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September 7, 2021

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Subject: Biological Survey Report for the Reservoirs 4711-3 and 4711-4 Project, Indio Hills, Riverside County, California

Dear Ms. Meyerhoff:

This Biological Survey Report (Report) describes the results of a biological field survey performed for the Coachella Valley Water District (CVWD) Reservoirs 4711-3 and 4711-4 Project (Project), located on a 3.67-acre parcel (Assessor Parcel Number [APN] 750-130-005) in the area of Indio Hills, Riverside County, California. The Report summarizes the results of the reconnaissance-level field survey, which was conducted by a Wood Environment & Infrastructure Solutions, Inc. (Wood) staff biologist to: (1) review and confirm existing vegetation and habitat conditions at the Project site; and (2) to identify whether there is any potential for federally listed species to occur on the Project site. Attached to this Report is a resource list from the U.S. Fish and Wildlife Service (USFWS) Installation Planning and Consultation (IPaC) System describing federally listed species and federally designated critical habitat within the vicinity of Project site (see **Appendix A**). The Report states the results of the reconnaissance-level field survey and makes appropriate effect determinations pursuant to the Endangered Species Act. As discussed in further detail below, with the implementation of the recommendations provided in this Report, the proposed Project would have *no effect* on special status species, including federally listed species pursuant to the Endangered Species Act.

Wood's effort supplements the previously prepared *Biological Survey Report for Dillon Road Transmission Pipeline Replacement Phase II Project* (CVWD 2015), which included a survey of the Project site but is now greater than 5 years old (see **Appendix D**).

Project Location

The Project site is located in the northwest portion of CVWD's service area within the unincorporated community of Indio Hills, Riverside County, California approximately 0.5 miles north of the intersection of 30th Avenue and Sunny Rock Road. The Project site is located within the southwest corner of APN 750-130-005, a 3.67-acre, CVWD-owned property located within a portion of Section 11, Township 4 south, Range 7 east, San Bernardino Base and Meridian (see **Figure 1**).

The Project site is located on a broad alluvial fan south of the Little San Bernardino Mountains. Elevations range at the Project site from approximately 1,140 to 1,380 feet above mean sea level (MSL). Soils in the area are comprised of well-drained Carrizo stony sand (2 to 9 percent slopes) (U.S. Department of Agriculture [USDA] 2020). The Project site is located within the Whitewater River watershed and is

traversed by ephemeral streambed channels. These ephemeral streambed channels are generally dry throughout the year but convey water from upstream areas during storm events (WEST Consultants, Inc. 2020; Wood 2021). The Project site is also located adjacent to the *Indio Hills/Joshua Tree National Park Linkage Conservation Area* and *Desert Tortoise and Linkage Conservation Area* under the Coachella Valley Multiple Species Habitat Conservation Plan (CVMSHCP) (Coachella Valley Association of Governments [CVAG] 2019).

Project Description

The proposed Project includes the construction of two 1,000,000-gallon (1MG) aboveground welded-steel tanks (Reservoirs 4711-3 and 4711-4), followed by the demolition of the two existing 100,000-gallon aboveground bolted-steel tanks (Reservoirs 4711-1 and 4711-2), which were originally constructed in 1993 and 1999. The construction of the proposed Reservoirs 4711-3 and 4711-4 would include the following components:

- Excavation, grading, soil compaction, and construction of two 76-foot diameter by 5-foot deep foundations;
- Construction of two 1MG welded-steel tanks;
- Construction of all required aboveground and buried appurtenances (e.g., water meters, valves, 18-inch diameter connection to the existing Dillon Road Transmission Pipeline, etc.); and
- Construction of all required infrastructure (e.g., riprap revetment north/upstream of the new reservoirs, perimeter chain-link fence, etc.).

Following the construction and initial operation of proposed Reservoirs 4711-3 and 4711-4, the two existing bolted-steel tanks (Reservoirs 4711-1 and 4711-2) and associated appurtenances and infrastructure would be demolished and removed from the Project site. This demolition would include the removal of existing aboveground meters, valves, and pipelines as well as the existing riprap revetment and perimeter chain-link fence. The buried pipelines associated with the existing tanks may be removed or abandoned in place.

CVWD is a California Special District formed in 1918 to protect and conserve local water sources to the Coachella Valley. The District provides irrigation and domestic drinking water, collects and recycles wastewater, provides regional storm water protection, replenishes the groundwater basin and promotes water conservation. The proposed Project would restore and improve water storage infrastructure and ensure reliable and sustainable domestic water supply and fire flow protection to CVWD's customers within the Sky Valley Domestic Water Production Zone / Indio Hills Pressure Zone, which serves the unincorporated community of Indio Hills.

Survey Methods

Prior to the reconnaissance-level field survey, special status biological resources present or potentially present on the Project site were identified through a literature search that included a review of the California Department of Fish and Wildlife (CDFW) California Natural Diversity Database (CNDDB) RareFind 5 Application (2021), California Native Plant Society (CNPS) Inventory of Rare, Threatened, and Endangered Plants of California (2021), and the U.S. Fish and Wildlife Service (USFWS) Information for Planning and Consultation (IPaC) System (2021). The scientific and common names for wildlife used in this report are from the CVMSHCP (CVAG 2019), California Bird Records Committee Checklist (2020), CDFW's

Complete List of Amphibian, Reptile, Bird and Mammal Species in California (2016), CDFW's Special Animals List (2020a), and CDFW's Special Vascular Plants, Bryophytes, and Lichens List (2020b). The vegetation nomenclature used in this report is based on The Manual of California Vegetation, Second Edition (Sawyer, Keeler-Wolf and Evens 2009) pursuant to California Fish and Game Code Section 1940. A general reconnaissance-level field survey of the Project site was conducted on January 8, 2021 by Wood senior biologist Dale Maeister. During the reconnaissance-level field survey, existing vegetation communities and potential habitat for federally listed and state-listed sensitive species were assessed.

Survey Results

On-Site Conditions

The entire Project site contains creosote scrub habitat and contains sandy, gravelly soils. The general conditions of the Project site are shown in **Appendix A**.

Dominant species include creosote bush (*Larrea tridentata*), burrowbrush (*Ambrosia dumosa*), burro weed (*Ambrosia salsola*), brittlebush (*Encelia farinosa*), sweetbush (*Bebbia juncea*), and Mojave rabbitbrush (*Ericameria paniculata*).

Wood biologists have conducted extensive studies in the vicinity of the Project site and are familiar with the general area and typical wildlife of creosote scrub habitat. Due to the time of year (i.e., January) and the time of day (i.e., early morning) when the reconnaissance-level survey was conducted, little wildlife was observed or detected. The only vertebrate species / sign noted during the field visits were mourning dove (*Zenaida macroura*), Costa's hummingbird (*Calypte costae*), Say's phoebe (*Sayornis saya*), and common raven (*Corvus corax*). Desert woodrat (*Neotoma lepida*) nests, and coyote (*Canis latrans*) tracks and scat were also observed.

Sensitive Resources

A comprehensive list of regionally-occurring special status species and sensitive natural communities was compiled from a 5-mile buffer of the Project site containing records from the CNDDDB RareFind 5 Application (CDFW 2021) and a search of the CNPS Inventory (CNPS 2021), and USFWS IPaC System (2021) (see **Appendix B** and **Appendix C**). Habitats present in the study area were compared to the habitat requirements of the regionally occurring special status species and used to determine which of these species had the potential to occur on-site.

Definitions of Occurrence Probability

Occurs:	Observed on-site by the Wood biologist, or previously observed on-site by other qualified biologists.
High:	Previously observed within similar habitat in region by qualified biologists; or the site is located within the known range of the species and the habitat on-site is a type that is often utilized by the species.
Moderate:	Previously observed in the region by qualified biologists; or the site is located within the known range of the species and the habitat on-site is a type that is occasionally used by the species.
Low:	The site is within the known range of the species but the habitat on-site is rarely used by the species.
Absent:	A focused study failed to detect the species; or no suitable habitat is present.

Table 1 through **Table 6** include a list of regionally-occurring special status species, their habitat requirements, and a conclusion regarding the occurrence of those habitats on the Project site.

Table 1. Sensitive Plant Species

Species	Protective Status	Habitat	Flowering Period	Observed during the Reconnaissance-Level Field Survey?	Occurrence Probability
<i>Abronia villosa</i> var. <i>aurita</i> chaparral sand-verbena	F: None C: None CNPS: List 1B.1 CNDDDB Element Rank: State Rank: S2	Sandy areas in chaparral and coastal sage scrub, dunes; 75-1,600 meters (246-5,249 feet) above mean sea level (AMSL).	January - August	No	Absent (Chaparral and sage scrub habitats are lacking on the Project site. Records upstream may be erroneous, misidentifications of common subspecies. Taxonomy of species is questionable [A. Sanders pers. com.])
<i>Astragalus lentiginosus</i> var. <i>coachellae</i> Coachella Valley milkvetch	F: END C: None CNPS List: 1B.2 CNDDDB Element Rank: State Rank: S1	Sandy flats, washes, alluvial fans, sand field, dunes and dune edges; windblown sand deposits 40-655 meters (131-2,182 feet) AMSL.	February - May	No	Low (Aeolian [i.e., wind-deposited] sand habitat is lacking on the Project site; most sand on or near the Project site is fluvial [i.e., river] deposited.)
<i>Astragalus tricarinatus</i> triple-ribbed milkvetch	F: END C: None CNPS List: 1B.2 CNDDDB Element Rank: State Rank: S2	Sandy or gravelly areas in Joshua tree woodland and Sonoran Desert scrub, 450-1,190 meters (1,476-3,904 feet) AMSL.	February - May	No	Low (Habitat at the Project site is potentially suitable, but the closest CNDDDB records are more than 5 miles away.)

Species	Protective Status	Habitat	Flowering Period	Observed during the Reconnaissance-Level Field Survey?	Occurrence Probability
<i>Chorizanthe parryi</i> var. <i>parryi</i> Parry's spineflower	F: None C: None CNPS List: 1B.1 CNDDB Element Rank: State Rank: S3	On dry, sandy soils in coastal scrub, chaparral, cismontane woodland, and valley and foothill grassland; 275-1,220 meters (902-4,003 feet) AMSL.	April - June	No	Low (Habitat at the Project site is atypical and/or marginal; located within Sonoran creosote bush scrub at Morongo Tribal lands to the west [CNPS 2018; A. Sanders pers. com.])
<i>Coryphantha alversonii</i> Alverson's foxtail cactus	F: None C: None CNPS List: 4.3 CNDDB Element Rank: State Rank: S3	Sandy or rocky alluvium, creosote-bush scrub; 75-600 meters (246-1,968 feet) AMSL.	May - June	No	Absent (Suitable habitat occurs at the Project site; however, the closest occurrence is 20 miles east.)
<i>Imperata brevifolia</i> California satintail	F: None C: None CNPS List: 2B.1 CNDDB Element Rank: State Rank: S3	Coastal scrub, chaparral, riparian scrub, Mojave scrub, meadows and seeps; 0-1,215 meters (0-3,986 feet) AMSL.	September - May	No	Very Low (On-site habitat is atypical and/or marginal; there is a 1949 record from 1.5 miles northwest of the Project site.)

Species	Protective Status	Habitat	Flowering Period	Observed during the Reconnaissance-Level Field Survey?	Occurrence Probability
<i>Mentzelia tricuspis</i> spiny-hair blazing star	F: None C: None CNPS List: 2B.1 CNDDB Element Rank: State Rank: S2	Mojave Desert scrub/sandy, gravelly, slopes, and washes; 150-1,280 meters (492-4,199 feet) AMSL.	March - May	No	Absent (Habitat lacking is lacking on the Project site; the one record from Whitewater in 1876 questionable, no other recorded observations existing in the vicinity [A. Sanders pers. com.])
<i>Nemacaulis denudata</i> var. <i>gracilis</i> slender cottonheads	F: None C: None CNPS: List 2B.2 CNDDB Element Rank: State Rank: S2	Coastal and desert dunes, in Sonoran Desert scrub (sandy); 50-400 meters (164-1,312 feet) AMSL.	April - May (rarely March)	No	Very Low (Habitat on the Project site is marginal; sandy soils are extremely limited on there is only one recorded observation in the vicinity from 1948.)
<i>Penstemon pseudospectabilis</i> ssp. <i>pseudospectabilis</i> desert beardtongue	F: None C: None CNPS List: 2B.2 CNDDB Element Rank: State Rank: S3	Sandy or rocky washes in Mojave Desert scrub and Sonoran desert scrub; 80-1,953 meters (262-6,407 feet) AMSL.	January - May	No	Low (Habitat on the Project site is marginally suitable; this large, showy species that would be easy to detect if present.)

Species	Protective Status	Habitat	Flowering Period	Observed during the Reconnaissance-Level Field Survey?	Occurrence Probability
<i>Petalonyx linearis</i> narrow-leaf sandpaper-plant	F: None C: None CNPS List: 2B.3 CNDDB Element Rank: State Rank: S3?	Sandy or rocky canyons in Mojave and Sonoran Desert scrubs.	(Jan-Feb) Mar - May (Jun-Dec)	No	Absent (The closest CNDDB record is approximately 10 miles west of the Project site and is from 1879; the other records are from Deep Canyon.)
<i>Saltugilia latimeri</i> Latimer's woodland-gilia	F: None C: None CNPS: List 1B.2 Global Rank: G3 CNDDB Element Rank: State Rank: S3	Rocky, sandy, often granitic, sometimes washes in chaparral, Mojave Desert scrub, pinyon and juniper woodland; 400-1,900 meters (1,312-6,234 feet) AMSL.	March - June	No	Absent (Suitable habitat is lacking at the Project site; the Project site is below known elevational range of species.)
<i>Selaginella eremophila</i> desert spike-moss	F: None C: None CNPS: List 2B.2 CNDDB Element Rank: State Rank: S2S3	Shaded areas in crevices among rocks or on gravelly soils in Sonoran Desert scrub; 200-900 meters (656-2,953 feet) AMSL.	June	No	Absent (The Project site is fully exposed to sun, shaded areas very limited.)

Table 2. Special Status Invertebrates

Species	Protective Status	Habitat	Observed during the Reconnaissance-Level Field Survey?	Occurrence Probability
<i>Dinacoma caseyi</i> Casey's June beetle	F: END C: None CNDDDB Element Rank: State Rank: S1	Known from only two main populations in the southern Palm Springs area, generally associated with Palm Canyon Wash and its associated floodplain. Needs soils that are not too rocky or compacted and difficult to burrow in.	No	Absent (The Project site is almost 15 miles east of the currently known range of the species. The Project site is not located within the historic range of the species.)
<i>Macrobaenetes valgum</i> Coachella giant sand treader cricket	F: None C: None CNDDDB Element Rank: State Rank: S1S2	Wind-deposited sand dune ridges, winter rains somewhat regulate abundance.	No	Low (Aeolian deposits are very limited on the Project site.)
<i>Stenopelmatus calhounensis</i> Coachella Valley Jerusalem cricket	F: None C: None CNDDDB Element Rank: State Rank: S1S2	Sand dune and sand field habitats, in the vicinity of the north base of the San Jacinto Mountains.	No	Absent (No habitat is present on the Project site.)

