Appendix B
Biological Resources Assessment and CVMSHCP Compliance Report

DRAFT CALHOUN RESIDENTIAL DEVELOPMENT PROJECT
Assessor's Parcel Numbers 692-060-006, -007, -008, and -023

Biological Resources Assessment & Coachella Valley Multiple Species Habitat Conservation Plan Compliance Report

CITY OF INDIO, CALIFORNIA

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1.0 INTRODUCTION

At the request of Terra Nova Planning & Research (Terra Nova), this biological resource assessment report (BRAR) was prepared by Wood Environment & Infrastructure Solutions, Inc. (Wood) for the proposed Calhoun Residential Development Project (project site/project), located in the city of Indio, California. Information contained herein is intended to be used for compliance with the Coachella Valley Multiple Species Habitat Conservation Plan (CVMSHCP), California Environmental Quality Act (CEQA), as well as federal and California Endangered Species Acts.

2.0 PROJECT LOCATION / DESCRIPTION

Terra Nova is preparing the Specific Plan for a proposed residential development on a 60-acre project site located north of Interstate 10, south of Avenue 42, east of Jackson Street and west of Golf Center Parkway in the city of Indio, Riverside County, California (Appendix A – Figure 1). Implementation of the proposed project would provide much needed housing in this growing community. It includes single family homes and associated infrastructure. The project site includes four separate Assessor's Parcel Numbers 692-060-006, 007, 008, and 023. Specifically, the project site is located within Section 13; Township 5 South; Range 7 East as shown on the United States Geological Survey (USGS) Indio, California, 7.5-minute topographic quadrangle (Appendix A – Figure 2). The proposed project is located north of Hopi Avenue, south of Avenue 43, east of Interstate 10, and west of Avenida Estrella (Appendix A – Figure 3). The geographic coordinates near the approximate center of the project area are 33°44'05.1" north latitude and 116°12'29.5" west longitude. The elevation of the project site ranges from approximately -16 to -30 feet below mean sea level.

3.0 REGULATORY FRAMEWORK

3.1 Federal

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

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

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

Section 10(a) of the ESA authorizes the issuance of incidental take permits and establishes standards for the content of habitat conservation plans (see Section 3.3 below).

Migratory Bird Treaty Act (MBTA) – Treaties signed by the U.S., Great Britain, Mexico, Japan, and the countries of the former Soviet Union make it unlawful to pursue, capture, kill, and/or possess, or attempt to engage in any such conduct to any migratory bird, nest, egg or parts thereof listed in the document. As with the ESA, the MBTA also allows the Secretary of the Interior to grant permits for the incidental take of these protected migratory bird species.

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

Section 404 of the Clean Water Act – This section of the Clean Water Act, administered by the U.S. Army Corps of Engineers (USACE), regulates the discharge of dredged and fill material into "waters of the United States." The USACE has created a series of nationwide permits that authorize certain activities within waters of the U.S. provided that the proposed activity does not exceed the impact threshold of 0.5 acre for nationwide permits, takes steps to avoid impacts to wetlands and other designated U.S. waters where practicable, minimizes potential impacts to wetlands, and provides compensation for any remaining, unavoidable impacts through activities to restore or create wetlands. For projects that exceed the threshold for nationwide permits, individual permits under Section 404 can be issued. An inspection of the project site to determine presence or absence of potential jurisdictional wetlands and waters was conducted during the assessment for this project.

3.2 State

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

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

1) identify the significant environmental effects of their actions; and, either
2) avoid those significant environmental effects, where feasible; or
3) mitigate those significant environmental effects, where feasible.

CEQA applies to "projects" proposed to be undertaken or requiring approval by state and local government agencies. Projects are activities that have the potential to have a physical impact on the environment and may include the enactment of zoning ordinances, the issuance of conditional use permits and the approval of tentative subdivision maps. Where a project

requires approvals from more than one public agency, CEQA requires one of these public agencies to serve as the "lead agency."

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

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

While there is no ironclad definition of "significance", Article 5 of the State CEQA Guidelines (California Natural Resources Agency 2014) provides criteria to lead agencies in determining whether a project may have significant effects.

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

Natural Community Conservation Planning (NCCP) Program – A NCCP, which is managed by the CDFW, is intended to conserve multiple species and their associated habitats, while also providing for compatible use of private lands. Through local planning, the NCCP planning process is designed to provide protection for wildlife and natural habitats before the environment becomes so fragmented or degraded by development that species listing are required under CESA. Instead of conserving small, often isolated “islands” of habitat for just one listed species, agencies, local jurisdictions, and/or other interested parties have an opportunity through the NCCP to work cooperatively to develop plans that consider broad areas of land for conservation that would provide habitat for many species. Partners enroll in the programs, and by mutual consent, areas considered to have high conservation priorities or values are set aside and protected from development. Partners may also agree to study, monitor, and develop management plans for these high value “reserve” areas. The NCCP provides an avenue for fostering economic growth by allowing approved development in areas with lower conservation value. The project site is in a combined Habitat Conservation Plan (HCP) / NCCP, see Section 3.3.

Sections 1600-1603 of the State Fish and Game Code – The California Fish and Game (Wildlife) Code, pursuant to Sections 1600 through 1603, regulates all diversions, obstructions, or changes to the natural flow or bed, channel, or bank of any river, stream, or lake that supports fish or wildlife resources. Under state code, CDFW jurisdiction is assessed in the field based on one, or a combination, of the following criteria:

7) At minimum, intermittent and seasonal flow through a bed or channel with banks and that also supports fish or other aquatic life.
8) A watercourse having a surface or subsurface flow regime that supports or that has supported riparian vegetation.
9) Hydrogeomorphically distinct top-of-embankment to top-of-embankment limits.
10) Outer ground cover and canopy extents of, typically, riparian associated vegetation species that would be sustained by surface and/or subsurface waters of the watercourse.

The CDFW requires that public and private interests apply for a "Streambed Alteration Agreement" for any project that may impact a streambed or wetland. The CDFW has maintained a "no net loss" policy regarding impacts to streams and waterways and requires replacement of lost habitats on at least a 1:1 ratio.

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

Section 3505.5 of the State Fish and Game Code – This section makes it unlawful to take, possess, or destroy any birds in the order Falconiformes or Strigiformes (birds-of-prey, e.g.: owls, hawks, eagles, etc.) or to take, possess, or destroy the nest or eggs of any bird-of-prey.

