on vireo adults and juveniles if, in fact, it is possible to do so without disturbing or harassing the birds. If leg bands or other markers are observed, then surveyors should record and report the detection and associated circumstances to us by telephone, facsimile, or electronic mail as soon as possible. Reports should include the colors and relative locations of any and all bands detected, the age and sex of the marked bird, and the precise location of the detection.
- 8. The numbers and locations of all brown-headed cowbirds (*Molothrus ater*) detected within vireo territories should be recorded during each survey and subsequently reported to us. In addition, all detections of the State and federally endangered southwestern willow flycatcher (*Empidonax trallii extimus*, flycatcher) and State endangered yellow-billed cuckoo (*Coccyzus americanus*, cuckoo) should be recorded and reported. Any and all cuckoo and flycatcher adults, young, or nests should not be approached, and taped vocalizations of these species should not be used unless authorized in advance by scientific permits to take* issued by us (if appropriate) and the California Department of Fish and Game. Flycatcher presence/absence surveys require a recovery permit issued by us per section 10(a)(1)(A) of the Endangered Species Act.

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- 9. To avoid the potential harassment of vireos, flycatchers, and cuckoos resulting from vireo surveys, other riparian species survey efforts, or multiple surveys within a given riparian habitat patch, detections of these three species should be reported to us as soon possible by telephone, facsimile, or electronic mail.
- A final report (including maps) should be prepared that depicts survey dates and times 10. and includes descriptions or accounts of the methods, locations, data and information identified in preceding sections.
- This final report should be provided to us (at the letterhead address) and to the local 11. office of the Department of Fish and Game within 45 calendar days following the completion of the survey effort. Additionally, a summary of all vireo survey efforts conducted during the calendar year should be submitted to each of the above offices by January 31 of the following year.

Should you have data or information to report, or have any questions regarding these survey guidelines, please contact Christine Moen (christine moen@fws.gov), or Loren Hays (loren hays@fws.gov) of my staff at (760) 431-9440 (facsimile 760-431-9624), or John Gustafson (jgustafs@hq.dfg.ca.gov) with the Department of Fish and Game at (916) 654-4260 (facsimile 916-653-1019).

Sincerely,

Ken S. Berg Acting Field Supervisor

* The term "take," as defined in Section 3, paragraph 18 of the Endangered Species Act of 1973 as amended (Act), means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to engage in any such conduct. "Take" (specifically "harass") is further defined to mean "an act or omission which creates the likelihood of injury to wildlife by annoying it to such an extent as to significantly disrupt normal behavioral patterns, which include, but are not limited to, breeding, feeding, and sheltering" "Take" (specifically "harm") is further defined as an "act which actually kills or injures wildlife. Such act may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavior patterns, including breeding feeding or sheltering" (50 CFR 17.3). Please be advised that the take of the vireo and other listed species is prohibited by section 9 of the Act unless authorized by permits issued pursuant to section 7 or section 10 to the Act.