Table 3. Special Status Amphibians and Reptiles

Species	Protective Status	Habitat	Observed during the Reconnaissance-Level Field Survey?	Occurrence Probability
<i>Aspidoscelis hyperythra beldingi</i> orange-throated whiptail	F: None C: WL CNDDDB Element Rank: Global Rank: G5 State Rank: S2S3	Coastal sage scrub, grasslands, chaparral in cismontane valleys and foothills in Southern California.	No	Absent (Habitat is lacking on the Project site; more common <i>A. tigris tigris</i> expected at this location.)
<i>Anaxyrus californicus</i> arroyo toad	F: END C: SSC CNDDDB Element Rank: Global Rank: G2G3 State Rank: S2S3	Shallow pools and open sand and gravel channels along low-gradient reaches of medium to large-sized streams with riparian vegetation. Also uses upland habitats adjacent to breeding sites.	No	Absent (Riparian vegetation is lacking at the Project site; loose, sandy soils lacking.)
<i>Anniella stebbinsi</i> southern California legless lizard	F: None C: SSC CNDDDB Element Rank: Global Rank: G3 State Rank: S3	Occurs in a variety of habitats, but seems to prefer areas with loose, moist soils (high moisture content).	No	Very Low (Less expected at washout sites, some potential in adjacent habitat, although soil moisture not known.)
<i>Arizona elegans occidentalis</i> California glossy snake	F: None C: SSC CNDDDB Element Rank: Global Rank: G5T2 State Rank: S2	Inhabits arid scrub, rocky washes, grasslands, chaparral. Appears to prefer microhabitats of open areas and areas with soil loose enough for easy burrowing.	No	Low (Probability is for the species; <i>A. e. occidentalis</i> is a more coastal race. Individuals at the Project site are likely intergrades with the subspecies <i>eburnata</i> , if not "true" <i>A. e. eburnata</i> .)

Species	Protective Status	Habitat	Observed during the Reconnaissance-Level Field Survey?	Occurrence Probability
<i>Crotalus ruber</i> northern red-diamond rattlesnake	F: None C: SSC CNDDDB Element Rank: Global Rank: G4 State Rank: S3	Chaparral, woodland, grassland, desert areas from coastal San Diego County to eastern slopes of mountains; rocky areas and dense vegetation, needs rodent burrows, cracks in rocks or surface cover objects.	No	Low (Individuals are generally not found in flat creosote scrub areas with sandy, gravelly soils, which is more characteristic of the Project site.)
<i>Gopherus agassizii</i> desert tortoise	F: THR C: THR CNDDDB Element Rank: Global Rank: G3 State Rank: S2S3 CVMSHCP: Yes	Various desert communities and habitats (Mojave creosote bush scrub, Joshua tree woodland, saltbush scrub); washes, arroyos, bajadas, rocky hillsides, open flat desert.	No	Moderate (Suitable habitat is present at the Project site; however, no sign was observed during survey.)
<i>Rana draytonii</i> California red-legged frog	F: THR C: SSC CNDDDB Element Rank: Global Rank: G4T2T3 State Rank: S2S3 CVMSHCP: No	Requires sources of permanent water, usually deep pools or ponded areas in foothill and lowland areas.	No	Absent (No suitable habitat occurs at the Project site.)

Species	Protective Status	Habitat	Observed during the Reconnaissance-Level Field Survey?	Occurrence Probability
<i>Uma inornata</i> Coachella Valley fringe-toed lizard	F: THR C: END CNDDDB Element Rank: Global Rank: G1Q State Rank: S1 CVMSHCP: Yes	Restricted to sandy areas in the Coachella Valley; requires fine, loose, windblown sand interspersed with hardpan and widely spaced desert shrubs.	No	Absent (Although known from areas west of the Project site, soils on-site are predominantly fluvial-deposited with only small areas of aeolian deposits which are not considered extensive enough to support this species.)

Table 4. Special Status Birds

Species	Protective Status	Habitat	Observed during the Reconnaissance-Level Field Survey?	Occurrence Probability
<i>Aquila chrysaetos</i> golden eagle	F: None C: FP, WL CNDDDB Element Rank: Global Rank: G5 State Rank: S3	Forages over rolling foothills, mountain areas, sage-juniper flats, and desert. Cliff-walled canyons used for nesting, sometimes large trees in open areas.	No	Nesting: Absent (The Project site does not support nesting habitat.) Foraging: Low (No suitable foraging habitat occurs within the Project site.)

Species	Protective Status	Habitat	Observed during the Reconnaissance-Level Field Survey?	Occurrence Probability
<i>Athene cunicularia</i> burrowing owl	F: BLM S, BCC C: SSC (burrows) CNDDDB Element Rank: Global Rank: G4 State Rank: S3	Open, dry annual or perennial grassland, deserts, and scrublands characterized by low-growing vegetation.	No	Nesting: Low (No suitable burrows were observed within the Project site.) Foraging: Moderate
<i>Dendroica petechia</i> yellow warbler	F: MBTA, BCC C: SSC (nesting), F&G Code CNDDDB Element Rank: Global Rank: G5 State Rank: S3S4	Riparian forest and woodland; nests along Mojave River, Santa Ana River, Kern River, and many others in Southern California.	No	Nesting: Absent (Riparian habitat lacking is lacking within the Project site.) Foraging: Low (May forage, disperse and/or migrate through the site, but habitat not optimal.)
<i>Empidonax trailii extimus</i> southwestern willow flycatcher	F: END (subspecies), MBTA C: END (full species), F&G Code CNDDDB Element Rank: Global Rank: G5T2 State Rank: S1	Riparian woodlands.	No	Nesting: Absent (Riparian habitat is lacking within the Project site.) Foraging: Absent (Habitat is lacking within the Project site.)

Species	Protective Status	Habitat	Observed during the Reconnaissance-Level Field Survey?	Occurrence Probability
<i>Falco mexicanus</i> prairie falcon	F: BCC C: WL CNDDDB Element Rank: Global Rank: G5 State Rank: S4	Breeding sites located on cliffs, forages far afield even to marshlands and ocean shores	No	Nesting: Absent (Preferred habitat is lacking at the Project site.) Foraging: Low-Moderate (May nest on nearby cliffs and forage over the Project site.)
<i>Lanius ludovicianus</i> loggerhead shrike	F: MBTA, BCC C: SSC (nesting), F&G Code CNDDDB Element Rank: Global Rank: G4 State Rank: S4	Associated with a variety of vegetation communities including creosote bush scrub, Joshua tree woodland. Nests in trees and shrubs.	No	Nesting: Low (Shrubs within the Project site and the surrounding vicinity are not large enough to support nesting activities.) Foraging: Moderate (Common in region.)
<i>Toxostoma lecontei</i> Le Conte's thrasher	F: BLM S, BCC C: SSC (San Joaquin population only) CNDDDB Element Ranks: Global Rank: G4 State Rank: S3	Desert resident, primarily of open desert wash, desert scrub, alkali desert scrub, and desert succulent scrub habitats; commonly nests in a dense, spiny shrub or densely branched cactus in desert wash habitat, usually 2-8 feet above ground.	No	Nesting: Low (Dense, spiny shrubs are very limited within the Project site.) Foraging: Low (Potentially suitable habitat present adjacent to the Project site.)

Species	Protective Status	Habitat	Observed during the Reconnaissance-Level Field Survey?	Occurrence Probability
<i>Vireo bellii pusillus</i> least Bell's vireo	F: END (nesting), MBTA C: END (nesting), F&G Code CNDDDB Element Ranks: Global Rank: G5T2 State Rank: S2	Willow riparian woodlands	No	Nesting: Absent (Riparian habitat is not present on or adjacent to the Project site.) Foraging: Absent (Same as for nesting.)

Table 5. Special Status Mammals

Species	Protective Status	Habitat	Observed during the Reconnaissance-Level Field Survey?	Occurrence Probability
<i>Corynorhinus townsendii</i> Townsend's big-eared bat	F: None C: SSC CNDDDB Element Ranks: Global Rank: G3G4 State Rank: S2 WBWG: H	Generally viewed as a cave-dwelling species, but the western subspecies are also found on/in human-made structures (e.g., old mine workings and buildings). Roosts in open but extremely sensitive to human disturbance.	No	Roosting: Absent (Roosting habitat is not present on the Project site.) Foraging: Moderate (Over water in adjacent Whitewater River channel.)
<i>Neotoma lepida intermedia</i> San Diego desert woodrat	F: None C: SSC CNDDDB Element Rank: Global Rank: G5T3T4 State Rank: S3S4	The most common habitats are chaparral, coastal sage scrub (including Riversidean sage scrub and Diegan coastal sage scrub) and grassland, although this subspecies also occurs in desert habitats.	No	Possibly Present (There are several woodrat nests within the Project site. The species is not confirmed, but is possibly San Diego desert woodrat.)
<i>Ovis canadensis nelsoni</i> pop. 2 Peninsular bighorn sheep DPS	F: END C: THR CNDDDB Element Rank: Global Rank: G4T3Q State Rank: S1	Optimal habitat includes steep-walled canyons and ridges bisected by rocky or sandy washes with available water.	No	Absent (The Project site is generally north of the known range of the subspecies, closer to known Desert bighorn subspecies that occurs further north in Whitewater Canyon.)

Species	Protective Status	Habitat	Observed during the Reconnaissance-Level Field Survey?	Occurrence Probability
<i>Perognathus longimembris bangsi</i> Palm Springs pocket mouse	F: BLM S C: SSC CNDDDB Element Rank: Global Rank: G5T2 State Rank: S2	Desert scrub, sandy, loosely-packed soils.	No	Moderate (Habitat suitable, site within known range, species occurs nearby. A small mammal trapping survey conducted by LSA in 2012 resulted in the capture of the species in Whitewater Canyon, upstream from site [LSA 2012].)
<i>Xerospermophilus tereticaudus</i> Coachella Valley (Palm Springs) round-tailed ground squirrel	F: BLM S C: SSC CDDDB Element Rank: Global Rank: G5T2Q State Rank: S2	Sand fields, dunes and hummocks in Sonoran creosote bush scrub, mesquite, saltbush and desert sink scrub. Also, may occur in coarse sandy and pebbly alluvial substrates along washes.	No	Low (Aeolian substrates are absent from the Project site and very limited adjacent to the Project. Coarse, alluvial sandy areas intermittent and sparse. CNDDDB record from less than 15 miles of the Project site.)

Table 6. Special Status Vegetation Communities

Species	Protective Status	Habitat	Observed during the Reconnaissance-Level Field Survey?	Occurrence Probability
Desert Fan Palm Oasis Woodland	F: None C: None CNDDDB Element Rank: Global Rank: G3 State Rank: S3.2 MSHCP: No	Desert areas often associated with availability of water (including upwelling in fault zones).	No	Absent (Community not present with the Project site.)

Definitions of Status Designations and Occurrence Probabilities in Table 6

Federal Designations:

END:	Federally listed as Endangered under the Federal Endangered Species Act
THR:	Federally listed as Threatened under the Federal Endangered Species Act
C:	Candidate for listing under the Federal Endangered Species Act
MBTA:	Protected under the Migratory Bird Treaty Act
BCC:	Designated as a Bird of Conservation Concern by the USFWS
BLM S:	Designated as Sensitive by the Bureau of Land Management (BLM)

State Designations:

END:	Listed as Endangered under the California Endangered Species Act
THR:	Listed as Threatened under the California Endangered Species Act
CSC:	Designed as a Species of Special Concern by CDFW

California Native Plant Society (CNPS) Designations: *(Non-regulatory, compilation by a non-profit organization which tracks rare plants)*

According to the CNPS all plants on Lists 1A, 1B, 2A, and 2B meet definitions for state listing as threatened or endangered under Sections 2062 and 2067 of the California Department of Fish and Game Code. Certain plants on Lists 3 and 4 do as well.

(http://www.cnps.org/programs/Rare_Plant/inventory/names.htm),

The CDFW states that plants on Lists 1A, 1B, 2A, and 2B of the CNPS Inventory consist of plants that *may* qualify for listing, and recommends they be addressed pursuant to the California Environmental Quality Act (CEQA) (CEQA Guidelines Section 15380). However, a plant need not be in the Inventory to be considered a rare, threatened, or endangered species under CEQA. In addition, CDFW recommends, and local governments may require, protection of plants which are regionally significant, such as locally rare species, disjunct populations of more common plants, or plants on the CNPS Lists 3 and 4

(http://www.dfg.ca.gov/hcpb/species/t_e_spp/nat_plnt_consv.shtml).

List 1A:	Plants presumed extinct in California.
List 1B:	Plants rare and endangered in California and throughout their range.
List 2A:	Plants presumed extirpated in California, but more common elsewhere.
List 2B:	Plants rare, threatened, or endangered in California, but more common elsewhere.
List 3:	Plants for which more information is needed.
List 4:	Plants of limited distribution; a "watch list."
.1:	Seriously endangered in California (over 80% of occurrences threatened / high degree and immediacy of threat)
.2:	Fairly endangered in California (20-80% occurrences threatened)
.3:	Not very endangered in California (<20% of occurrences threatened or no current threats known)

Note: All List 1A (presumed extinct in California) and some List 3 (need more information - a review list) plants lacking any threat information receive no threat code extension. Also, these Threat Code guidelines represent a starting point in the assessment of threat level. Other factors, such as habitat vulnerability and specificity, distribution, and condition of occurrences, are also considered in setting the Threat Code.

CDFW CNDDDB Rankings: Wildlife

S1:	Extremely Endangered: <6 viable occurrences or <1,000 individuals, or < 2,000 acres of occupied habitat
S2:	Endangered: approximately 6-20 viable occurrences or 1,000 - 3,000 individuals, or 2,000 to 10,000 acres of occupied habitat
S3:	Restricted Range, Rare: about 21-100 viable occurrences, or 3,000 – 10,000 individuals, or 10,000 – 50,000 acres of occupied habitat
S4:	Apparently Secure: some factors exist to cause some concern such as narrow habitat or continuing threats
S5:	Demonstrably secure; commonly found throughout its historic range
SH:	All sites are historical, this species may be extinct, further field work is needed

CDFW CNDDDB Rankings: Plants and Vegetation Communities

S1:	Less than 6 viable occurrences or less than 1,000 individuals or less than 2,000 acres
S1.1:	Very threatened
S1.2:	Threatened
S1.3:	No current threats known
S2:	6-20 viable occurrences 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:	21-80 viable occurrences 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 within California; this rank is clearly lower than S3 but factors exist to cause some concern (i.e., there is some threat, or somewhat narrow habitat)
S5:	Demonstrably secure to ineradicable in California.

Western Bat Working Group (WBWG) Designations:

The WBWG is comprised of agencies, organizations and individuals interested in bat research, management and conservation from the 13 western states and provinces. Its goals are: (1) to facilitate communication among interested parties and reduce risks of species decline or extinction; (2) to provide a mechanism by which current information on bat ecology, distribution and research techniques can be readily accessed; and (3) to develop a forum to discuss conservation strategies, provide technical assistance and encourage education programs.

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.

Recommendations

As described in **Table 1** through **Table 6** the Project site generally lacks habitat for special status species with the exception of foraging birds as well as the Townsend's big-eared bat, San Diego desert woodrat, Palm Spring pocket mouse, and desert tortoise, each of which has a moderate potential for occurrence. The following measures are recommended to avoid the potential for impacts to special status species:

1. A biological resources Worker Environmental Awareness Program (WEAP) training should be conducted by a qualified biologist prior to the initiation of any ground-disturbing activities associated with proposed Project. The purpose of the WEAP training is to educate construction personnel about the potential for biological resources within the Project site – including foraging birds as well as the Townsend's big-eared bat, San Diego desert woodrat, Palm Spring pocket mouse, and desert tortoise – and the measures to protect these resources if they are encountered. The WEAP should explain the applicable measures that should be implemented to avoid impact to biological resources as well as the consequences of not complying with these protective measures. The WEAP training should be given to all construction personnel and copies of the WEAP sign-in sheets submitted to CVWD.