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

3.3 Coachella Valley Multiple Species Habitat Conservation Plan

Finalized in October 2008, and amended in 2016, the CVMSHCP is a comprehensive regional plan that addresses the conservation needs of 27 species of native flora and fauna and 24 natural vegetation communities occurring throughout the Coachella Valley region of western Riverside County, California. Permits for the CVMSHCP were issued by the CDFW on September 9, 2008 and the United States Fish and Wildlife Service (USFWS) on October 1, 2008 (TE104604-0). Managed by the Coachella Valley Conservation Commission (CVCC), CVMSHCP participants include Riverside County, the Cities of Cathedral City, Coachella, Desert Hot Springs, Indian Wells, Indio, La Quinta, Palm Desert, Palm Springs, Rancho Mirage, as well as the Coachella Valley Association of Governments (CVAG), Coachella Valley Water District, Imperial Irrigation District, Mission Springs Water District and the California Department of Transportation (CVAG 2008, 2016).

The CVMSHCP serves two primary purposes: Balancing environmental protection and economic development objectives in the CVMSHCP planning area and simplifying compliance with endangered species related laws. The CVMSHCP accomplishes this by conserving unfragmented habitat to permanently protect and secure viable populations of the covered 27 species within the planning area. The covered species include those plants and animals that are either currently listed as threatened or endangered, are proposed for listing, or are believed by an appointed Scientific Advisory Committee, USFWS and CDFW, to have a high probability of being proposed for listing in the future if not conserved by the CVMSHCP. The goal of the CVMSHCP is to meet the requirements of the ESA and CESA, while at the same time allowing for the economic growth (land development) within the plan area without significant delay or hidden costs. Under the CVMSHCP, land development/mitigation fees are collected from all new development projects occurring in the plan area. The purpose of this fee is to support the assembly of a preserve system for the covered species and natural vegetation communities within areas identified as having high conservation value (CVAG 2008).

4.0 METHODS

4.1 Literature Review

In preparation for the field surveys, a literature search was conducted to identify special status biological resources known from the vicinity of the project site. In the context of this report, and for the purpose of this assessment, vicinity is defined as areas within a 5-mile radius of the project site.

The literature search included a review of the following documents:

- California Natural Diversity Data Base (CNDDB) RareFind 5 (CDFW 2022a)
- Special Animals List (CDFW 2022)
- California Native Plant Society's (CNPS) Inventory of Rare, Threatened, and Endangered Plants of California (CNPS 2022a)
- CVMSHCP (CVAG 2008)
- United States Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS). 2019. Web Soil Survey
- USGS 7.5' *Indio and West Berdoo Canyon, Calif.* quadrangles (USGS 1972 and 1988)

Scientific nomenclature for this document follows standard reference sources: For plant communities, CVMSHCP (CVAG 2008), Sawyer et. al (2009), and/or Holland (1986); for flora, Jepson eFlora (2022) and the USDA NRCS PLANTS Database (2022); for amphibians, reptiles, and mammals, CDFW (2016); and for birds, California Bird Records Committee (2022).

4.2 Field Assessment

The field assessment was conducted on 22 April 2022 by Wood Senior Wildlife Biologist Nathan Moorhatch. On-site suitable habitat was assessed based on the presence of constituent habitat elements (e.g., soils, vegetation and topography) characteristic of the potentially occurring special status biological resources determined by the literature review. The entire site and adjacent properties (where accessible) were assessed on foot to record pertinent field data and current site conditions. Adjacent undeveloped areas within an approximate 150-meter (~500-foot) buffer zone that were unfenced and unsigned (i.e., not posted with "No Trespassing" and/or "Private Property") were also assessed for burrowing owl (*Athene cunicularia*). This area was limited to Cahuilla Park to the southeast and the freeway shoulder associated with I-10 to the west. Inaccessible areas were scanned for burrowing owl habitat and sign (i.e., burrows &

perches with whitewash) with binoculars. All on-site flora and fauna observed or otherwise detected (e.g., vocalizations, presence of scat, tracks, and/or bones) during the assessment were recorded in field notes and are included in Appendix B. General weather and site conditions were also recorded at the beginning and end of the survey. Temperatures and wind speeds were recorded with a handheld Kestrel 2000 anemometer. Percent cloud cover was visually estimated.

5.0 RESULTS

The proposed project site is surrounded by development, primarily residential development to the north, east, and south. West of the project site is Interstate 10. The northern half of the project site has been routinely disturbed and consists of non-native weedy species. The southern half of the project site consists of native vegetation. No drainage features occur within the project site. Representative site photos are included in Appendix C.

5.1 Coachella Valley Multiple Species Habitat Conservation Plan

The entire project is located within the CVMSHCP fee area but is not within a conservation area. The northeastern-most portion of the project site is located approximately 1 mile southwest of the East Indio Hills Conservation Area (Figure 6, Appendix A). The development of the project site will have no effect on the East Indio Hills Conservation Area.

5.2 Weather Conditions

Weather conditions during the field assessment were sunny and warm. Skies were clear with 5-10% cloud cover. Temperatures ranged from 71 to 78 degrees Fahrenheit. Winds were calm with wind speeds measured between 0 to 8 miles per hour.

5.3 Topography and Soils

The proposed project alignment is relatively flat. Two soil types occur on the project site. These include: 1) Gilman fine sandy loam, wet, 0 to 2 percent slopes (GbA); 2) Indio very fine sandy loam (Is); (USDA, NRCS. 2019) (Appendix A - Figure 4).

Gilman series consists of very deep, well drained soils that formed in stratified stream alluvium that typically occur on flood plains and alluvial fans. Gilman soils are on flood plains and alluvial fans. Gilman soils were historically, and still are used for irrigated cropland and livestock grazing (USDA, NRCS. 2019).

Indio soil series consist of “very deep, well or moderately well drained soils formed in young calcareous, silty mixed alluvium derived from mixed rock sources. They are intermittently moist soils typically found on alluvial fans, lacustrine basins and flood plains that were historically, and still are used for irrigated cropland and livestock grazing (USDA, NRCS. 2019).

The field assessment confirmed that on-site soils and substrates are typical of this area and consistent with the soil survey. Much of the area on and adjacent to the project site have been heavily altered for agriculture, commercial and/or residential development, road right-of-way maintenance, and the construction and maintenance of Interstate 10.

The site does not contain active sand dunes, drifts, rock outcrops, significant rocky areas, clay lenses, springs or seeps. The Whitewater River/Coachella Stormwater Drain Channel parallels the southwest end of the project site. The project will have no effect on the channel, as it is on the opposite side of Interstate 10.

5.4 Vegetation

Approximately 75% of the project site is disturbed (previously utilized for agriculture) with elements of a native vegetation community which is best described as disturbed desert saltbush

scrub in the southwestern portion of the project site (CVAG 2008, Holland 1986). See Figure 5 in Appendix A. Sawyer et. al. (2009) classifies this community as Atriplex lentiformis Shrubland Alliance (Quailbush scrub), but the vegetation on-site is very sparse and may not function as a vegetation community. There are a few small tamarisks (*Tamarix* species) on-site, but not in sufficient quantity to be considered a vegetation community.

A total of 19 plant species were identified across the project site during the assessment (Appendix B). These included of a mixture of native and non-native and/or weedy species. Representative plant species identified within the project site include big saltbush (*Atriplex lentiformis*), allscale (*Atriplex polycarpa*), four-wing saltbush (*Atriplex canescens*), salt cedar (*Tamarix ramosissima*), arrow weed (*Pluchea serica*), Bermuda grass (*Cynodon dactylon*), Mediterranean grass (*Schismus barbata*), athel tamarisk (*Tamarix aphylla*), Russian thistle (*Salsola tragus*), fountain grass (*Pennisetum* sp.), and lantana (*Lantana* sp.).

5.5 Wildlife

Vertebrate wildlife directly observed and/or detected otherwise (e.g., scat, bones, tracks, feathers, burrows, etc.) during the assessment was not notably diverse or abundant, limited to 20 species, all of which are common to the region. This included one reptile, 18 birds and one mammal (Appendix B). Representative examples included species common to desert scrub and/or tolerant of agricultural, residential, commercial and areas of heavy disturbance. These included but were not limited to side-blotched lizard (*Uta stansburiana*), mourning dove (*Zenaida macroura*), American kestrel (*Falco sparverius*), common raven (*Corvus corax*) and verdin (*Auriparus flaviceps*). The number of species detected does not represent the total number of species that may occur on the project site. Brief, one visit assessments are limited by the seasonal timing and short duration of the survey period as well as the nocturnal, fossorial and/or migratory habits of many animals. The disturbed condition of the project site reduces the potential for use by some special status species, as many of these require higher quality and/or more extensive areas of natural habitats. Some are habitat specialists requiring aeolian deposits, which are not currently present along the project site.

No actively nesting birds were detected on or adjacent to the site during the assessment. Several old, inactive bird nests were, however, observed in some of the trees located along and adjacent to the project site. Burrows most likely belonging to desert cottontail (*Sylvilagus audubonii*), were also detected within the project site. A single burrowing owl burrow was identified within the project site (Appendix C).

5.6 Special Status Biological Resources

Some plant and/or animal taxa are designated as having special status due to declining populations, limited geographic distributions and/or vulnerability to climate change, habitat loss and/or fragmentation. Some have been listed as threatened or endangered by the USFWS or by the CDFW and are protected by the federal and state ESAs. Others have been identified, and are managed as sensitive by the USFWS, CDFW, or by private conservation organizations, including the CNPS, but have not been formally listed as threatened or endangered. Impacts to such species can still be considered significant under the CEQA, if not avoided, minimized and/or mitigated by specific project design and implementation.

The literature review and field visit resulted in a list of 34 special status biological resources which occur or potentially occur on the project site and vicinity (3 mile radius) of the project site. Tables 1-3 provide a summary of these resources, their current conservation status, habitat associations and potential to occur on the project site. Two special status species, burrowing owl (*Athene cunicularia*) and Vaux's swift (*Chaetura vauxi*) were observed on-site during the

assessment (Appendix B). These species are not listed as threatened or endangered, however, they are designated as California Species of Special Concern (CSC) by the CDFW.

Table 1. Special Status Plants

Species	Protective Status	Habitat	Flowering Period	Occurrence Probability
Abronia villosa var. aurita Chaparral sand-verbena	F: ND C: ND CNPS List: 1B.1 State Rank: S2 CVMSHCP: No	Chaparral, coastal scrub, desert dunes; found in sandy areas. 225 to 4,800 feet.	(January) March - September	**Absent** Habitat lacking, site below known elevational range of species
Astragalus lentiginosus var. coachellae Coachella Valley milk-vetch	F: END C: ND CNPS List: 1B.2 State Rank: S1 CVMSHCP: Yes	Annual/Perennial herb found in sandy flats, washes, alluvial fans, sand field, dunes and dune edges, at 130 to 2,150 feet, a CA endemic.	February - May	**Absent** Habitat lacking, site below known elevational range of species
Astragalus preussii var.laxiflorus Lancaster milk-vetch	F: ND C: ND CNPS List: 1B.1 State Rank: S1 CVMSHCP: No	Chenopod scrub. 2295 - 2295 feet	March - May	**Absent** Habitat present, but site is well below known elevational range of species
Astragalus sabulonum Gravel milk-vetch	F: ND C: ND CNPS List: 2B.2 State Rank: S2 CVMSHCP: No	Desert dunes, Mojavean Desert scrub, Sonoran Desert scrub; usually found on sandy flats and washes, sometimes found on gravelly roadsides. -195 to 3,050 feet.	February - June	**Absent** Plant does not grow in desert saltbush scrub
Ditaxis claryana Glandular ditaxis	F: ND C: ND CNPS List: 2B.2 State Rank: S2 CVMSHCP: No	Mojavean Desert scrub, Sonoran Desert scrub; found in sandy areas. 0 to 1,395 feet.	October - March	**Absent** Plant does not grow in desert saltbush scrub, site below known elevational range of species
Horsfordia alata *Pink velvet-mallow*	F: ND C: ND CNPS List: 4.3 State Rank: S4 CVMSHCP: No	Sonoran Desert scrub. 330 to 1640 feet	February - December	**Absent** Habitat lacking, site below known elevational range of species
Horsfordia newberryi Newberry's velvet-mallow	F: ND C: ND CNPS List: 4.3 State Rank: S4 CVMSHCP: No	Sonoran Desert scrub. 10 to 2625 feet	February - December	**Absent** Plant does not grow in desert saltbush scrub, site below known elevational range of species
Johnstonella costata Ribbed Cryptantha	F: ND C: ND CNPS List: 4.3 State Rank: S4 CVMSHCP: No	Desert dunes, Mojavean Desert scrub, Sonoran Desert scrub; found in sandy areas. -180 to 1,500 feet.	February - May	**Absent** Plant does not grow in desert saltbush scrub

Species	Protective Status	Habitat	Flowering Period	Occurrence Probability
Juncus acutus ssp. leopoldii Southwestern spiny rush	F: ND C: ND CNPS List: 4.2 State Rank: S4 CVMSHCP: No	Coastal dunes, marshes and swamps, meadows and seeps. 10 – 2,955 feet	(March) May - June	**Absent** Plant does not grow in desert saltbush scrub, , site below known elevational range of species

Table 2. Special Status Vegetation Communities

Community	Protective Status (F=Federal, C=California)	Occurrence Probability
Desert Fan Palm Oasis Woodland	F: ND C: ND State rank: S3.2 CVMSHCP: No	**Absent** Date palms and fan palms planted adjacent to the site as landscaping and as agricultural crops, but no natural palm oases present on-site