2. To the maximum extent practicable, construction activities should avoid the nesting bird season (January 1 through July 31 for raptors and March 1 through September 15 for songbirds). This would avoid potential violations of the Migratory Bird Treaty Act (MBTA) and California Fish and Game Code Sections 3503, 3503.5, and 3513. However, if activities with the potential to disrupt nesting birds are scheduled to occur during the bird breeding season, a pre-construction nesting bird survey should be conducted by a qualified biologist. Nest surveys should include the Project site and adjacent areas where construction activities have the potential to impact nesting. If no nesting birds are observed during the survey, site preparation and construction activities may begin as originally planned. If nesting birds (including nesting raptors) are found to be present, then avoidance or minimization measures should be undertaken. Measures should include establishment of an avoidance buffer until nesting has been completed. The width of the buffer should be determined by the qualified biologist.

Conclusions Regarding Potential Effects on Special Status Species

As previously described, no special status species were observed on the Project site during the reconnaissance-level field survey on January 8, 2021 or the field survey associated with the *Biological Survey Report for Dillon Road Transmission Pipeline Replacement Phase II Project* (CVWD 2015). The Project site generally lacks habitat for special status species with the exception of some foraging birds as well as the Townsend's big-eared bat, San Diego desert woodrat, Palm Spring pocket mouse, and desert tortoise, each of which has a moderate potential for occurrence. However, the implementation of the recommendations described above, and CVWD's commitment to mitigation in the CVMSHCP for covered activities outside of conservation areas, construction activities would have a less than significant impact on these species.

With the exception of the federally threatened desert tortoise, the federally listed species that have been previously recorded in the surrounding vicinity are either absent from the Project site, or have a low potential for occurrence due to the lack of habitat. The federally threatened desert tortoise has never been recorded on the Project site, but has a moderate potential to occur due to the proximity of the Project site to the *Desert Tortoise and Linkage Conservation Area* under the CVMSHP (CVAG 2019). Nevertheless, with the recommendations above, along with CVWD's commitment to mitigation for CVMSHCP covered activities outside of conservation areas there would be *no effect* on federally listed species pursuant to the Endangered Species Act or any other special status species.

References

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1 inch = 2,000 feet

0 1,000 2,000 Feet

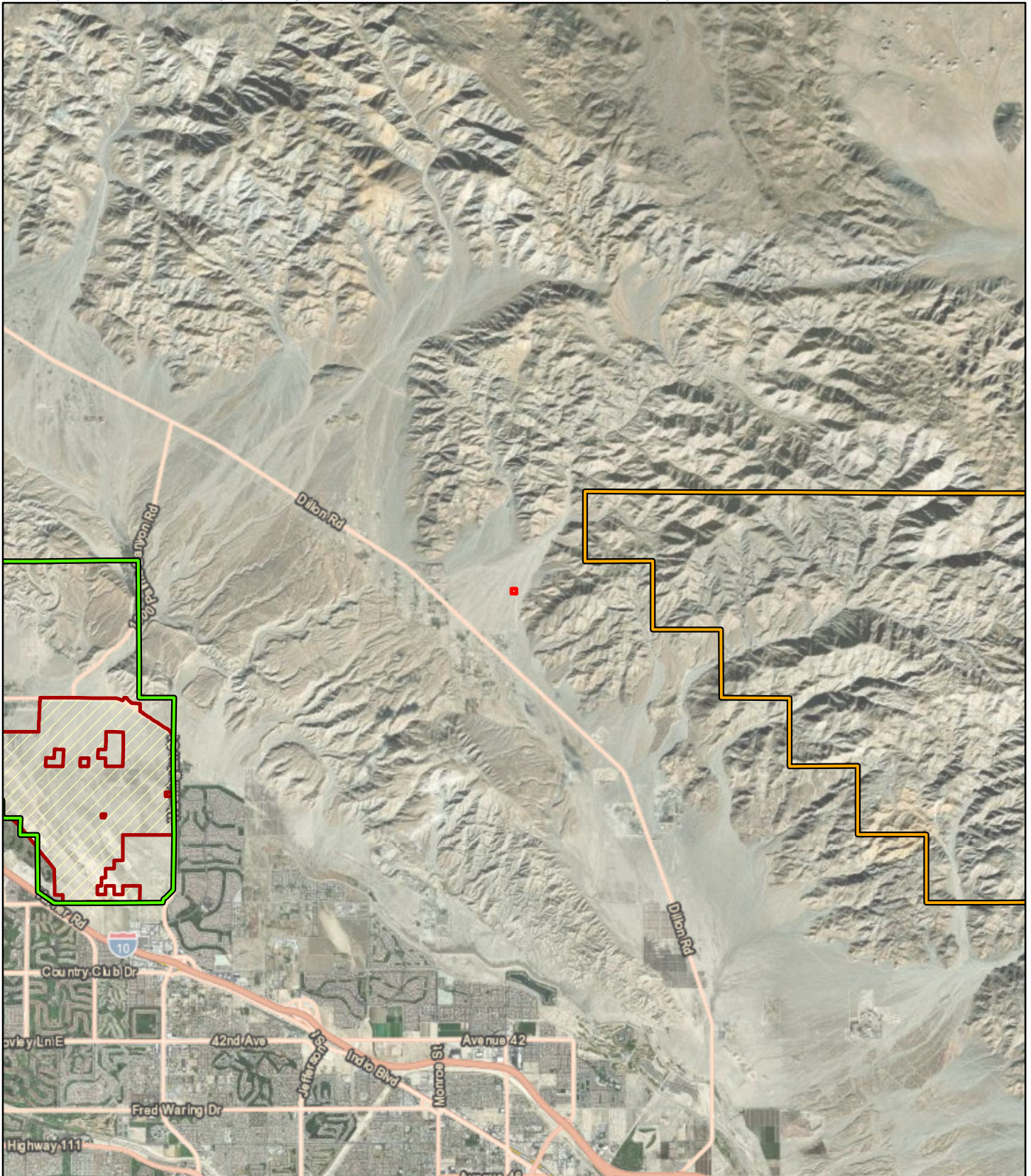


wood.

 Survey Area

FIGURE 1

Project Vicinity
USGS 7.5' Topo: West Berdoo Canyon
CVWD Indio Hills
Riverside County, CA



Path: \\sdg1-fs1\gis\3554_NaturalResources\CVWD_IndioHills_WetlandDelineation_1755402009\MXD\ReportFigures\AppendixB_CriticalHabitat.mxd, aaron.johnson 5/10/2021

Project Area

Critical Habitat

Coachella Valley fringe-toed lizard

Coachella Valley milk-vetch

Desert tortoise

1 inch = 2 miles
0 1 2 Miles



wood.

FIGURE 2
USFWS Critical Habitat
Wetland Delineation
CVWD Indio Hills
Riverside County, CA

Appendix A

Project Site Photos



Photograph 1: Looking north from the southern edge of the site showing creosote scrub.



Photograph 2: Looking west across the site showing creosote scrub and the existing water tanks.



Photograph 3: Desert woodrat nest observed on-site.



Photograph 5: Looking south across the site from the northern boundary.

Appendix B
Information for Planning and Consultation
Resources List
(May 2021)

IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

Location

Riverside County, California



Local office

Carlsbad Fish And Wildlife Office

☎ (760) 431-9440

📠 (760) 431-5901

2177 Salk Avenue - Suite 250

Carlsbad, CA 92008-7385

<http://www.fws.gov/carlsbad/>

Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

- 1. Draw the project location and click CONTINUE.
- 2. Click DEFINE PROJECT.
- 3. Log in (if directed to do so).
- 4. Provide a name and description for your project.
- 5. Click REQUEST SPECIES LIST.

Listed species¹ and their critical habitats are managed by the [Ecological Services Program](#) of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries²).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact [NOAA Fisheries](#) for [species under their jurisdiction](#).

- 1. Species listed under the [Endangered Species Act](#) are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the [listing status page](#) for more information. IPaC only shows species that are regulated by USFWS (see FAQ).
- 2. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following species are potentially affected by activities in this location:

Birds

NAME	STATUS
------	--------

Least Bell's Vireo *Vireo bellii pusillus***Endangered**

Wherever found

There is **final** critical habitat for this species. The location of the critical habitat is not available.

<https://ecos.fws.gov/ecp/species/5945>

Southwestern Willow Flycatcher *Empidonax traillii extimus***Endangered**

Wherever found

There is **final** critical habitat for this species. The location of the critical habitat is not available.

<https://ecos.fws.gov/ecp/species/6749>

Reptiles

NAME

STATUS

Coachella Valley Fringe-toed Lizard *Uma inornata***Threatened**

Wherever found

There is **final** critical habitat for this species. The location of the critical habitat is not available.

<https://ecos.fws.gov/ecp/species/2069>

Desert Tortoise *Gopherus agassizii***Threatened**

There is **final** critical habitat for this species. The location of the critical habitat is not available.

<https://ecos.fws.gov/ecp/species/4481>

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

THERE ARE NO CRITICAL HABITATS AT THIS LOCATION.

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act¹ and the Bald and Golden Eagle Protection Act².

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described [below](#).

1. The [Migratory Birds Treaty Act](#) of 1918.
2. The [Bald and Golden Eagle Protection Act](#) of 1940.

Additional information can be found using the following links:

- Birds of Conservation Concern <http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php>
- Measures for avoiding and minimizing impacts to birds <http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php>
- Nationwide conservation measures for birds <http://www.fws.gov/migratorybirds/pdf/management/nationwidestandardconservationmeasures.pdf>

THERE ARE NO MIGRATORY BIRDS OF CONSERVATION CONCERN EXPECTED TO OCCUR AT THIS LOCATION.

Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

[Nationwide Conservation Measures](#) describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. [Additional measures](#) or [permits](#) may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the migratory birds potentially occurring in my specified location?

The Migratory Bird Resource List is comprised of USFWS [Birds of Conservation Concern \(BCC\)](#) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the [Avian Knowledge Network \(AKN\)](#). The AKN data is based on a growing collection of [survey, banding, and citizen science datasets](#) and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle ([Eagle Act](#) requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the [AKN Phenology Tool](#).

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the [Avian Knowledge Network \(AKN\)](#). This data is derived from a growing collection of [survey, banding, and citizen science datasets](#).

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering, migrating or present year-round in my project area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may refer to the following resources: [The Cornell Lab of Ornithology All About Birds Bird Guide](#), or (if you are unsuccessful in locating the bird of interest there), the [Cornell Lab of Ornithology Neotropical Birds](#)

[guide](#). If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are [Birds of Conservation Concern](#) (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the [Eagle Act](#) requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the [Northeast Ocean Data Portal](#). The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the [NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf](#) project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the [Diving Bird Study](#) and the [nanotag studies](#) or contact [Caleb Spiegel](#) or [Pam Loring](#).

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to [obtain a permit](#) to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or

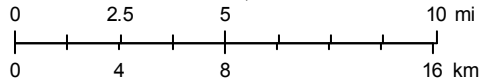
Appendix C
California Natural Diversity Database
5-mile Radius Search
(May 2021)

Reservoirs 4711-3 and -4

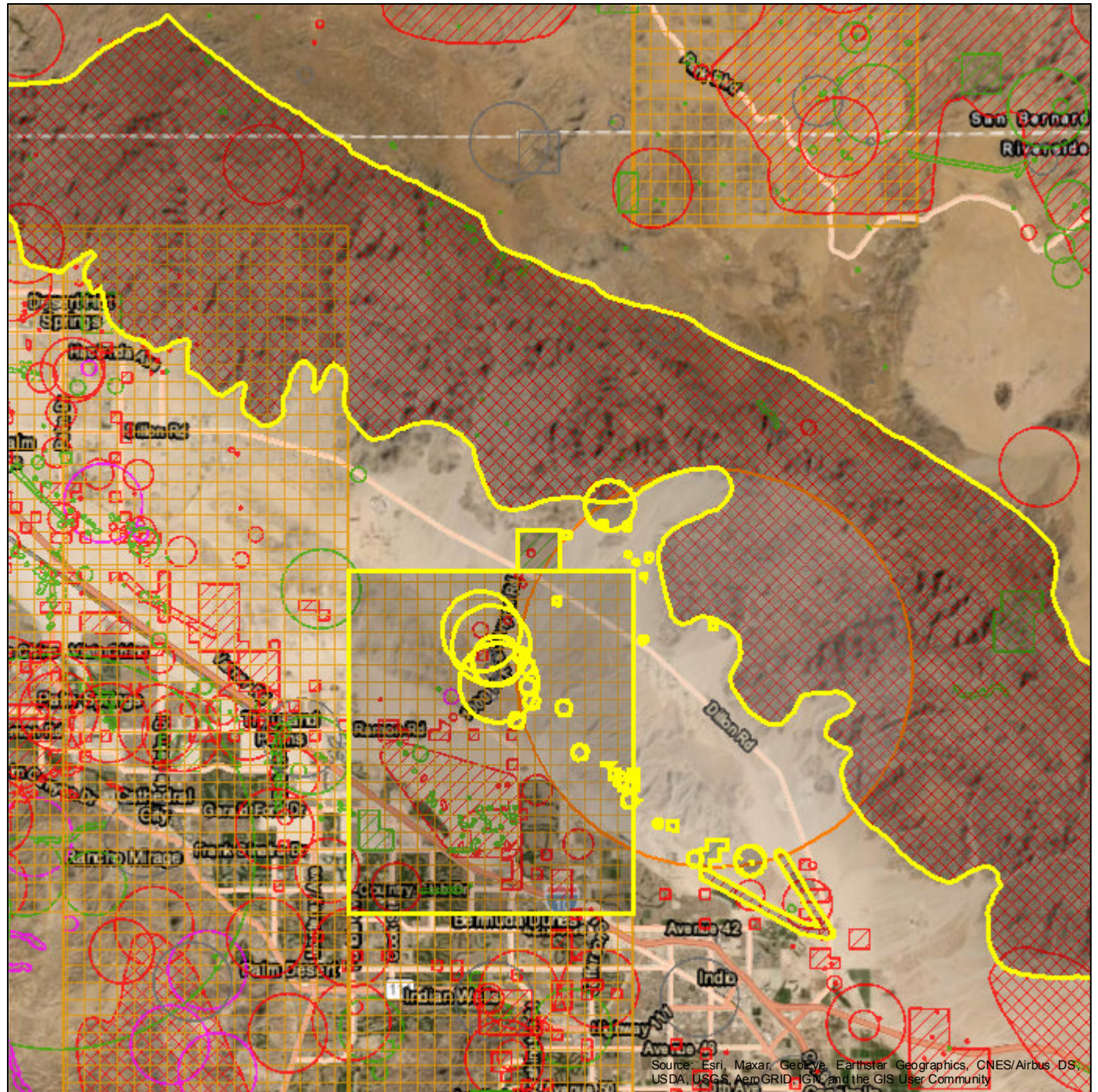
California Natural Diversity
Database (CNDDB) Commercial
[ds85]

- Plant (80m)
- Plant (specific)
- Plant (non-specific)
- Plant (circular)
- Animal (80m)
- Animal (specific)
- Animal (non-specific)
- Animal (circular)
- Terrestrial Comm. (80m)
- Terrestrial Comm. (specific)
- Terrestrial Comm. (non-specific)
- Terrestrial Comm. (circular)
- Aquatic Comm. (80m)
- Aquatic Comm. (specific)
- Aquatic Comm. (non-specific)
- Aquatic Comm. (circular)
- Multiple (80m)
- Multiple (specific)
- Multiple (non-specific)
- Multiple (circular)
- Sensitive EO's (Commercial only)

1:288,895



May 27, 2021





Multiple Occurrences per Page
California Department of Fish and Wildlife
California Natural Diversity Database



Query Criteria: BIOS selection

Falco mexicanus

Element Code: ABNKD06090

prairie falcon

Listing Status: **Federal:** None **CNDDDB Element Ranks:** **Global:** G5
State: None **State:** S4
Other: CDFW_WL-Watch List, IUCN_LC-Least Concern, USFWS_BCC-Birds of Conservation Concern
Habitat: **General:** INHABITS DRY, OPEN TERRAIN, EITHER LEVEL OR HILLY.
Micro: BREEDING SITES LOCATED ON CLIFFS. FORAGES FAR AFIELD, EVEN TO MARSHLANDS AND OCEAN SHORES.

* SENSITIVE *

Occurrence No. 126 **Map Index:** 05678 **EO Index:** 26291 **Element Last Seen:** 1976-06-05
Occ. Rank: Unknown **Presence:** Presumed Extant **Site Last Seen:** 1976-06-05
Occ. Type: Natural/Native occurrence **Trend:** Unknown **Record Last Updated:** 2020-11-30

Quad Summary: Myoma (3311673)

County Summary: Riverside

Lat/Long: **Accuracy:** 1/5 mile
UTM: **Elevation (ft):** 800
PLSS: **Acres:** 0.0

Location: *SENSITIVE* LOCATION INFORMATION SUPPRESSED.

Detailed Location: PLEASE CONTACT THE CALIFORNIA NATURAL DIVERSITY DATABASE, CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE, FOR MORE INFORMATION: (916) 322-2493

Ecological: NEST WAS IN A POTHOLE 50 FT UP A SCARP.

General:

Owner/Manager:



Multiple Occurrences per Page
California Department of Fish and Wildlife
California Natural Diversity Database



Empidonax traillii extimus

Element Code: ABPAE33043

southwestern willow flycatcher

Listing Status: **Federal:** Endangered

CNDDDB Element Ranks: **Global:** G5T2

State: Endangered

State: S1

Other: NABCI_RWL-Red Watch List

Habitat: **General:** RIPARIAN WOODLANDS IN SOUTHERN CALIFORNIA.

Micro: ☐

Occurrence No. 71 **Map Index:** 79125 **EO Index:** 87103 **Element Last Seen:** 2002-06-17

Occ. Rank: Unknown **Presence:** Presumed Extant **Site Last Seen:** 2002-06-17

Occ. Type: Natural/Native occurrence **Trend:** Unknown **Record Last Updated:** 2012-06-08

Quad Summary: Myoma (3311673)

County Summary: Riverside

Lat/Long: 33.84197 / -116.31051 **Accuracy:** 3/5 mile

UTM: Zone-11 N3744848 E563791 **Elevation (ft):** 600

PLSS: T04S, R06E, Sec. 12 (S) **Acres:** 0.0

Location: VICINITY OF THOUSAND PALMS OASIS, ABOUT 2 MI NE OF RAMON RD AT THOUSAND PALMS CANYON RD, 4.25 MI SW OF FAN HILL.

Detailed Location: MAPPED TO LOCATION DESCRIBED AS "THOUSAND PALMS OASIS (COACHELLA VALLEY PRESERVE)."

Ecological:

General: 2002: 3 DETECTED 23 MAY, POSSIBLE PAIR & AT LEAST 1 SINGING MALE DETECTED 17 JUN. REPEATED DETECTIONS AT THE SAME LOCATION SUGGEST BREEDING BUT THIS WAS NOT CONFIRMED AND NO DETECTIONS WERE MADE AFTER THIS DATE. MORE RESEARCH NEEDED.

Owner/Manager: TNC-COACHELLA VALLEY PRESERVE



Multiple Occurrences per Page
California Department of Fish and Wildlife
California Natural Diversity Database



Perognathus longimembris bangsi

Element Code: AMAFD01043

Palm Springs pocket mouse

Listing Status: **Federal:** None

CNDDDB Element Ranks: **Global:** G5T2

State: None

State: S2

Other: BLM_S-Sensitive, CDFW_SSC-Species of Special Concern

Habitat: **General:** DESERT RIPARIAN, DESERT SCRUB, DESERT WASH AND SAGEBRUSH HABITATS. MOST COMMON IN CREOSOTE-DOMINATED DESERT SCRUB.

Micro: RARELY FOUND ON ROCKY SITES. OCCURS IN ALL CANOPY COVERAGE CLASSES.

Occurrence No.	5	Map Index:	51793	EO Index:	51793	Element Last Seen:	1999-06-XX
Occ. Rank:	Good	Presence:	Presumed Extant	Site Last Seen:			1999-06-XX
Occ. Type:	Natural/Native occurrence	Trend:	Unknown	Record Last Updated:			2003-07-17

Quad Summary: Indio (3311662), West Berdoo Canyon (3311672)

County Summary: Riverside

Lat/Long:	33.75099 / -116.19132	Accuracy:	non-specific area
UTM:	Zone-11 N3734841 E574897	Elevation (ft):	75
PLSS:	T05S, R08E, Sec. 07 (S)	Acres:	942.3

Location: AT THE BASE OF THE SOUTHERN END OF THE INDIO HILLS, NE OF INDIO.

Detailed Location: TRAPLINES SET ON BOTH THE EAST AND WEST SIDES OF INDIO HILLS.

Ecological: HABITAT CONSISTS OF DESERT SCRUB AND RIPARIAN, DOMINATED BY C. LINEARIS, LARREA TRIDENTATA, E. FARINOSA, A. DUMOSA, AND H. SALSOLA. SITE HAS ~15% SHRUB COVER ON SANDY/GRAVELLY SOILS (LEVEL).

General: 4 ADULTS CAPTURED DURING JUN 1999 SURVEYS.

Owner/Manager: UNKNOWN

Neotoma lepida intermedia

Element Code: AMAFF08041

San Diego desert woodrat

Listing Status: **Federal:** None

CNDDDB Element Ranks: **Global:** G5T3T4

State: None

State: S3S4

Other: CDFW_SSC-Species of Special Concern

Habitat: **General:** COASTAL SCRUB OF SOUTHERN CALIFORNIA FROM SAN DIEGO COUNTY TO SAN LUIS OBISPO COUNTY.

Micro: MODERATE TO DENSE CANOPIES PREFERRED. THEY ARE PARTICULARLY ABUNDANT IN ROCK OUTCROPS, ROCKY CLIFFS, AND SLOPES.



Multiple Occurrences per Page
California Department of Fish and Wildlife
California Natural Diversity Database



Occurrence No.	86	Map Index:	73811	EO Index:	74802	Element Last Seen:	1995-03-22
Occ. Rank:	Unknown			Presence:	Presumed Extant	Site Last Seen:	1995-03-22
Occ. Type:	Natural/Native occurrence			Trend:	Unknown	Record Last Updated:	2009-03-09
Quad Summary:	East Deception Canyon (3311683)						
County Summary:	Riverside						
Lat/Long:	33.89096 / -116.25353			Accuracy:	1/10 mile		
UTM:	Zone-11 N3750317 E569022			Elevation (ft):	1730		
PLSS:	T03S, R07E, Sec. 21, SE (S)			Acres:	0.0		
Location:	NORTH SIDE OF THE COLORADO RIVER AQUEDUCT, ABOUT 0.5 MI NE OF FAN HILL, JOSHUA TREE NP.						
Detailed Location:	TRAPLINE 1 (50 TRAPS). MAPPED TO TRAPLINE LOCATION FROM PROVIDED MAP.						
Ecological:	HABITAT IS DOMINATED BY LARREA TRIDENTATA AND AMBROSIA DUMOSA. SOIL IS GRAVELLY. AVERAGE SHRUB HEIGHT IS 0.25-2 M. UNDERSTORY IS MOSTLY BAREGROUND/HERBS.						
General:	1 INDIVIDUAL CAPTURED ON 22 MAR 1995.						
Owner/Manager:	NPS-JOSHUA TREE NP						
Occurrence No.	88	Map Index:	73815	EO Index:	74805	Element Last Seen:	1995-03-23
Occ. Rank:	Unknown			Presence:	Presumed Extant	Site Last Seen:	1995-03-23
Occ. Type:	Natural/Native occurrence			Trend:	Unknown	Record Last Updated:	2009-03-09
Quad Summary:	East Deception Canyon (3311683)						
County Summary:	Riverside						
Lat/Long:	33.88784 / -116.28007			Accuracy:	1/10 mile		
UTM:	Zone-11 N3749954 E566571			Elevation (ft):	1500		
PLSS:	T03S, R07E, Sec. 29, NW (S)			Acres:	0.0		
Location:	SOUTH OF THE COLORADO RIVER AQUEDUCT, ABOUT 1.1 MI WEST OF FAN HILL, INDIO HILLS.						
Detailed Location:	TRAPLINE 3 (100 TRAPS). MAPPED TO TRAPLINE LOCATION FROM PROVIDED MAP.						
Ecological:	HABITAT DOMINATED BY AMBROSIA DUMOSA & ENCELIA FARINOSA. SOIL IS CHUCKWALLA VERY GRAVELLY SANDY CLAY LOAM. AVERAGE SHRUB HEIGHT IS 0.25-1 M. UNDERSTORY IS BARE GROUND/HERBS.						
General:	3 INDIVIDUALS CAPTURED ON 23 MAR 1995. RAINED DURING SURVEY.						
Owner/Manager:	DPR-INDIO HILLS PALMS						
Occurrence No.	90	Map Index:	73819	EO Index:	74811	Element Last Seen:	1995-04-14
Occ. Rank:	Unknown			Presence:	Presumed Extant	Site Last Seen:	1995-04-14
Occ. Type:	Natural/Native occurrence			Trend:	Unknown	Record Last Updated:	2009-03-09
Quad Summary:	Myoma (3311673)						
County Summary:	Riverside						
Lat/Long:	33.86378 / -116.28431			Accuracy:	1/10 mile		
UTM:	Zone-11 N3747283 E566198			Elevation (ft):	1050		
PLSS:	T03S, R07E, Sec. 31, SE (S)			Acres:	0.0		
Location:	ABOUT 1.3 MI SE OF DILLON ROAD AT THOUSAND PALMS RD, INDIO HILLS PALMS.						
Detailed Location:	TRAPLINE 6 (50 TRAPS). MAPPED TO TRAPLINE LOCATION FROM PROVIDED MAP.						
Ecological:	HABITAT DOMINATED BY LARREA TRIDENTATA. SOIL IS CARRIZO STONY SAND. AVERAGE SHRUB HEIGHT IS 1-2 M. UNDERSTORY IS HERBS TO BARE GROUND TO ROCKY.						
General:	2 INDIVIDUALS CAPTURED ON 13 APR & 2 ON 14 APR 1995.						
Owner/Manager:	DPR-INDIO HILLS PALMS						



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Occurrence No.	91	Map Index:	73821	EO Index:	74813	Element Last Seen:	1995-06-10
Occ. Rank:	Unknown	Presence:	Presumed Extant	Site Last Seen:		1995-06-10	
Occ. Type:	Natural/Native occurrence	Trend:	Unknown	Record Last Updated:		2009-03-09	

Quad Summary: West Berdoo Canyon (3311672)

County Summary: Riverside

Lat/Long:	33.84956 / -116.24626	Accuracy:	1/10 mile
UTM:	Zone-11 N3745731 E569728	Elevation (ft):	1110
PLSS:	T04S, R07E, Sec. 03, SW (S)	Acres:	0.0

Location: NORTH OF DILLON RD, ABOUT 3.6 MI SE OF DILLON RD AT THOUSAND PALMS RD, SKY VALLEY ER.

Detailed Location: TRAPLINE 8 (100 TRAPS) AND DENSITY PLOT 5 (128 TRAPS). MAPPED TO TRAPLINE LOCATION FROM PROVIDED MAP.

Ecological: HABITAT DOMINATED BY LARREA TRIDENTATA & AMBROSIA DUMOSA. SOIL IS CARRIZO STONY SAND. AVERAGE SHRUB HEIGHT IS 1-3 M. UNDERSTORY IS MOSTLY BARE GROUND/HERBS.

General: TRANSECT 8: 6 INDIVIDUALS CAPTURED ON 25 APR, 6 ON 26 APR, AND 2 ON 27 APR 1995. DENSITY PLOT 5: 6 CAPTURED ON 6 JUN, 5 ON 7 JUN, 7 ON 8 JUN, 6 ON 9 JUN, AND 4 ON 10 JUN 1995.

Owner/Manager: DFG-SKY VALLEY ER

Occurrence No.	92	Map Index:	73824	EO Index:	74816	Element Last Seen:	1995-04-27
Occ. Rank:	Unknown	Presence:	Presumed Extant	Site Last Seen:		1995-04-27	
Occ. Type:	Natural/Native occurrence	Trend:	Unknown	Record Last Updated:		2009-03-09	

Quad Summary: West Berdoo Canyon (3311672)

County Summary: Riverside

Lat/Long:	33.85484 / -116.21573	Accuracy:	1/10 mile
UTM:	Zone-11 N3746338 E572548	Elevation (ft):	1570
PLSS:	T04S, R07E, Sec. 02, NE (S)	Acres:	0.0

Location: ABOUT 1.7 MI NNE OF INDIO HILLS (TOWN), AT SE BASE OF LITTLE SAN BERNARDINO MTS.

Detailed Location: TRAPLINE 7 (100 TRAPS). MAPPED TO TRAPLINE LOCATION FROM PROVIDED MAP.

Ecological: HABITAT DOMINATED BY LORREA TRIDENTATA & HYMENOCLEA SALSOLA. SOIL IS CARRIZO STONY SAND. AVERAGE SHRUB HEIGHT IS 0.5-2 M. UNDERSTORY IS BARE GROUND/HERBS.

General: 5 INDIVIDUALS CAPTURED ON 15 APR, 6 ON 16 APR, AND 6 ON 17 APR 1995.

Owner/Manager: UNKNOWN



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Occurrence No.	93	Map Index:	73826	EO Index:	74819	Element Last Seen:	1995-04-30
Occ. Rank:	Unknown			Presence:	Presumed Extant	Site Last Seen:	1995-04-30
Occ. Type:	Natural/Native occurrence			Trend:	Unknown	Record Last Updated:	2009-03-09
Quad Summary:	Keys View (3311682)						
County Summary:	Riverside						
Lat/Long:	33.87950 / -116.24386				Accuracy:	1/10 mile	
UTM:	Zone-11 N3749053 E569926				Elevation (ft):	1630	
PLSS:	T03S, R07E, Sec. 27, SW (S)				Acres:	0.0	
Location:	SOUTH OF THE COLORADO RIVER AQUEDUCT, ABOUT 1 MI ESE OF FAN HILL, SKY VALLEY ECOLOGICAL RESERVE.						
Detailed Location:	TRAPLINE 9 (100 TRAPS). MAPPED TO TRAPLINE LOCATION FROM PROVIDED MAP.						
Ecological:	HABITAT DOMINATED BY LORREA TRIDENTATA, AMBROSIA DUMOSA & ENCELIA FARINOSA. SOIL IS CARRIZO STONY SAND & CHUCKWALLA VERY GRAVELLY SANDY CLAY LOAM. VERY ROCKY. AVERAGE SHRUB HEIGHT IS 0.5-2 M. UNDERSTORY IS MOSTLY BARE GROUND.						
General:	8 INDIVIDUALS CAPTURED ON 28 APR, 11 ON 29 APR, AND 7 ON 30 APR 1995.						
Owner/Manager:	DFG-SKY VALLEY ER						
Occurrence No.	94	Map Index:	73829	EO Index:	74820	Element Last Seen:	1995-04-29
Occ. Rank:	Unknown			Presence:	Presumed Extant	Site Last Seen:	1995-04-29
Occ. Type:	Natural/Native occurrence			Trend:	Unknown	Record Last Updated:	2009-03-09
Quad Summary:	East Deception Canyon (3311683)						
County Summary:	Riverside						
Lat/Long:	33.89170 / -116.26406				Accuracy:	1/10 mile	
UTM:	Zone-11 N3750391 E568048				Elevation (ft):	1650	
PLSS:	T03S, R07E, Sec. 21, SW (S)				Acres:	0.0	
Location:	ABOUT 0.4 MI NNW OF FAN HILL, BETWEEN INDIO HILLS PALMS & JOSHUA TREE NATIONAL PARK.						
Detailed Location:	TRAPLINE 10 (50 TRAPS). MAPPED TO TRAPLINE LOCATION FROM PROVIDED MAP.						
Ecological:	HABITAT DOMINATED BY HYMENOCLEA SALSOLA. SOIL IS CARSITAS COBBLY SAND. AVERAGE SHRUB HEIGHT IS 1-1.5 M. UNDERSTORY IS BARE GROUND/HERBS.						
General:	2 INDIVIDUALS CAPTURED ON 28 APR & 3 ON 29 APR 1995.						
Owner/Manager:	UNKNOWN						



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Ovis canadensis nelsoni

Element Code: AMALE04013

desert bighorn sheep

Listing Status: **Federal:** None

CNDDB Element Ranks: **Global:** G4T4

State: None

State: S3

Other: BLM_S-Sensitive, CDFW_FP-Fully Protected, USFS_S-Sensitive

Habitat: **General:** WIDELY DISTRIBUTED FROM THE WHITE MTNS IN MONO CO. TO THE CHOCOLATE MTS IN IMPERIAL CO.