Table 3. Special Status Wildlife

Species	Protective Status (F=Federal, C=California)	Habitat	Occurrence Probability
Invertebrates			
Danaus plexippus Monarch Butterfly	F: C C: CSC State Rank: S2S3 CVMSHCP: No	Can be found in a variety of areas where milkweed and flowering plants are present; milkweeds are necessary for breeding	**Moderate** Milkweed present on-site. Known to occur in the area.
Euparagia unidentata Algodones euparagia	F: ND C: ND State Rank: S1S2 CVMSHCP: No	Found on desert dunes	**Absent** Habitat lacking, site isolated from sand dune areas
Macrobaenetes valgum Coachella giant sand treader cricket	F: ND C: ND State Rank: S1S2 CVMSHCP: Yes	Found in the sandy areas of the specialized sand dune ecosystem of Coachella Valley (aka “blow sand” habitat)	**Absent** Habitat lacking, site isolated from sand dune areas
Reptiles			
Gopherus agassizii Desert tortoise	F: THR C: THR State Rank: S2S3 CVMSHCP: Yes	Found in desert environments with high plant diversity, digging burrows in the desert sand and dirt	**Absent** Habitat lacking, site isolated from any adjacent habitat
Phrynosoma mcallii Flat-tailed horned lizard	F: ND C: CSC State rank: S2 CVMSHCP: Yes	Fine sand in desert washes and flats with vegetative cover and ants, generally below 600 feet elevation in Riverside, San Diego, and Imperial Counties.	**Absent** Habitat lacking, site isolated from sand sources
Uma inornata Coachella Valley fringe-toed lizard	F: THR C: END State rank: S1 CVMSHCP: Yes	Sandy areas of the Coachella Valley (dunes and sand field habitats)	**Absent** Habitat lacking, site isolated from sand sources

Species	Protective Status (F=Federal, C=California)	Habitat	Occurrence Probability
Birds *birds covered by the CVMSHCP still cannot be directly impacted while nesting or in burrows			
Athene cunicularia Burrowing Owl	F: MBTA, BCC C: CSC State: S3 CVMSHCP: Yes	Occupies open, dry grasslands, scrub habitats, agricultural, railroad rights-of-way, and margins of highways, golf courses, and airports. Utilizes ground squirrel burrows and man-made structures, such as earthen berms, cement culverts, cement, asphalt, and debris piles for nesting and shelter.	**Nesting: Occurs** Owl and suitable burrows present **Foraging: Occurs** Foraging habitat present
Buteo regalis Ferruginous Hawk	F: ND C: ND State Rank: S3S4 CVMSHCP: No	Prefers arid and semiarid grassland and prairie regions; can also be found at foothills, mid-elevation plateaus, riparian corridors and at desert edges; rock outcrops, solitary trees, and shallow canyons may characterize potential habitat	**Nesting: Absent** No suitable nesting habitat **Foraging: Low-Moderate** Open areas within the project site may provide suitable foraging habitat, but surrounding residential development precludes frequent use. In this area only during migration and winter.
Calypte costae Costa's Hummingbird	F: BCC C: ND State Rank: S4 CVMSHCP: No	Sonoran and Mojave Desert scrub, coastal California chaparral and sage scrub, and deciduous forest; they can be found in desert washes wit plants such as palo verde, jojoba, desert lavender, or chuparosa; also found on steep rock slopes, and in lowlands with saguaro, creosote bush, and cholla cacti, usually below 3,000 feet elevation.	**Nesting: Low** Marginal nesting habitat **Foraging: Low-Moderate** Surrounding residential development provides better nectar sources.
Chaetura vauxi Vaux's swift	F: ND C: SSC State Rank: S2S3 CVMSHCP: No	A summer resident of northern California. Prefers redwood and Douglas-fir habitats. Roosts and nests in hollow trees and snags, and occasionally in chimneys and buildings. Fairly common migrant throughout most of the state. A few winter irregularly in southern coastal lowlands	**Nesting: Absent** No suitable nesting habitat. does not nest in southern California. **Foraging: Occurs** Species present during field visit, but only as a passing migrant.
Spinus lawrencei Lawrence's goldfinch	F: ND C: ND State Rank: S4 CVMSHCP: No	Nests in oak woodlands with meadows, weedy fields, or chaparral with a freshwater source; also found migrating in coastal scrub and desert arroyos	**Nesting: Absent** No suitable nesting habitat **Foraging: Low** Marginal foraging habitat on-site.

Species	Protective Status (F=Federal, C=California)	Habitat	Occurrence Probability
Empidonax traillii extimus Southwestern willow flycatcher	F: END C: END State: S1 CVMSHCP: Yes	Nests in large areas of riparian forests and woodlands	**Nesting: Absent** No suitable nesting habitat **Foraging: Absent** No suitable foraging habitat on-site.
Haliaeetus leucocephalus Bald Eagle	F: non-BCC, Eagle Act, MBTA C: END State Rank: S3 CVMSHCP: No	Prefers habitat near large bodies of open water with abundance of fish	**Nesting: Absent** No suitable nesting habitat **Foraging: Absent** No suitable foraging habitat on-site.
Polioptila melanura Black-tailed gnatcatcher	F: ND C: WL State rank: S3S4 CVMSHCP: No	Nests in wooded desert wash habitat containing mesquite, palo verde, ironwood, and acacia. May also occur in areas with salt cedar, especially when adjacent to native wooded desert wash habitat. Also occurs in desert scrub habitat in winter.	**Nesting: Low** Marginally suitable habitat present **Foraging: Low** Site is highly disturbed and isolated from adjacent habitat.
Pyrocephalus rubinus Vermilion flycatcher	F: ND C: CSC State Rank: S2S3 CVMSHCP: No	Usually found near water in habitats including arid scrub, farmlands, golf courses, desert or savanna, and riparian woodlands	**Nesting: Low** Marginally suitable habitat present on site, best habitat is in adjacent park. **Foraging: Low-Moderate** Some areas within the project site may provide suitable foraging habitat, but surrounding residential, including a park, provides more attractive foraging habitat for this species.
Rallus obsoletus yumanensis Yuma Ridgway's rail	F: END C: THR, FP State rank: S1 CVMSHCP: Yes	Well-developed marsh habitats of cattails and California bulrush. Also requires water depths varying from 6.5 cm to 20 cm.	**Nesting: Absent** No suitable nesting habitat **Foraging: Absent** No suitable foraging habitat on-site.
Toxostoma crissale Crissal thrasher	F: ND C: CSC State rank: S3 CVMSHCP: Yes*	Dense thickets of shrubs or low trees in desert riparian and desert wash habitats. Southeastern California to Texas and northern Mexico.	**Nesting: Low** Habitat present but limited, marginal **Foraging: Low** Same as above, limited potential due to isolation from adjacent habitat.