Micro: OPEN, ROCKY, STEEP AREAS WITH AVAILABLE WATER AND HERBACEOUS FORAGE.

Occurrence No. 14 **Map Index:** 05686 **EO Index:** 12417 **Element Last Seen:** 1986-XX-XX

Occ. Rank: Unknown **Presence:** Presumed Extant **Site Last Seen:** 1986-XX-XX

Occ. Type: Natural/Native occurrence **Trend:** Unknown **Record Last Updated:** 1995-10-24

Quad Summary: Thermal Canyon (3311661), Rockhouse Canyon (3311671), West Berdoo Canyon (3311672), Malapai Hill (3311681), Keys View (3311682), East Deception Canyon (3311683), Seven Palms Valley (3311684), Desert Hot Springs (3311685), Joshua Tree South (3411613), Yucca Valley South (3411614), Morongo Valley (3411615)

County Summary: Riverside, San Bernardino

Lat/Long: 33.90296 / -116.29325 **Accuracy:** specific area

UTM: Zone-11 N3751621 E565341 **Elevation (ft):**

PLSS: T03S, R07E, Sec. 19 (S) **Acres:** 140891.3

Location: LITTLE SAN BERNARDINO MOUNTAINS.

Detailed Location: THIS RANGE BECOMES MORE ARID TO THE EAST AND THE SHEEP POPULATION BECOMES LESS DENSE AND IS USED LESS FREQUENTLY THAN THE WESTERN PORTION.

Ecological:

General: POPULATION ESTIMATE OF 100 INDIVIDUALS; RECENT INCREASES IN POPULATION NUMBERS.

Owner/Manager: NPS-JOSHUA TREE NP



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Gopherus agassizii

Element Code: ARAAF01012

desert tortoise

Listing Status: **Federal:** Threatened

CNDDB Element Ranks: **Global:** G3

State: Threatened

State: S2S3

Other: IUCN_VU-Vulnerable

Habitat: **General:** MOST COMMON IN DESERT SCRUB, DESERT WASH, AND JOSHUA TREE HABITATS; OCCURS IN ALMOST EVERY DESERT HABITAT.

Micro: REQUIRE FRIABLE SOIL FOR BURROW AND NEST CONSTRUCTION. CREOSOTE BUSH HABITAT WITH LARGE ANNUAL WILDFLOWER BLOOMS PREFERRED.

Occurrence No.	272	Map Index:	73516	EO Index:	74486	Element Last Seen:	2002-04-XX
Occ. Rank:	Unknown	Presence:	Presumed Extant	Site Last Seen:			2002-04-XX
Occ. Type:	Natural/Native occurrence	Trend:	Unknown	Record Last Updated:			2009-01-30

Quad Summary: West Berdoo Canyon (3311672), Keys View (3311682), East Deception Canyon (3311683)

County Summary: Riverside

Lat/Long:	33.87786 / -116.24975	Accuracy:	specific area
UTM:	Zone-11 N3748867 E569383	Elevation (ft):	1550
PLSS:	T03S, R07E, Sec. 28 (S)	Acres:	15.0

Location: SW OF THE INTERSECTION OF JOSHUA TREE NATIONAL PARK RD & FAN HILL RD, 0.55-1.25 MI SE OF FAN HILL.

Detailed Location: LOCATIONS MAPPED ARE THE 3 LOCATIONS WHERE TORTOISES/BURROWS OBSERVED.

Ecological: 3 LIVE TORTOISES WERE FOUND IN BURROWS WITHIN THE 11 SQUARE MILES OF THE PROJECT AREA, WHICH TRANSLATES INTO AN AVERAGE DENSITY OF LESS THAN 1 TORTOISE/3 SQUARE MILES.

General: 3 BURROWS/3 TORTOISES OBS DURING APRIL & MAY 2002 SURVEYS. TORTOISES OBS: SMALL SUBADULT INSIDE A BURROW, NO HEALTH PROBLEMS SEEN; SMALL ADULT RESTING INSIDE A BURROW IN TALL WASH BANK; HATCHLING PLATES CLEARLY PRESENT, UNDER INDIGO BUSH.

Owner/Manager: NPS-JOSHUA TREE NP



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Uma inornata

Element Code: ARACF15010

Coachella Valley fringe-toed lizard

Listing Status: **Federal:** Threatened

CNDDDB Element Ranks: **Global:** G1Q

State: Endangered

State: S1

Other: IUCN_EN-Endangered

Habitat: **General:** LIMITED TO SANDY AREAS IN THE COACHELLA VALLEY, RIVERSIDE COUNTY.

Micro: REQUIRES FINE, LOOSE, WINDBLOWN SAND (FOR BURROWING), INTERSPERSED WITH HARDPAN AND WIDELY-SPACED DESERT SHRUBS.

Occurrence No.	192	Map Index:	50050	EO Index:	50050	Element Last Seen:	1975-XX-XX
Occ. Rank:	Unknown	Presence:	Presumed Extant	Site Last Seen:			1975-XX-XX
Occ. Type:	Natural/Native occurrence	Trend:	Unknown	Record Last Updated:			2003-02-24

Quad Summary: West Berdoo Canyon (3311672)

County Summary: Riverside

Lat/Long: 33.76897 / -116.19946 **Accuracy:** 2/5 mile

UTM: Zone-11 N3736828 E574128 **Elevation (ft):** 400

PLSS: T05S, R07E, Sec. 01, NW (S) **Acres:** 0.0

Location: NE FACING SLOPE OF SOUTHERN END OF INDIO HILLS, 2.5 MILES NE OF INTERSECTION OF JACKSON ST & INTERSTATE 10; NE OF INDIO.

Detailed Location: DAVIS RECORD: T5S R8E NW 1/4 OF NW 1/4 SECTION 6.

Ecological:

General: DAVIS RECORD FOR TIME PERIOD 1969-1975. INCLUDES DATA FROM RECOVERY PLAN (1984).

Owner/Manager: UNKNOWN

Desert Fan Palm Oasis Woodland

Element Code: CTT62300CA

Desert Fan Palm Oasis Woodland

Listing Status: **Federal:** None

CNDDDB Element Ranks: **Global:** G3

State: None

State: S3.2

Other:

Habitat: **General:** ☐

Micro: ☐



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Occurrence No.	52	Map Index:	05779	EO Index:	13144	Element Last Seen:	1976-09-XX
Occ. Rank:	Unknown	Presence:	Presumed Extant	Site Last Seen:		1976-09-XX	
Occ. Type:	Natural/Native occurrence	Trend:	Unknown	Record Last Updated:		1998-07-23	

Quad Summary: Myoma (3311673)

County Summary: Riverside

Lat/Long:	33.82474 / -116.28112	Accuracy:	1/5 mile
UTM:	Zone-11 N3742956 E566523	Elevation (ft):	800
PLSS:	T04S, R07E, Sec. 17, SW (S)	Acres:	0.0

Location: PUSHAWALLA PALMS OASIS, INDIO HILLS.

Detailed Location: WASHINGTONIA FILIFERA ALONG FAULT SYSTEM. 429 PALMS COUNTED IN 1966. 261 COUNTED IN 1945. EXTENDING ALONG CANYON 1.25 MILES.

Ecological: WASH TYPE OASIS, ASSOC VEG INCLUDE POPULUS FREMONTII, SCIRPUS, TYPHA, PLUCHEA. SITE BURNED 1959.

General: ACQUIRED FOR INDIO HILLS PALMS COUNTY PARK. SEE WWW.DFG.CA.GOV/BIOGEODATA/VEGCAMP/NATURAL_COMM_BACKGROUND.ASP TO INTERPRET AND ADDRESS THE PRESENCE OF RARE COMMUNITIES.

Owner/Manager: UNKNOWN

Occurrence No.	53	Map Index:	16007	EO Index:	28842	Element Last Seen:	1975-07-XX
Occ. Rank:	Unknown	Presence:	Presumed Extant	Site Last Seen:		1975-07-XX	
Occ. Type:	Natural/Native occurrence	Trend:	Decreasing	Record Last Updated:		1998-07-23	

Quad Summary: Myoma (3311673)

County Summary: Riverside

Lat/Long:	33.85281 / -116.31757	Accuracy:	1 mile
UTM:	Zone-11 N3746045 E563129	Elevation (ft):	700
PLSS:	T04S, R06E, Sec. 01 (S)	Acres:	0.0

Location: SIMONE PALMS OASIS, SECTION 1 NORTH OF THOUSAND PALMS OASIS.

Detailed Location: WASHINGTONIA FILIFERA ALONG FAULT SYSTEM. 210 PALMS COUNTED 1966.

Ecological: UNABLE TO CONVERT TO FLORISTIC CLASSIFICATION, LACKS SPP. INFO.

General: SEE WWW.DFG.CA.GOV/BIOGEODATA/VEGCAMP/NATURAL_COMM_BACKGROUND.ASP TO INTERPRET AND ADDRESS THE PRESENCE OF RARE COMMUNITIES.

Owner/Manager: PVT



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Occurrence No.	56	Map Index:	05840	EO Index:	13143	Element Last Seen:	1975-11-XX
Occ. Rank:	Good	Presence:	Presumed Extant	Site Last Seen:	1988-09-24		
Occ. Type:	Natural/Native occurrence	Trend:	Unknown	Record Last Updated:	1998-07-23		

Quad Summary: West Berdoo Canyon (3311672)

County Summary: Riverside

Lat/Long:	33.76973 / -116.22362	Accuracy:	1/5 mile
UTM:	Zone-11 N3736895 E571890	Elevation (ft):	200
PLSS:	T05S, R07E, Sec. 02 (S)	Acres:	0.0

Location: INDIO HILLS NATIVE PALMS NATURAL AREA. BADLAND TOPOGRAPHY OF INDIO HILLS IS TO THE NORTH.

Detailed Location: WASHINGTONIA FILIFERA ALONG SAN ANDREAS FAULT W/23 TREES. 80 TO 320 FEET. 20 ACRES. ONE OF THE INDIO HILLS FAULTS GROUP OF OASES.

Ecological: SANDSTONE BANKS WITH LOOSE SAND IN THE WASHES. OVER 100 WASHINGTONIA FILIFERA GROWING IN ARROYOS. ASSOC. INCLUDE PROSOPIS GLANDULOSA TORREYANA, PHORADENDRON CALIFORNICUM, ATRIPLEX HYMENELYTRA AND CHORIZANTHE RIGIDA.

General: SEE WWW.DFG.CA.GOV/BIOGEODATA/VEGCAMP/NATURAL_COMM_BACKGROUND.ASP TO INTERPRET AND ADDRESS THE PRESENCE OF RARE COMMUNITIES.

Owner/Manager: UNKNOWN, BLM

Occurrence No.	57	Map Index:	05788	EO Index:	28839	Element Last Seen:	1977-07-XX
Occ. Rank:	Unknown	Presence:	Presumed Extant	Site Last Seen:	1977-07-XX		
Occ. Type:	Natural/Native occurrence	Trend:	Unknown	Record Last Updated:	1998-07-23		

Quad Summary: Myoma (3311673)

County Summary: Riverside

Lat/Long:	33.80862 / -116.27417	Accuracy:	1/5 mile
UTM:	Zone-11 N3741173 E567179	Elevation (ft):	400
PLSS:	T04S, R07E, Sec. 20 (S)	Acres:	0.0

Location: NOMAD PALMS OASIS, INDIO HILLS.

Detailed Location: WASHINGTONIA FILIFERA ALONG FAULT SYSTEM. 3 PALMS COUNTED 1966.

Ecological: UNABLE TO CONVERT TO FLORISTIC CLASSIFICATION, LACKS SPP. INFO.

General: SEE WWW.DFG.CA.GOV/BIOGEODATA/VEGCAMP/NATURAL_COMM_BACKGROUND.ASP TO INTERPRET AND ADDRESS THE PRESENCE OF RARE COMMUNITIES.

Owner/Manager: BLM



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Occurrence No.	58	Map Index:	21416	EO Index:	28837	Element Last Seen:	1966-XX-XX
Occ. Rank:	Unknown	Presence:	Presumed Extant	Site Last Seen:		1966-XX-XX	
Occ. Type:	Natural/Native occurrence	Trend:	Unknown	Record Last Updated:		1998-07-23	

Quad Summary: Myoma (3311673)

County Summary: Riverside

Lat/Long:	33.84773 / -116.31330	Accuracy:	1 mile
UTM:	Zone-11 N3745484 E563528	Elevation (ft):	660
PLSS:	T04S, R06E, Sec. 01 (S)	Acres:	0.0

Location: POWELL PALMS OASIS, INDIO HILLS BETWEEN THOUSAND PALMS OASIS AND SIMONE PALMS.

Detailed Location: WASHINGTONIA FILIFERA ALONG FAULT SYSTEM. 59 PALMS COUNTED IN 1966.

Ecological: UNABLE TO CONVERT TO FLORISTIC CLASSIFICATION, LACKS SPP. INFO.

General: SEE WWW.DFG.CA.GOV/BIOGEODATA/VEGCAMP/NATURAL_COMM_BACKGROUND.ASP TO INTERPRET AND ADDRESS THE PRESENCE OF RARE COMMUNITIES.

Owner/Manager: UNKNOWN

Occurrence No.	59	Map Index:	05805	EO Index:	28838	Element Last Seen:	1976-09-XX
Occ. Rank:	Unknown	Presence:	Presumed Extant	Site Last Seen:		1976-09-XX	
Occ. Type:	Natural/Native occurrence	Trend:	Unknown	Record Last Updated:		1997-04-16	

Quad Summary: West Berdoo Canyon (3311672), Myoma (3311673)

County Summary: Riverside

Lat/Long:	33.79113 / -116.25251	Accuracy:	1/5 mile
UTM:	Zone-11 N3739248 E569198	Elevation (ft):	460
PLSS:	T04S, R07E, Sec. 28, SE (S)	Acres:	0.0

Location: BISKRA PALMS OASIS, INDIO HILLS.

Detailed Location: WASHINGTONIA FILIFERA OASIS AT POINT OF FRACTURE OF SAN ANDREAS FAULT INTO TWO BRANCHES. 215 PALMS COUNTED 1966, ALL MATURE.

Ecological: BOTH SEEP AND WASH OASIS CHARACTERISTICS.

General: IN INDIO HILLS PALMS STATE PARK. SEE WWW.DFG.CA.GOV/BIOGEODATA/VEGCAMP/NATURAL_COMM_BACKGROUND.ASP TO INTERPRET AND ADDRESS THE PRESENCE OF RARE COMMUNITIES.