Species	Protective Status (F=Federal, C=California)	Habitat	Occurrence Probability
Toxostoma lecontei LeConte's thrasher	F: BCC C: ND) State rank: S3 CVMSHCP: Yes	Resident of open desert wash, scrub, alkali scrub, succulent scrub habitats, nests in dense spiny shrubs and cacti in washes, usually within 2-8 feet of the ground.	**Nesting: Low** Habitat present but marginal and limited, isolated from adjacent habitat. **Foraging: Low** Same as above
Vireo bellii pusillus Least Bell's vireo	F: END C: END State rank: S2 CVMSHCP: Yes*	Riparian woodland habitats along the riverine systems of Southern California	**Nesting: Absent** No suitable nesting habitat **Foraging: Absent** No suitable foraging habitat.
Mammals			
Eumops perotis californicus Western mastiff bat	F: ND C: CSC State rank: S3S4 CVMSHCP: No WBWG: H	Many open, semi-arid to arid areas including conifer and deciduous forests, grasslands, chaparral, and coastal scrubs. Roosts in crevices in cliff faces, buildings, trees and tunnels.	**Low** Suitable roosting habitat lacking but may forage over site, especially over Whitewater River/Coachella Valley Stormwater Drain Channel and canals and at lights that attract nocturnal insect prey
Lasiurus xanthinus Western yellow bat	F: ND C: CSC State rank: S3 CVMSHCP: Yes WBWG: H	Found in valley foothill riparian, desert riparian, desert wash, and palm oasis. Roosts in trees, particularly palms. Forages over water and among trees.	**Low** Suitable habitat marginal and project site is surrounded by residential development.
Perognathus longimembris bangsi Palm Springs pocket mouse	F: BLM Sensitive C: CSC State Rank: S2 CVMSHCP: Yes	Sonoran Desert habitats with level to gently sloping topography, sparse to moderate vegetative cover, and loosely packed or sandy soils.	**Low** Suitable habitat marginal and project site is surrounded by residential development.
Taxidea taxus American Badger	F: ND C: CSC State Rank: S3 CVMSHCP: No	Can be found in brushy areas and hot desert habitats, occasionally found in open chaparral and riparian zones; typically have numerous burrows in areas with substantial rodent populations	**Absent** Suitable habitat lacking and project site is surrounded by residential development.

Species	Protective Status (F=Federal, C=California)	Habitat	Occurrence Probability
Xerospermophilus tereticaudus chlorus Coachella Valley (Palm Springs) round-tailed ground squirrel	F: ND C: CSC State Rank: S2 CVMSHCP: Yes	Prefers open, flat, grassy areas in fine-textured, sandy soil in desert succulent scrub, desert wash, desert scrub, alkali scrub, & levees.	**Absent** Suitable habitat lacking and project site is surrounded by residential development.

Definitions of occurrence probability:

Occurs: Observed on the site by AMEC personnel or recorded on-site by other qualified biologists.

High: Observed in similar habitat in region by qualified biologists, or habitat on the site is a type often utilized by the species and the site is within the known range of the species.

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

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

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

Definitions of status designations and occurrence probabilities.

Federal designations: (federal Endangered Species Act, US Fish and Wildlife Service):

END: Federally listed, Endangered.
THR: Federally listed, Threatened.
BCC: Bird of Conservation Concern
C: Candidate for Federal listing
ND: Not designated.

State designations: (California Endangered Species Act, California Dept. of Fish and Game)

END: State listed, Endangered.
THR: State listed, Threatened.
RARE: State listed as Rare (Listed "Rare" animals have been re-designated as Threatened, but Rare plants have retained the Rare designation.)
CSC: California Special Concern Species.
WL: Watch List Species.
ND: Not designated.

CDFW CNDDB rankings: Animals

S1 = Extremely endangered: <6 viable occurrences or <1,000 individuals, or < 2,000 acres of occupied habitat
S2 = Endangered: about 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 CNDDB 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.

California Native Plant Society (CNPS) designations:
California Rare Plant Ranks (CRPR) Note: According to the CNPS (http://www.cnps.org/programs/Rare_Plant/inventory/names.htm), ALL plants on Lists 1A, 1B, 2A, and 2B meet definitions for state listing as threatened or endangered under Secs. 2062 and 2067 (California Endangered Species Act) of the California Department of Fish and Game Code. Certain plants on Lists 3 and 4 do as well.
The CDFW (http://www.dfg.ca.gov/hcpb/species/t_e_spp/nat_plnt_consv.shtml) 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 in CEQA projects (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.
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."
CA Endemic: Taxa that occur only in California
CNPS Threat Code:
.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.

Western Bat Working Group (WBWG) designations:
The Western Bat Working Group 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.

CVMSHCP designations
Yes: Conserved by the CVMSHCP
No: Not Specifically Conserved by the CVMSHCP
C: Considered, but not included in the CVMSHCP

5.7 Discussion of the Special-status Species Tables

Of the 34 special status biological resources listed on Tables 1-3, 21 have no potential for occurrence. They will not be discussed further.

5.7.1 CVMSHCP Covered Species

Five of the remaining thirteen species are conserved under the CVMSHCP: burrowing owl, crissal thrasher Le Contes' thrasher, western yellow bat, and Palm Springs pocket mouse. Participation in the CVMSHCP, payment of the CVMSHCP development/mitigation fee and participation in the plan will fully mitigate project related impacts (if any) to western yellow bat and Palm Springs pocket mouse.

Suitable habitat for burrowing owl was observed at various locations along the southern portion of the project site. Burrows suitable for burrowing owl use were also observed within these areas. A single burrowing owl individual was observed within the project site. For these reasons, burrowing owl is currently considered present within the project site. This species nests and roosts underground and is particularly sensitive to ground disturbing activities, loud noise created by operation of heavy equipment and may abandon nests or burrows if/when such activities occur. Therefore, in addition to on-site impacts, potential direct and indirect impacts to burrowing owls potentially occurring nearby off-site must also be considered. The burrowing owl is not listed as threatened or endangered by the USFWS or CDFW. It is, however, managed as a Bird of Conservation Concern (BCC) by the USFWS and designated as a CSC by the CDFW. It is also protected from take by the MBTA and California Fish and Game Code. The burrowing owl is a covered species under the CVMSHCP, however the federal permit for the CVMSHCP does not allow take of this species under the MBTA. For these reasons, all burrowing owls must be avoided or relocated prior to any ground disturbing activities. A preconstruction survey for the known owl and any others that may have occupied the site will be necessary (California Department of Fish and Game "CDFG" 2012). Relocation will require prior permission from the CDFW, at a minimum. The two thrashers must not be impacted while nesting. See the nesting bird protection discussion below.

5.7.2 Potentially Occurring Species Not Covered Under the CVMSHCP

Eight special status species that are not covered by the CVMSHCP are considered to have at least some potential to nest or forage on the project site. These include monarch butterfly, ferruginous hawk, Costa's hummingbird, Vaux's swift, black-tailed gnatcatcher, Lawrence's goldfinch, vermilion flycatcher, and western mastiff bat.

Ferruginous hawks and Vaux's swifts occur only in winter and/or migration and Lawrence's goldfinch potentially occurs only for foraging. They will not be impacted by the project. Costa's hummingbird, black-tailed gnatcatcher, and vermilion flycatcher will be protected by the nesting birds measures below.

Monarch butterfly are known to occur in the area and the project contains larval host plants (milkweed species). This species has a moderate potential to occur within the project while foraging, during migration, and as a caterpillar. This species is not listed as threatened or endangered by any of the resource agencies. It is, however, a recent Candidate Species under the Federal Endangered Species Act. Therefore, this species must be avoided during construction activities. Wood recommends a pre-construction survey to identify if the species is present prior to construction. If absent, no additional monitoring will be required. If present, a biologist should monitor the project site until all vegetation has been removed from the site. If

caterpillars are present on the milkweeds, they must be avoided until metamorphosis or relocated with USFWS approval.

Any suitable roost trees should be examined for bats prior to removal. If present, the bats should be relocated, with CDFW permission. Permission for relocation may not be granted during the maternity season (spring-summer). Should project-related disturbance be conducted during the nesting season (1 February through 31 August), a nesting bird clearance survey is recommended to ensure that implementation of the proposed project does not impact nesting birds.

6.0 DISCUSSION

The proposed project includes the development of all 60 acres into a residential development. The project site is largely disturbed with a patch of native salt bush scrub in the southwestern portion It is completely surrounded by either residential development or an interstate freeway. It provides no connectivity to any adjacent native habitat or conservation areas. The project site does not contain any United States Army Corps of Engineers, Regional Water Quality Control Board, or CDFW jurisdictional waters. The project site is not within and/or adjacent to any CVMSHCP Conservation Areas, so will not be subject to CVMSHCP land use adjacency guidelines. Nevertheless, implementation of the proposed project is expected to permanently disturb all areas within the project site, which in turn may potentially result in direct or indirect disturbance to the biological resources, sensitive and otherwise, occurring, or potentially occurring on- and/or adjacent to the site. We have made recommendations above for the protection of these species. Additionally, to prevent impacts to the potentially nesting special status bird species above, as well as to all native birds protected by the MBTA and state fish and game code, the following measures should be taken:

6.1 Protection of Nesting Birds

Special status bird species covered by the CVMSHCP as well as a variety of common bird species that are excluded from coverage under the plan are all still protected by the MBTA and the state Fish and Game Code. This includes virtually all native migratory and resident bird species. Avoidance of impacts to these birds is a requirement of the federal permit issued for the CVMSHCP. To avoid impacting nesting birds both within the conservation area and outside of the conservation area, either avoidance of project-related disturbance during the nesting season (1 February through 31 August) or nesting bird surveys conducted by a qualified ornithologist or biologist immediately prior to on-site disturbance during the nesting season would be required. If nesting birds are found, no work would be permitted near the nest until young have fledged. There is no established protocol for nest avoidance, however, when consulted the CDFW generally recommends avoidance buffers of about 500 feet for birds-of-prey and species listed as threatened or endangered, and 100–300 feet for unlisted songbirds.

6.2 Burrowing Owl

As noted above, at least one burrowing owl and suitable habitat for more is present on site. This species nests and roosts underground so is uniquely vulnerable to ground disturbing activities. A preconstruction survey following CDFG (2012) guidelines must be conducted. Unless avoidable, all burrowing owls present must be relocated prior to any ground disturbing activities. If burrowing owls remain on-site, a Burrowing Owl Relocation and Management Plan will be prepared to describe and outline how the burrowing owl will be actively or passively relocated per CDFW guidelines. Prior to construction, any owls occurring on-site will be relocated prior to vegetation removal or grading activities. Relocation will require prior permission from the CDFW, at a minimum. Since the burrowing owl is a covered species under the CVMSHCP, additional mitigation/conservation measures will not be required.

7.0 CONCLUSION

With the implementation of the recommendations above, impacts to special status biological resources are anticipated to be avoided, minimized, and/or mitigated in accordance with the CVMSHCP and other resource agency requirements.

8.0 LITERATURE CITED AND REFERENCES

California Bird Records Committee. 2022. Official California Checklist. Accessed online at: http://californiabirds.org/ca_list.asp.

California Department of Fish and Game (CDFG). 2012. Staff report on Burrowing Owl Mitigation. CDFG, Sacramento, CA.

California Department of Fish and Wildlife (CDFW). 2022a. California Natural Diversity Data Base, Rarefind 5. Report for the *Indio and West Berdoo Calif.* quadrangles. Accessed at: dfg.ca.gov/biogeodata/cnddb/mapsanddata.asp

CDFW. 2022b. Special Animals List. April. Periodic publication. Sacramento, CA. Accessed online at: https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109406&inline=1

CDFW. 2016. Complete List of Amphibian, Reptile, Bird and Mammal Species in California. Accessed online at: https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=87155&inline

California Legislative Information. 2021. Fish and Game Code of California. https://leginfo.legislature.ca.gov/faces/codesTOCSelected.xhtml?tocCode=FGC&tocTitle=+Fish+and+Game+Code+-+FGC

CDFW. 2015a. California Wildlife Habitat Relationships, Life History Accounts and Range Maps. Accessed online at: http://www.dfg.ca.gov/biogeodata/cwhr/cawildlife.aspx

CDFW. 2015b. Threatened and Endangered Species, Species Lists and Accounts, Species Accounts-Fish. Accessed online at: https://www.dfg.ca.gov/wildlife/nongame/t_e_spp/

CDFW. 2016. Complete List of Amphibian, Reptile, Bird and Mammal Species in California. Accessed online at: nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=87155&inline=1

California Native Plant Society (CNPS). 2022a. Inventory of Rare, Threatened, and Endangered Plants of California. Report for the *Indio and West Berdoo, Calif.* quadrangles. Accessed online at: http://www.rareplants.cnps.org

CNPS. 2022b. The California Rare Plant Ranking System. Accessed online at: https://www.cnps.org/cnps/rareplants/ranking.php

California Natural Resources Agency. 2014. CEQA Guidelines. Accessed online at: http://resources.ca.gov/ceqa/guidelines/

CVAG. 2016. Final Major Amendment to the Coachella Valley Multiple Species Habitat Conservation Plan/Natural Community Conservation Plan. Accessed online at: https://www.cvmshcp.org/Plan%20Documents/10.%20CVAG%20MSHCP%20Plan%20Section%203.0.pdf

CVAG. 2008. Coachella Valley Multiple Species Habitat Conservation Plan. Accessed online at: cvmshcp.org

Holland, R.F. 1986. Preliminary Descriptions of the Terrestrial Natural Communities of California. Prepared for the California Department of Fish and Game.