Owner/Manager: RIV COUNTY



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Occurrence No.	60	Map Index:	05798	EO Index:	28836	Element Last Seen:	1976-09-XX
Occ. Rank:	Unknown	Presence:	Presumed Extant	Site Last Seen:	1976-09-XX		
Occ. Type:	Natural/Native occurrence	Trend:	Unknown	Record Last Updated:	1998-07-23		

Quad Summary: Myoma (3311673)

County Summary: Riverside

Lat/Long:	33.79862 / -116.25584	Accuracy:	1/5 mile
UTM:	Zone-11 N3740076 E568884	Elevation (ft):	500
PLSS:	T04S, R07E, Sec. 28, NW (S)	Acres:	0.0

Location: MACOMBER OASIS, INDIO HILLS.

Detailed Location: WASHINGTONIA FILIFERA ALONG FAULT SYSTEM. 536 PALMS COUNTED IN 1966, INCL 102 JUVENILES.

Ecological: BOTH SEEP AND WASH OASIS CHARACTERISTICS.

General: IN INDIO HILLS PALMS STATE PARK. SEE WWW.DFG.CA.GOV/BIOGEODATA/VEGCAMP/NATURAL_COMM_BACKGROUND.ASP TO INTERPRET AND ADDRESS THE PRESENCE OF RARE COMMUNITIES.

Owner/Manager: RIV COUNTY

Occurrence No.	61	Map Index:	05754	EO Index:	28834	Element Last Seen:	1976-09-XX
Occ. Rank:	Unknown	Presence:	Presumed Extant	Site Last Seen:	1980-11-11		
Occ. Type:	Natural/Native occurrence	Trend:	Unknown	Record Last Updated:	1998-07-23		

Quad Summary: Myoma (3311673)

County Summary: Riverside

Lat/Long:	33.84424 / -116.29998	Accuracy:	1/5 mile
UTM:	Zone-11 N3745106 E564763	Elevation (ft):	720
PLSS:	T04S, R07E, Sec. 07, NW (S)	Acres:	0.0

Location: INDIAN PALMS OASIS. EAST OF THOUSAND PALMS CANYON ROAD, SOUTH OF DILLON ROAD, INDIO HILLS.

Detailed Location: WASHINGTONIA FILIFERA ALONG FAULT SYSTEM. 142 PALMS SEEN 1966, 127 PALMS INCL 14 DEAD MATURE TREES.

Ecological: 1942 TREMOR INCREASED WATER SUPPLY AND SEEDLING ESTABLISHMENT. UNABLE TO CONVERT TO FLORISTIC CLASSIFICATION, LACKS SPP. INFO.

General: SEE WWW.DFG.CA.GOV/BIOGEODATA/VEGCAMP/NATURAL_COMM_BACKGROUND.ASP TO INTERPRET AND ADDRESS THE PRESENCE OF RARE COMMUNITIES.

Owner/Manager: PVT



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Occurrence No.	62	Map Index:	05764	EO Index:	28835	Element Last Seen:	1976-09-XX
Occ. Rank:	Unknown	Presence:	Presumed Extant	Site Last Seen:	1976-09-XX		
Occ. Type:	Natural/Native occurrence	Trend:	Unknown	Record Last Updated:	1998-07-23		

Quad Summary: Myoma (3311673)

County Summary: Riverside

Lat/Long:	33.82723 / -116.29530	Accuracy:	1/5 mile
UTM:	Zone-11 N3743223 E565209	Elevation (ft):	750
PLSS:	T04S, R07E, Sec. 18, NW (S)	Acres:	0.0

Location: HORSESHOE PALMS OASIS. EAST OF THOUSAND PALMS CANYON ROAD, INDIO HILLS.

Detailed Location: WASHINGTONIA FILIFERA ALONG FAULT SYSTEM. 169 PALMS COUNTED IN 1966.

Ecological: UNABLE TO CONVERT TO FLORISTIC CLASSIFICATION, LACKS SPP. INFO.

General: IN INDIO HILLS PALMS STATE PARK. SEE WWW.DFG.CA.GOV/BIOGEODATA/VEGCAMP/NATURAL_COMM_BACKGROUND.ASP TO INTERPRET AND ADDRESS THE PRESENCE OF RARE COMMUNITIES.

Owner/Manager: RIV COUNTY

Occurrence No.	63	Map Index:	05762	EO Index:	28833	Element Last Seen:	1976-09-XX
Occ. Rank:	Unknown	Presence:	Presumed Extant	Site Last Seen:	1976-09-XX		
Occ. Type:	Natural/Native occurrence	Trend:	Unknown	Record Last Updated:	1998-07-23		

Quad Summary: Myoma (3311673)

County Summary: Riverside

Lat/Long:	33.83278 / -116.29695	Accuracy:	1/5 mile
UTM:	Zone-11 N3743837 E565052	Elevation (ft):	650
PLSS:	T04S, R07E, Sec. 07, SW (S)	Acres:	0.0

Location: TWIN PALMS OASIS, BETWEEN HORSESHOE PALMS AND INDIAN PALMS OASIS, EAST OF THOUSAND PALMS CANYON ROAD.

Detailed Location: WASHINGTONIA FILIFERA ALONG FAULT SYSTEM.

Ecological: UNABLE TO CONVERT TO FLORISTIC CLASSIFICATION, LACKS SPP. INFO.

General: SEE WWW.DFG.CA.GOV/BIOGEODATA/VEGCAMP/NATURAL_COMM_BACKGROUND.ASP TO INTERPRET AND ADDRESS THE PRESENCE OF RARE COMMUNITIES.

Owner/Manager: RIV COUNTY



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Occurrence No.	64	Map Index:	05759	EO Index:	28831	Element Last Seen:	1976-09-XX
Occ. Rank:	Unknown	Presence:	Presumed Extant	Site Last Seen:	1976-09-XX	Record Last Updated:	1998-07-23
Occ. Type:	Natural/Native occurrence	Trend:	Unknown				

Quad Summary: Myoma (3311673)

County Summary: Riverside

Lat/Long:	33.83988 / -116.29761	Accuracy:	1/5 mile
UTM:	Zone-11 N3744624 E564986	Elevation (ft):	700
PLSS:	T04S, R07E, Sec. 07, NW (S)	Acres:	0.0

Location: EAST INDIAN PALMS OASIS SE OF INDIAN PALMS OASIS, EAST OF THOUSAND PALMS CANYON ROAD, INDIO HILLS.
Detailed Location: WASHINGTONIA FILIFERA ALONG FAULT SYSTEM. OF 31 PALMS COUNTED IN 1966, 14 WERE JUVENILE.
Ecological: UNABLE TO CONVERT TO FLORISTIC CLASSIFICATION, LACKS SPP. INFO.
General: SEE WWW.DFG.CA.GOV/BIOGEODATA/VEGCAMP/NATURAL_COMM_BACKGROUND.ASP TO INTERPRET AND ADDRESS THE PRESENCE OF RARE COMMUNITIES.
Owner/Manager: UNKNOWN

Occurrence No.	65	Map Index:	05752	EO Index:	28832	Element Last Seen:	1976-09-XX
Occ. Rank:	Unknown	Presence:	Presumed Extant	Site Last Seen:	1976-09-XX	Record Last Updated:	1998-07-23
Occ. Type:	Natural/Native occurrence	Trend:	Unknown				

Quad Summary: Myoma (3311673)

County Summary: Riverside

Lat/Long:	33.82028 / -116.30194	Accuracy:	1/5 mile
UTM:	Zone-11 N3742448 E564600	Elevation (ft):	480
PLSS:	T04S, R06E, Sec. 13, S (S)	Acres:	0.0

Location: HIDDEN PALMS OASIS, EAST OF THOUSAND PALMS CANYON ROAD, INDIO HILLS.
Detailed Location: WASHINGTONIA FILIFERA ALONG FAULT SYSTEM. 268 PALMS COUNTED IN 1966.
Ecological: UNABLE TO CONVERT TO FLORISTIC CLASSIFICATION, LACKS SPP. INFO.
General: IN INDIO HILLS PALMS STATE PARK. SEE WWW.DFG.CA.GOV/BIOGEODATA/VEGCAMP/NATURAL_COMM_BACKGROUND.ASP TO INTERPRET AND ADDRESS THE PRESENCE OF RARE COMMUNITIES.
Owner/Manager: RIV COUNTY

Xylorhiza cognata

Element Code: PDASTA1010

Mecca-aster

Listing Status:	Federal: None	CNDDB Element Ranks:	Global: G2
	State: None		State: S2
	Other: Rare Plant Rank - 1B.2, BLM_S-Sensitive, SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden		
Habitat:	General: SONORAN DESERT SCRUB.		
	Micro: STEEP CANYON SLOPES, IN SANDSTONE AND CLAY. 20-305 M.		



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Occurrence No.	14	Map Index:	36090	EO Index:	31087	Element Last Seen:	2006-01-26
Occ. Rank:	Good	Presence:	Presumed Extant	Site Last Seen:		2006-01-26	
Occ. Type:	Natural/Native occurrence	Trend:	Unknown	Record Last Updated:		2011-11-23	
Quad Summary:	West Berdoo Canyon (3311672)						
County Summary:	Riverside						
Lat/Long:	33.76957 / -116.20312			Accuracy:	specific area		
UTM:	Zone-11 N3736892 E573788			Elevation (ft):	300		
PLSS:	T05S, R07E, Sec. 01, NE (S)			Acres:	2.0		
Location:	NNE OF INDIO; CANYON ACCESS VIA A POWERLINE ROAD 2.5 MI W OF DILLON RD, INDIO HILLS.						
Detailed Location:	MAPPED ACCORDING TO 2006 BENIGNO COORDINATES. A 1984 STEWART FIELD SURVEY FORM FROM SE1/4 OF THE NE1/4 OF SECTION 1 IS ALSO ATTRIBUTED TO THIS SITE.						
Ecological:	BASE OF NORTH-FACING SANDSTONE CLIFF ON GYPSUM CLAY. ASSOCIATED WITH HAPLOPAPPUS ACRADENIUS, LARREA TRIDENTATA, HOFFMANSEGGIA MICROPHYLLA, AND HYMENOCLEA SALSOLA.						
General:	7 PLANTS OBSERVED IN 1985. 12 PLANTS OBSERVED IN SOUTHERN POLYGON IN 2005. 28 PLANTS OBSERVED THROUGHOUT OCCURRENCE IN 2006.						
Owner/Manager:	BLM						

Occurrence No.	15	Map Index:	36091	EO Index:	31088	Element Last Seen:	2006-01-26
Occ. Rank:	Fair	Presence:	Presumed Extant	Site Last Seen:		2006-01-26	
Occ. Type:	Natural/Native occurrence	Trend:	Unknown	Record Last Updated:		2012-01-23	
Quad Summary:	West Berdoo Canyon (3311672)						
County Summary:	Riverside						
Lat/Long:	33.77020 / -116.21379			Accuracy:	non-specific area		
UTM:	Zone-11 N3736955 E572799			Elevation (ft):	300		
PLSS:	T05S, R07E, Sec. 01, NW (S)			Acres:	199.0		
Location:	NNE OF INDIO; APPROXIMATELY 2.3 MILES SOUTHEAST OF BISKRA PALMS, INDIO HILLS.						
Detailed Location:	SE POLY MAPPED ACCORDING TO 2006 BENIGNO COORDS. NW POLY MAPPED ACCORDING TO 1984 TRS FROM STEWART: T05S R7E NE1/4 OF NE1/4 SEC 2 AND SE1/4 OF NE1/4 SEC 2; NW1/4 OF NW1/4 SEC 1; T04S R7E SE1/4 OF SE1/4 SEC 35 AND SW1/4 OF SW1/4 SEC 36.						
Ecological:	ON GYPSUM CLAY. ASSOCIATED WITH HYMENOCLEA SALSOLA, PEUCEPHYLLUM SCHOTTII, ATRIPLEX POLYCARPA, DALEA SPINOSA, COLDENIA PALMERI, & ATRIPLEX CANESCENS.						
General:	200 PLANTS OBSERVED IN 1984. 2006: 1 PLANT SEEN IN THE SE1/4 OF THE NE1/4 OF SECTION 2 AND 17 PLANTS SEEN IN SOUTHEAST POLYGON. INCLUDES FORMER OCCURRENCE #33.						
Owner/Manager:	BLM						



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Occurrence No.	16	Map Index:	36092	EO Index:	31089	Element Last Seen:	1997-05-XX
Occ. Rank:	Unknown			Presence:	Presumed Extant	Site Last Seen:	1997-05-XX
Occ. Type:	Natural/Native occurrence			Trend:	Unknown	Record Last Updated:	2013-02-22
Quad Summary:	West Berdoo Canyon (3311672)						
County Summary:	Riverside						
Lat/Long:	33.78199 / -116.23340			Accuracy:	non-specific area		
UTM:	Zone-11 N3738248 E570974			Elevation (ft):	400		
PLSS:	T04S, R07E, Sec. 34, NE (S)			Acres:	52.0		
Location:	NORTH OF INDIO; ABOUT 1 MILE SOUTHEAST OF BISKRA PALMS NEAR GRAVEL PIT, INDIO HILLS.						
Detailed Location:	2 POLYGONS MAPPED BASED ON T-R-S PROVIDED BY STEWART: T04S R7E SE 1/4 OF NE 1/4 SECTION 34; AND NON-SPECIFIC DIGITAL DATA PROVIDED BY THE COACHELLA VALLEY MSHCP, "IN PALM OASIS JUST N OF GRANITE CONSTRUCTION CO. QUARRY".						
Ecological:	ASSOCIATED WITH LARREA TRIDENTATA, AMBROSIA DUMOSA, BEBBIA JUNCEA, AND ENCELIA.						
General:	7 PLANTS OBSERVED IN E POLY IN 1984. W POLY: 1 PLANT REPORTED BY BILL HAVERT IN 1997 IN THE COACHELLA VALLEY MSHCP, BUT POINT PROVIDED FOR SITE IS NOT LOCATED "IN A PALM OASIS"; MAPPED TO INCLUDE PALM OASIS CLOSEST TO (SOUTH OF) THE POINT.						
Owner/Manager:	UNKNOWN						
Occurrence No.	17	Map Index:	36093	EO Index:	31090	Element Last Seen:	2005-04-21
Occ. Rank:	Unknown			Presence:	Presumed Extant	Site Last Seen:	2005-04-21
Occ. Type:	Natural/Native occurrence			Trend:	Unknown	Record Last Updated:	2013-02-27
Quad Summary:	West Berdoo Canyon (3311672), Myoma (3311673)						
County Summary:	Riverside						
Lat/Long:	33.80363 / -116.26136			Accuracy:	non-specific area		
UTM:	Zone-11 N3740629 E568368			Elevation (ft):	600		
PLSS:	T04S, R07E, Sec. 21, SW (S)			Acres:	161.0		
Location:	VICINITY OF MACOMBER PALMS OASIS, INDIO HILLS.						
Detailed Location:	2 N-MOST POLYGONS ARE SPECIFIC AND BASED ON 2005 MCGLAUGHLIN COORDINATES. THE REST OF THE OCCURRENCE IS BASED ON TRS INFORMATION FROM 1984 STEWART FIELD SURVEY FORMS. IN THE SW 1/4 OF SECTION 21 AND THE NORTH 1/2 OF SECTION 28.						
Ecological:	PLANTS GROWING IN SANDY SOILS AT BASE OF CANYON WALL. ASSOCIATED WITH ENCELIA FARINOSA AND LARREA TRIDENTATA.						
General:	660 PLANTS OBSERVED IN THIS AREA IN 1984. 300+ PLANTS SEEN IN THE 2 N-MOST POLYGONS IN 2005; MOST LIKELY MORE IN THE AREA.						
Owner/Manager:	DPR-INDIO HILLS PALMS, PVT						



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Occurrence No.	18	Map Index:	36094	EO Index:	31091	Element Last Seen:	2005-04-21
Occ. Rank:	Unknown	Presence:	Presumed Extant	Site Last Seen:		2005-04-21	
Occ. Type:	Natural/Native occurrence	Trend:	Unknown	Record Last Updated:		2013-02-27	

Quad Summary: West Berdoo Canyon (3311672)

County Summary: Riverside

Lat/Long:	33.79044 / -116.24762	Accuracy:	specific area
UTM:	Zone-11 N3739175 E569651	Elevation (ft):	400
PLSS:	T04S, R07E, Sec. 27, SW (S)	Acres:	1.0

Location: JUST SOUTHEAST OF BISKRA PALMS, INDIO HILLS.