Jepson Flora Project (2nd ed.). 2022. Jepson eFlora. Accessed online at: http://ucjeps.berkeley.edu/IJM.html

Sawyer, J.O., T. Keeler-Wolf, and J.M. Evens. 2009. A manual of California vegetation (2nd ed.). California Native Plant Society, Sacramento, CA.

Shuford, W. D., and Gardali, T. (Ed.). 2008. California Bird Species of Special Concern: A ranked assessment of species, subspecies, and distinct populations of birds of

immediate conservation concern in California. Studies of Western Birds 1. Western Field Ornithologists, Camarillo, California, and California Department of Fish and Game, Sacramento.

United States Department of Agriculture (USDA), Soil Conservation Service. 1980. A Soil Survey of Riverside County, California, Coachella Valley Area. https://www.nrcs.usda.gov/Internet/FSE_MANUSCRIPTS/california/riversideCA1980/riversideCA1980.pdf

USDA, Natural Resources Conservation Service (NRCS). 2022. The PLANTS Database. National Plant Data Team. Accessed online at: plants.usda.gov

USDA, NRCS. 2019. Web Soil Survey. Accessed online at: http://websoilsurvey.nrcs.usda.gov/app/

USFWS. 2016. Bird Laws and Treaties. Accessed online at: http://www.fws.gov/migratorybirds/RegulationsandPolicies.html

USGS 7.5' *Indio and West Berdoo Canyon, Calif.* 7.5-minute topographic quadrangles (USGS 1972 and 1988)

APPENDIX A

FIGURES

Path: \\sdg1-fs1\GIS\3554_NaturalResources\TerraNova_Calhoun_322520124\MXD\ReportFigures\Fig1_ProjectLocation.mxd, amanda.schwab 6/21/2022

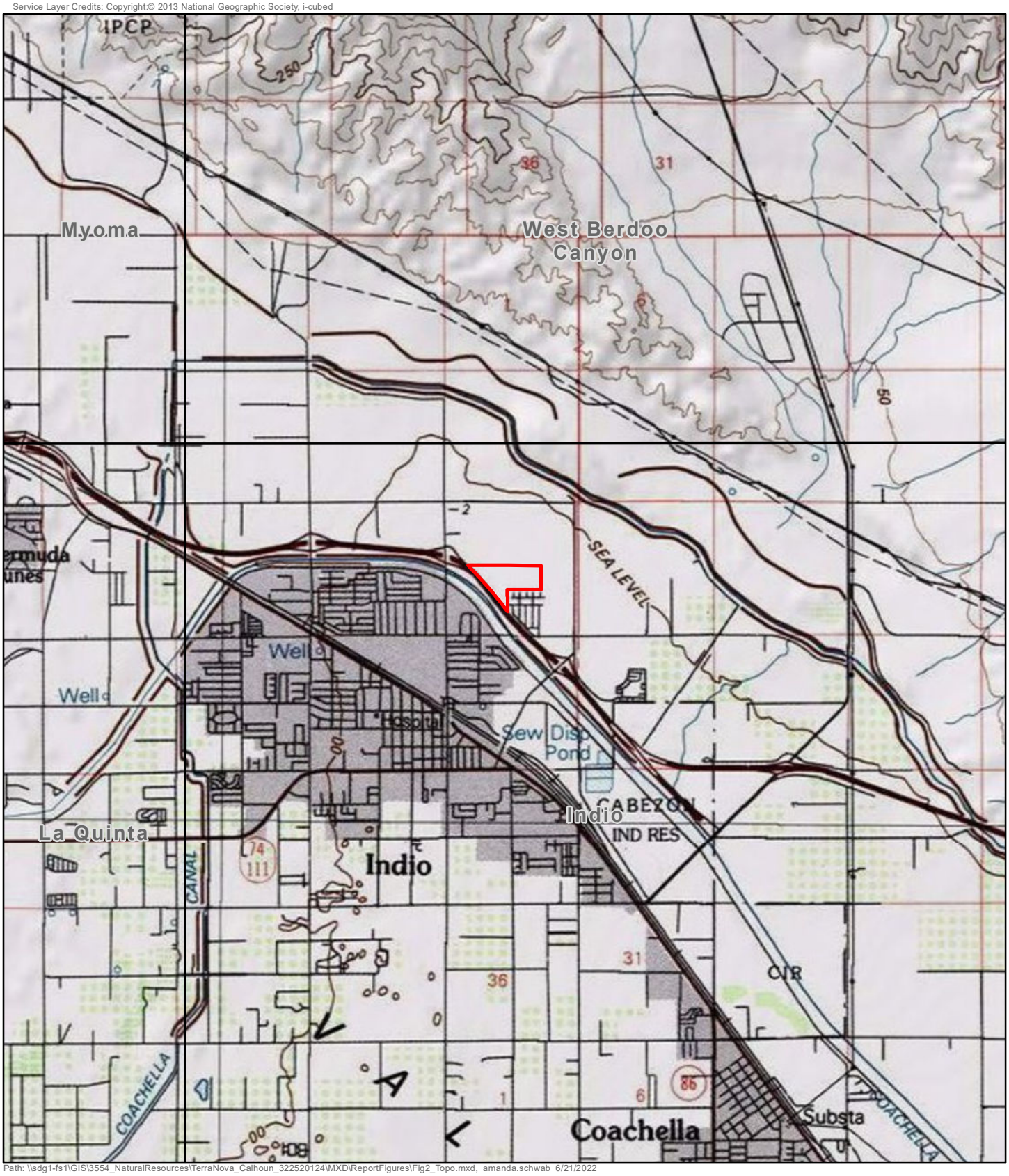
1 inch = 1 miles
0 0.5 1 Miles

wood.

Project Boundary

FIGURE 1

Project Location
Calhoun
Terra Nova Project
Indio, Riverside County, CA



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1 inch = 1 miles
0 0.5 1 Miles

wood.

Project Boundary

FIGURE 2

USGS 7.5' Topo Quad: Indio
Calhoun
Terra Nova Project
Indio, Riverside County, CA

Service Layer Credits: Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Path: \\sdg1-fs1\GIS\3554_NaturalResources\TerraNova_Calhoun_322520124\MXD\ReportFigures\Fig3_SiteVicinity.mxd, amanda.schwab 6/21/2022

1 inch = 500 feet
0 250 500 Feet

wood.