Detailed Location: SITE MAPPED BY CNDDDB AS A SMALL POLYGON ACCORDING TO 2005 MCGLAUGHLIN COORDINATES IN THE SW1/4 OF THE SW1/4 OF SECTION 27. A 1984 STEWART FIELD SURVEY FORM FROM SE1/4 OF SE1/4 OF SEC 28 IS ALSO ATTRIB HERE; MAY BE FURTHER TO THE WEST.

Ecological: STEEP SLOPES OF CANYONS, FROM NEAR BOTTOM TO RIDGETOP. UPLIFTED ROCKY SEDIMENTS AND ALKALI CLAY WITH PEUCEPHYLLUM, ATRIPLEX CANESCENS, A. HYMENELYTRA, TIDESTROMIA, BEBBIA, AND ENCELIA.

General: 250 PLANTS SEEN IN 1984 IN THE SE1/4 OF THE SE1/4 OF SECTION 28. 180+ PLANTS SEEN IN 2005.

Owner/Manager: DPR-INDIO HILLS PALMS

Astragalus lentiginosus var. coachellae

Element Code: PDFAB0FB97

Coachella Valley milk-vetch

Listing Status:	Federal: Endangered	CNDDDB Element Ranks:	Global: G5T1
	State: None		State: S1
	Other: Rare Plant Rank - 1B.2, SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden, SB_USDA-US Dept of Agriculture		
Habitat:	General: SONORAN DESERT SCRUB, DESERT DUNES.		
	Micro: SANDY FLATS, WASHES, OUTWASH FANS, SOMETIMES ON DUNES. 35-695 M.		

Occurrence No.	57	Map Index:	79125	EO Index:	80088	Element Last Seen:	1987-03-30
Occ. Rank:	Good	Presence:	Presumed Extant	Site Last Seen:		1987-03-30	
Occ. Type:	Natural/Native occurrence	Trend:	Unknown	Record Last Updated:		2010-06-22	

Quad Summary: Myoma (3311673)

County Summary: Riverside

Lat/Long:	33.84197 / -116.31051	Accuracy:	3/5 mile
UTM:	Zone-11 N3744848 E563791	Elevation (ft):	600
PLSS:	T04S, R06E, Sec. 12 (S)	Acres:	0.0

Location: THOUSAND PALMS OASIS, COACHELLA VALLEY PRESERVE.

Detailed Location: EXACT LOCATION WITHIN THE PRESERVE IS UNKNOWN. MAPPED BY CNDDDB AS BEST GUESS CENTERED ON THE THOUSAND PALM OASIS AS INDICATED ON SMALL SCALE MAP PROVIDED BY BARROWS, 1987.

Ecological: COACHELLA VALLEY FRINGE-TOED LIZARD IS ALSO PRESENT HERE.

General: FEWER THAN 10 PLANTS SEEN IN 1987 BY BARROWS.

Owner/Manager: COACHELLA VALLEY PRESERVE



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California Natural Diversity Database



Petalonyx linearis

Element Code: PDLOA04010

narrow-leaf sandpaper-plant

Listing Status: **Federal:** None

CNDDB Element Ranks: **Global:** G4

State: None

State: S3?

Other: Rare Plant Rank - 2B.3

Habitat: **General:** MOJAVEAN DESERT SCRUB, SONORAN DESERT SCRUB.

Micro: SANDY OR ROCKY CANYONS. -30-1090 M.

Occurrence No.	22	Map Index:	86444	EO Index:	106681	Element Last Seen:	1921-04-21
Occ. Rank:	Unknown	Presence:	Presumed Extant	Site Last Seen:		1921-04-21	
Occ. Type:	Natural/Native occurrence	Trend:	Unknown	Record Last Updated:		2017-06-07	

Quad Summary: Myoma (3311673)

County Summary: Riverside

Lat/Long:	33.83400 / -116.30988	Accuracy:	1 mile
UTM:	Zone-11 N3743964 E563855	Elevation (ft):	1000
PLSS:	T04S, R06E, Sec. 12 (S)	Acres:	0.0

Location: THOUSAND PALMS CANYON, COLORADO DESERT.

Detailed Location: EXACT LOCATION UNKNOWN. MAPPED BY CNDDB TO ENCOMPASS THE MAIN PORTION OF THOUSAND PALMS CANYON. GIVEN ELEVATION IS 1000 FEET; SITE MAY HAVE BEEN FROM FURTHER NORTH BASED ON HIGHER ELEVATION.

Ecological:

General: SITE BASED ON SEVERAL VAGUE 1921 COLLECTIONS FROM JAEGER AND DAVIDSON. NEEDS FIELDWORK.

Owner/Manager: UNKNOWN

Occurrence No.	23	Map Index:	A4980	EO Index:	106682	Element Last Seen:	1940-03-XX
Occ. Rank:	Unknown	Presence:	Presumed Extant	Site Last Seen:		1940-03-XX	
Occ. Type:	Natural/Native occurrence	Trend:	Unknown	Record Last Updated:		2017-06-07	

Quad Summary: Keys View (3311682), East Deception Canyon (3311683)

County Summary: Riverside

Lat/Long:	33.89863 / -116.26096	Accuracy:	3/5 mile
UTM:	Zone-11 N3751163 E568331	Elevation (ft):	
PLSS:	T03S, R07E, Sec. 21 (S)	Acres:	776.0

Location: FAN CANYON, 20 MILES NE OF INDIO.

Detailed Location: EXACT LOCATION UNKNOWN. MAPPED AS BEST GUESS AROUND FAN CANYON EAST OF SKY VALLEY AT SOUTHERN EDGE OF JOSHUA TREE NP, BASED ON A 1940 BRAUNTON COLLECTION.

Ecological:

General: ONLY SOURCE OF INFORMATION FOR THIS SITE IS A 1940 BRAUNTON COLLECTION. NEEDS FIELDWORK.

Owner/Manager: NPS-JOSHUA TREE NP?



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California Natural Diversity Database



Eremothera boothii ssp. boothii

Element Code: PDONA03052

Booth's evening-primrose

Listing Status: **Federal:** None

CNDDDB Element Ranks: **Global:** G5T4

State: None

State: S3

Other: Rare Plant Rank - 2B.3

Habitat: **General:** JOSHUA TREE WOODLAND, PINYON AND JUNIPER WOODLAND.

Micro: 285-2290 M.

Occurrence No. 12 **Map Index:** 78584 **EO Index:** 79516 **Element Last Seen:** 1995-04-20

Occ. Rank: Unknown **Presence:** Presumed Extant **Site Last Seen:** 1995-04-20

Occ. Type: Natural/Native occurrence **Trend:** Unknown **Record Last Updated:** 2010-04-14

Quad Summary: Myoma (3311673), East Deception Canyon (3311683)

County Summary: Riverside

Lat/Long: 33.88219 / -116.29226 **Accuracy:** non-specific area

UTM: Zone-11 N3749319 E565448 **Elevation (ft):** 1200

PLSS: T03S, R07E, Sec. 30 (S) **Acres:** 661.0

Location: NEAR FAN HILL, NE OF 1000 PALMS; 0.6 MI NE OF DILLON RD, COACHELLA VALLEY.

Detailed Location: ON ABANDONED ROAD. MAPPED BY CNDDDB WITHIN T03S R07E SECTION 30 AS STATED IN SANDERS 1995 COLLECTION.

Ecological: CREOSOTE SCRUB ON ROCKY ALLUVIAL SLOPES IN OPEN AREAS.

General: MENTIONED AS UNCOMMON IN 1995. ID SHOULD BE CHECKED; SITE IS OUTSIDE OF SUBSPECIES RANGE GIVEN IN THE JEPSON MANUAL.

Owner/Manager: BLM, UNKNOWN

Appendix D
Biological Survey Report for
Dillon Road Transmission Pipeline Replacement
Phase II Project
(CVWD 2015)

BIOLOGICAL SURVEY REPORT

Dillon Road Transmission Pipeline Replacement Phase II

Riverside County, CA



Prepared by

Coachella Valley Water District

Environmental Services Department

August 2015

PROJECT DESCRIPTION

The domestic water transmission main will be located along Dillon Road between Booster Station 04701 (BS04701) and Reservoir #4701 approximately one half mile north of the intersection of Ave 30 and Sunny Rock Road in the community of Sky Valley and the Indio Hills as shown in Figure 1. The transmission main will continue north on Sunny Rock Road to the terminus at Reservoir 4711 for a total length of 4.2 miles (Figures 2-9). The transmission main project will occur within Riverside County in a portion of sections 3, 4, 10 and 11, township 4 south, range 7 east, San Bernardino Baseline and Meridian. Currently ID-18 is located at the end of the Sky Valley Pressure Zone and receives water after traveling 13.5 miles through a series of waterlines decreasing in size to 8-inches in diameter. The segment from Booster Station 04701/ Reservoir #4701 to Reservoir #4711 is conveyed through a 34 year old 8-inch Asbestos-cement (AC) pipe of limited capacity. The Dillon Road pipeline will be installed with a minimum of four feet of earth cover. Restrained joints will be installed where the proposed pipe is installed in non-pavement areas, where it crosses other utilities including irrigation mains, agricultural drain lines, storm drain culverts, and buried telephone lines. The pipeline will be placed in polyethylene wrap to protect the pipe from mildly corrosive soils. The purpose of this project is to construct an 18-inch diameter transmission main that will replace the existing 8-inch diameter AC transmission main from Booster Station 04701/ Reservoir #4701 to Reservoir #4711.

PURPOSE

The purpose of this biological evaluation is to characterize biological resources present within the right of way and buffer zone (100') along the northern shoulder of Dillon Road (e.g., vegetation communities, adjacent conservation areas, waterways, natural washes and wildlife habitats), and to further assess the proposed route, in terms of the project areas' potential support for special-status resources (e.g., listed or candidate plant and wildlife species).

METHODS

The following presents the methods and results of the field survey, including a detailed description of the site, a description of plant communities and wildlife observed, and an evaluation of special-status plants, animals, and their potential to occur on the project site.

The biological evaluation included a literature review and a habitat-level survey of the project site. Literature was reviewed to identify any special-status resources reported as occurring in the project vicinity and to gather additional information on the natural history and ecology of these species (e.g., habitat requirements). Literature sources cited include:

- California Department of Fish and Wildlife (CDFW), California Natural Diversity Database (CNDDDB) CDFW/CNDDDB, 2015.

- California's Wildlife - Volumes I – Amphibians and Reptiles. CDFG, 2001.
- California's Wildlife – Volume II – Birds. CDFG, 1990.
- California's Wildlife – Volume III – Mammals. CDFG, 1990.
- State and Federally Listed Endangered, Threatened, and Rare Plants of California, CDFW, 2012
- Coachella Valley Multiple Species Conservation Plan/Natural Communities Conservation Plan (CVMSHCP/NCCP) 2008.

Prior to conducting field surveys, the California Natural-Diversity-Data-Base (CNDDDB), the CDFW's Special-Status species lists, and the Coachella Valley Multiple Species Habitat Conservation Plan and Natural Community Conservation Plan (CVMSHCP/NCCP) were queried to identify sensitive plant and animal species that have been reported from the region. Table 1 provides special status plant and animal resources that are listed under the Plan. The proposed transmission pipeline begins at CVWD Booster Station 04701/Reservoir #4701 and will occur within the right of way of Dillon Road which is immediately adjacent to the Indio Hills/Joshua Tree National Park Linkage Conservation Area in the section of project located west of Western Avenue. The pipeline will continue east on the north side of the Dillon Road right of way, then pass through a small portion of Indio Hills/Joshua Tree National Park Linkage Conservation Area east of Howell Road and extending to Avenue 28. Continuing along Dillon Road, the transmission pipeline intersects Sunny Rock Road, and then proceeds north along the east side of Sunny Rock Road. This portion of the transmission main is adjacent to the Desert Tortoise and Linkage Conservation Area. The transmission main terminates at CVWD Reservoir #4711. Table 2 lists vegetation observed on the project site or in the surveyed buffer area. Table 3 lists wildlife observed on the project site or within the surveyed buffer area.

Coachella Valley Water District (CVWD)'s Environmental staff conducted a habitat-survey at the project alignment on July 9, 2015 to ascertain what resources, if any, were present onsite. The survey was completed during the cooler periods of the day (early morning/late afternoon) to maximize observations of any wildlife. The survey consisted of walking down the proposed alignment on the north shoulder of Dillon Road to identify plant communities, dominant plant species, and wildlife that may be present along the proposed transmission main alignment. In addition, habitat that could support special status resources, including plants and animals, was characterized. For purposes of this analysis, special status resources are plant communities, plants, waters/wetlands, and wildlife that are listed by California or covered by the CVMSHCP/NCCP (2008) as provided in Table 1.

Vegetation communities on and around the proposed pipeline alignment were identified based on the field survey and review of the dominant communities associated with the region where the

alignment is located. Wildlife species occurring or having the potential to occur on the project site were identified during the site survey through direct observation, indirect evidence (e.g. scat, tracks, nests, and burrows), and assessment of habitat suitability. Habitat suitability was assessed on pre-survey literature review to identify habitat requirements of special-status species potentially occurring in the project vicinity, as well as to evaluate characteristics of plant communities/wildlife habitat observed on or adjacent to the project site.

RESULTS

The following sections present a brief description of the plant species, vegetation communities, and wildlife species observed on the project site as well as a discussion of the special-status resources potentially occurring on-site.

Conditions along the transmission main alignment are composed of graded road shoulder adjacent to residential housing and open desert.

Habitat north of the Dillon Road right-of-way is predominately creosote bush scrub with native tree species occurring in the buffer zone. Wildlife typically found in this setting include, but are not limited to, Coyote (*Canis latrans*), Desert woodrat (*Neotoma lepida*), Desert cottontail (*Sylvilagus audubonii*), Side-blotched lizard (*Uta stansburiana*), Desert Iguana (*Dipsosaurus dorsalis*), and Common Chuckwalla (*Sauromalus ater*). A desert iguana was observed basking within the buffer zone (Figure 10) and a chuckwalla was observed basking in boulders on the north side of the reservoir site (Figure 11).

Bird species observed onsite include Mourning dove (*Zenaida macroura*), Raven (*Corvus corax*), and Turkey vulture (*Cathartes aura*). A 100' buffer zone was also surveyed beyond the transmission main alignment when/where right of way and open space permitted. No sensitive species were observed during the course of the survey.

Plant species observed onsite include Creosote bush (*Larrea tridentata*), Brittlebush (*Encelia farinosa*), Indigo bush (*Psoralea fremontii*), Smoke tree (*Psoralea spinosa*), Catclaw Acacia (*Senegalia greggii*), Palo verde (*Cercidium floridum*), Pencil cholla (*Cylindropuntia ramosissima*), Fishhook barrel cactus (*Ferocactus wislizenii*), Teddy bear cholla (*Cylindropuntia bigelovii*), Beaver tail cactus (*Opuntia basilaris*), and California barrel cactus (*Ferocactus cylindraceus*). A 100' buffer zone was also surveyed beyond the pipeline alignment when/where right of way and open space permitted.

Based on CDFW' CNDDDB that was accessed in July 2015, desert tortoise (*Gopherus agassizii*) have been observed less than 1.0 mile southeast of Fan Hill Road, which is less than 2.0 miles west of the proposed project area at Booster Station 04701/ Reservoir #4701. San Diego woodrat (*Neotoma lepida*) have been observed less than 0.25 mile north of Dillon Road which along the proposed project route, and about 1.0 mile north of Reservoir #4711. Peninsular Bighorn sheep (*Ovis canadensis nelsoni*) have been observed less than 4.0 mile northwest of Booster Station

04701/ Reservoir #4701. Palm Springs pocket mouse (*Perognathus longimembris bangsi*) have been observed about 5.0 miles southeast of the Sunny Rock Road/Dillon Road intersection project area.

STREAMBED/WATERWAYS

No jurisdictional waterways, streams, or washes were observed on the project site. Several small erosion gullies were present and appear to be the result of sheet runoff from heavy rainfall experienced in the area during early July and late June.

SPECIAL STATUS SPECIES OCCURRENCE

The biological survey included an analysis of the special status species and habitats found in the region and their potential to occur on the project site. Species listed under the CVMSHCP/NCCP (2008) are provided in Table 1. The following section describes the results of this analysis and observations of conditions in the field.

PLANT SPECIES

Prior to beginning the biological survey, available information was reviewed including the CVMSHCP (County of Riverside 2008) and other relevant documents to determine locations and types of biological resources that have the potential to exist within the project area. A search of the CDFW's CNDDDB (2015) and California Native Plant Society's (CNPS) Electronic Inventory of Rare and Endangered Vascular Plants of California (CNPS 2012) was conducted to determine the special-status species that have been documented in the vicinity of the project site. Table 1 lists special-status plant species covered under the CVMSHCP/NCCP and discusses their potential for occurrence on the project site and surrounding buffer zone. Table 2 lists observed vegetation in the alignment right-of-way, including landscape species.

Based upon the assessment, environmental conditions (elevation, soils, habitat, etc.) and extensive disturbance from development and construction present within the project area, special-status plants are not expected to occur onsite or in the vicinity of the proposed project.

WILDLIFE

The CNDDDB query and literature research revealed no special-status species occurring on or adjacent to the project site, however there were several older records of special-species covered under the MSHCP and listed by the state of California within several miles of the project site:

- San Diego Desert woodrat (*Neotoma lepida*) has been observed ¼ mile north of Dillon Road and approximately 2 miles west of the project site.
- Peninsular Bighorn sheep (*Ovis canadensis nelsoni*) have been observed approximately 4 miles north of Reservoir #4711 in the Little San Bernardino Mountains.
- Palm Springs pocket mouse (*Perognathus longimembris bangsi*) has been observed 5 miles to the southeast of the project site near Berdoo Canyon.

- Desert tortoise (*Gopherus agassizii*) have been observed a 1.0 mile southeast of Fan Hill Road, which is approximately 2.0 miles northwest of project.

Habitat on the project site and along the transmission main alignment is highly disturbed and, in many areas, developed with residential housing and private property. Surrounding habitat in the buffer zone supports limited roosting and nesting habitat so preconstruction nesting bird surveys will be performed prior to initiating project activities. Table 1 provides listed wildlife species under the CVMSHCP/NCCP. Observed vegetation is provided in Table 2 and observed wildlife is presented in Table 3 which also includes observations of wildlife in the buffer zone.

The Burrowing owl is a California Species of Special Concern with a broad occurrence rate within the Coachella Valley and is typically associated with the agricultural areas and berms along the Coachella Valley Stormwater Channel. It can also occur in disturbed areas where it utilizes the burrows of other wildlife. No Burrowing owls, or their burrows, were observed during the survey within the project site, buffer zone or immediately adjacent to the site. In addition, the site offers no potential habitat, forage, or refugium for listed species due to the high level of disturbance and lack of suitable habitat. Although no special-status wildlife species or habitat was observed onsite during the survey, special-status species occurring in the region could potentially move through the site. Bird occurrence would likely be transient in nature and would not be affected by activities onsite as there is limited supportive habitat for nesting or roosting; i.e. trees, shrubs, or structures. Prior to any construction activities, CVWD environmental staff will conduct a pre-construction survey to verify non-presence of Burrowing owls 30 days and 24 hours prior to commencement of work.

SUMMARY

Based on the field survey of the project site on July 9, 2015, the proposed project activities are not anticipated to result in impacts to special-status plant or animal species. In addition to a pre-construction survey for Desert tortoise, Burrowing owls and nesting birds, avoidance minimization measures will also be implemented on the project site during construction and are included in the engineering specifications.

Tables and Figures

Table 1. Special Status Species Covered under the Coachella Valley MSHCP

Table 2. Observed Vegetation adjacent to proposed alignment

Table 3. Observed Wildlife during biological survey

Figure 1. Aerial map of transmission pipeline project route

Figure 2. Looking south across Dillon Road towards Booster Station 04701/Reservoir #4701

Figure 3. Looking north across Dillon Rd. from Booster Station 04701/Reservoir #4701

Figure 4. Looking east on Dillon Road. #1

Figure 5. Looking east on Dillon Road. #2

Figure 6. Looking west on 30th Avenue (intersection of 30th Avenue & Sunny Rock Road)

Figure 7. Looking north towards the CVWD access road for Reservoir #4711 – 30th Avenue and Sunny Rock Road.

Figure 8. Looking west towards CVWD Reservoir #4711 facility.

Figure 9. Looking south from CVWD Reservoir #4701 access road

Figure 10. Desert Iguana (*Dipsosaurus dorsalis*) found on west side of CVWD access road.

Figure 11. Common Chuckwalla (*Sauromalus ater*) was found on boulders on north side of Reservoir #4711.

Table 1. Special Status Species Covered under the Coachella Valley MSHCP

Common Name	Genus Species	Listing Status	Potential to Occur
Plants			
Mecca aster	<i>Xylorhiza cognata</i>	NA	No habitat onsite
Little San Bernardino Linanthus	<i>Linanthus maculatus</i> (also <i>Gilia maculata</i>)	CSC	No habitat onsite
Coachella Valley milk vetch	<i>Astragalus lentiginosus</i> var. <i>coachellae</i>	FE	No habitat onsite
Triple-ribbed milkvetch	<i>Astragalus tricarlinatus</i>	FE	No habitat onsite
Orocopia sage	<i>Salvia greatae</i>	NA	No habitat onsite
Amphibians			
Arroyo toad	<i>Anaxyrus californicus</i>	FE/CSC	No habitat onsite
Reptiles			
Desert tortoise	<i>Gopherus agassizii</i>	FT/ST	No habitat onsite
Flat-tailed horned lizard	<i>Phrynosoma mcallii</i>	CSC	No habitat onsite
Coachella Valley fringe-toed lizard	<i>Uma inornata</i>	FT/SE	No habitat onsite
Fish			
Desert pupfish	<i>Cyprinodon macularius</i>	FE/SE	No habitat onsite
Invertebrates - Insects			
Coachella Valley giant sand-treader cricket	<i>Macrobaenetes valgum</i>	NA	No habitat onsite
Coachella Valley Jerusalem cricket	<i>Stenopelmatus calhouni</i>	NA	No habitat onsite
Birds			
Yuma clapper rail	<i>Rallus longirostris yumanensis</i>	FE/ST/SFP	No habitat onsite
California black rail	<i>Laterallus jamaicensis</i>	ST/SFP	No habitat onsite
Burrowing owl	<i>Athene cunicularia</i>	CSC	No burrows onsite

Southwestern willow flycatcher	<i>Empidonax traillii extimus</i>	SE/FE	Transient
Crissal thrasher	<i>Toxostoma crissale</i>	CSC	Transient
Le Conte's thrasher	<i>Toxostoma lecontei</i>	CSC	Transient
Least Bell's vireo	<i>Vireo bellii pusillus</i>	FE/SE	No habitat onsite
Gray vireo	<i>Vireo vicinior</i>	CSC	Transient
Yellow warbler	<i>Dendroica petechia brewsteri</i>	CSC	Transient
Yellow-breasted chat	<i>Icteria virens</i>	CSC	Transient
Summer tanager	<i>Piranga rubra</i>	NA	Transient
Mammals			
Southern yellow bat	<i>Lasiurus xanthinus</i>	NA	No habitat onsite
Palm Springs round-tailed ground squirrel	<i>Spermophilus tereticaudus chlorus</i>	C/CSC	No habitat onsite
Palm Springs pocket mouse	<i>Perognathus longimembris bangsi</i>	C/CSC	No habitat onsite
Peninsular bighorn sheep	<i>Ovis canadensis nelsoni</i>	FE/ST/SFP	No habitat onsite
(Footnotes are explained below.) The status codes used in the table are identified in the following key, as listed in the <i>California Natural Diversity Data Base Special Animals List and Special Plants List</i> from July 2013 (CNDDB 2013).			
Key: FE = Federal Endangered FT = Federal Threatened FC = Federal Candidate SE = State Endangered SFP = State Fully Protected ST = State Threatened SC = State Candidate CNPS = Rare in California CSC = Species of Special Concern (a state list of species that are at risk due to habitat modification, or destruction, over – collecting, disease, or other threats) NA = Not Applicable			

Table 2. Observed vegetation

Family	Genus species	Common Name	Occurrence
Zygophyllaceae	<i>Larrea tridentata</i>	Creosote bush	Observed
Asteraceae	<i>Encelia farinosa</i>	Brittlebush	Observed
Leguminosae	<i>Psorothamnus fremontii</i>	Indigo bush	Observed
	<i>Psorothamnus spinosus</i>	Smoke tree	Observed
Fabaceae	<i>Senegalia greggii</i>	Catclaw Acacia	Observed
	<i>Cercidium floridum</i>	Palo verde (L)	Observed
Cactaceae	<i>Cylindropuntia ramosissima</i>	Pencil cholla	Observed
	<i>Ferocactus wislizenii</i>	Fishhook barrel cactus	Observed
	<i>Cylindropuntia bigelovii</i>	Teddy bear cholla	Observed
	<i>Opuntia basilaris</i>	Beaver tail cactus	Observed
	<i>Ferocactus cylindraceus</i>	California barrel cactus	Observed

Table 3. Observed wildlife

Family	Genus species	Common Name	Occurrence
Columbidae	<i>Zenaida macroura</i>	Mourning dove	Observed
Corvidae	<i>Corvus Corax</i>	Raven	Observed
Cathartidae	<i>Cathartes aura</i>	Turkey vulture	Observed
Canidae	<i>Canis latrans</i>	Coyote	Observed (Scat, Tracks)
Cricetidae	<i>Neotoma lepida</i>	Desert woodrat	Observed (Midden)
Leporidae	<i>Sylvilagus auduboni</i>	Desert cottontail	Observed (Scat)
Phrynosomatidae	<i>Uta stansburiana</i>	Side-blotched lizard	Observed
Iguanidae	<i>Dipsosaurus dorsalis</i>	Desert Iguana	Observed
	<i>Sauromalus ater</i>	Common Chuckwalla	Observed

Notes: (L) – Private Landscaping

Project Site Photos

Figure 1. Aerial map of transmission pipeline project route

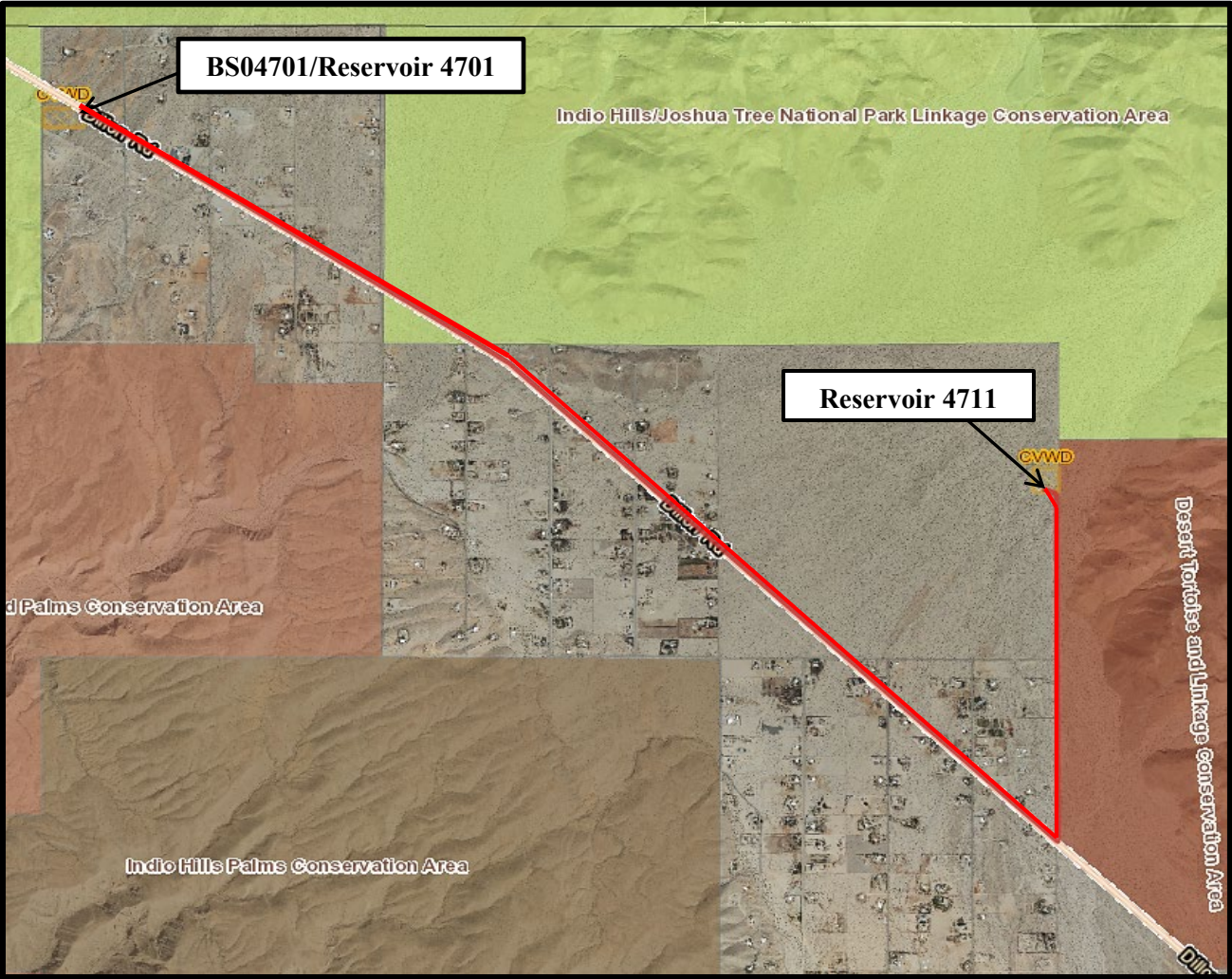


Figure 2. Looking south across Dillon Road towards Booster Station 04701/Reservoir #4701



Figure 3. Looking north across Dillon Rd. from Booster Station 04701/Reservoir #4701



Figure 4. Looking east on Dillon Road. #1



Figure 5. Looking east on Dillon Road. #2



Figure 6. Looking west on 30th Avenue (intersection of 30th Avenue & Sunny Rock Road)



Figure 7. Looking north towards the CVWD access road for Reservoir #4711(30th Avenue and Sunny Rock Road)



Figure 8. Looking west towards CVWD Reservoir #4711 facility.



Figure 9. Looking south from CVWD Reservoir #4701 access road



Figure 10. Desert Iguana (*Dipsosaurus dorsalis*) found on west side of CVWD access road.



Figure 11. Common Chuckwalla (*Sauromalus ater*) was found on boulders on north side of Reservoir #4711.