Project Boundary

FIGURE 3

Site Location
Calhoun
Terra Nova Project
Indio, Riverside County, CA

Path: \\sdg1-fs1\GIS\3554_NaturalResources\TerraNova_Calhoun_322520124\MXD\ReportFigures\Fig4_Soils.mxd, amanda.schwab 6/21/2022

1 inch = 500 feet

0 250 500 Feet

wood.

- Project Boundary
- GbA - Gilman fine sandy loam, 0 to 2 percent slopes
- Is - Indio very fine sandy loam

FIGURE 4

Soils
Calhoun
Terra Nova Project
Indio, Riverside County, CA

Service Layer Credits: Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Path: \\sdg1-fs1\GIS\3554_NaturalResources\TerraNova_Calhoun_322520124\MXD\ReportFigures\Fig5_Vegetation.mxd, amanda.schwab 6/21/2022

1 inch = 500 feet

0 250 500 Feet

Previous Agriculture (Disturbed)

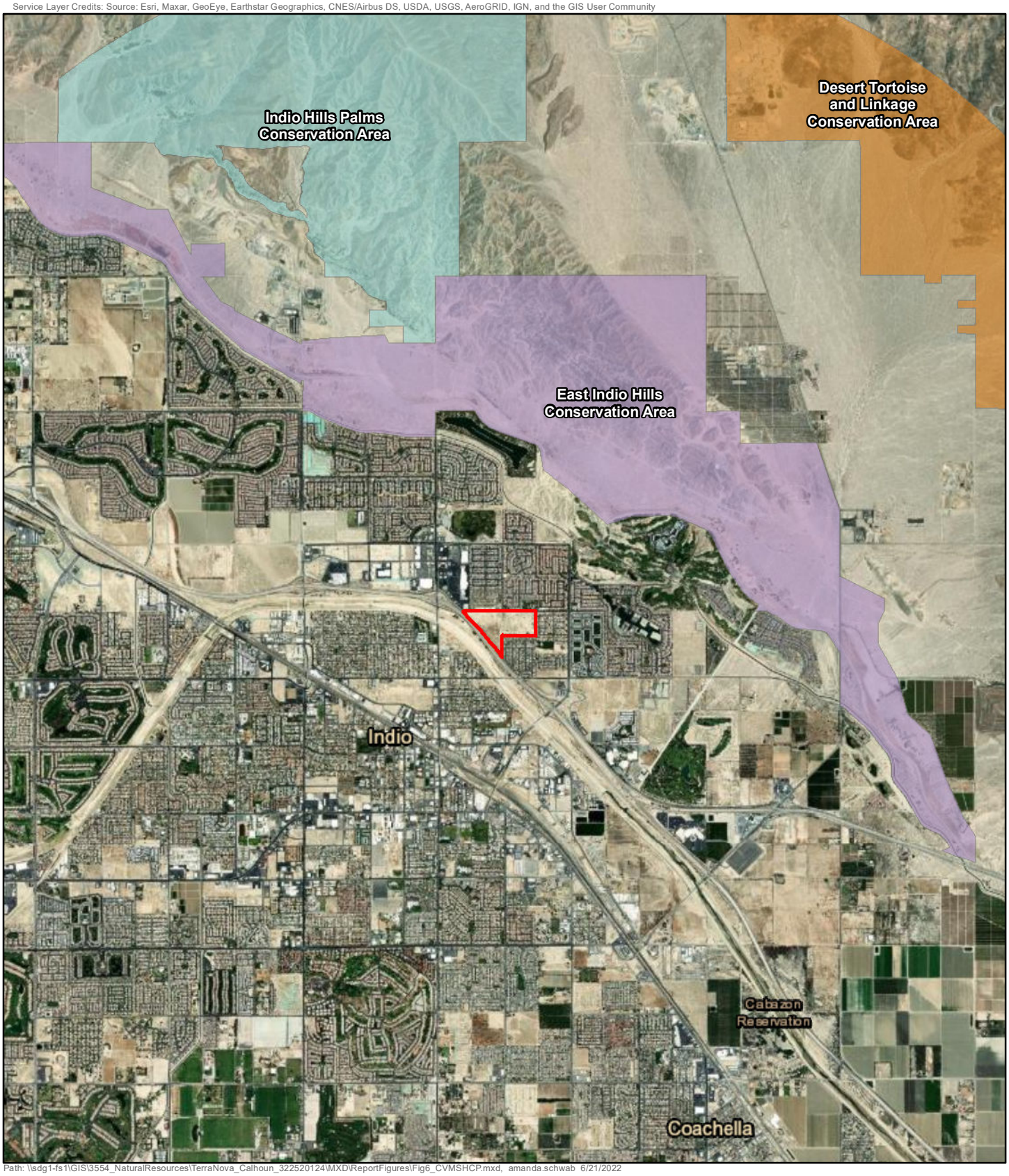
Desert saltbush scrub (Disturbed)

Project Boundary

wood.

FIGURE 5

Vegetation
Calhoun
Terra Nova Project
Indio, Riverside County, CA



Path: \\sdg1-fs1\GIS\3554_NaturalResources\TerraNova_Calhoun_322520124\MXD\ReportFigures\Fig6_CVMSHCP.mxd, amanda.schwab 6/21/2022

1 inch = 1 miles
0 0.5 1 Miles

- Project Boundary
- Desert Tortoise and Linkage Conservation Area
- East Indio Hills Conservation Area
- Indio Hills Palms Conservation Area

wood.

FIGURE 6

CVMSHCP
Calhoun
Terra Nova Project
Indio, Riverside County, CA

APPENDIX B

PLANTS AND VERTEBRATE WILDLIFE OBSERVED ON THE CALHOUN INDIO PROJECT

Flora Compendia

Bignoniaceae		**Bignonia**
Tecoma	*stans*	yellow trumpet flower*
Apocynaceae		**Dogbane Family**
Asclepias	*subulata*	rush milkweed
Funastrum	*hirtellum*	trailing townula*
Asteraceae		**Sunflower Family**
Pluchea	*sericea*	arrow weed
Brassicaceae		**Mustard Family**
Brassica	*tournefortii*	mustard*
Chenopodiaceae		**Goosefoot Family**
Atriplex	*canescens*	hoary saltbush
Atriplex	*lentiformis*	big saltbush
Atriplex	*polycarpa*	cattle spinach
Chenopodium	*murale*	nettle-leaved goosefoot
Salsola	*tragus*	Russian thistle
Suaeda	*nigra*	bush seepweed
Solanaceae		**Nightshade Family**
Datura	*wrightii*	jimson weed
Tamaricaceae		**Tamarisk Family**
Tamarix	*aphylla*	athel tamarisk
Tamarix	*ramosissima*	Mediterranean tamarisk*
Verbenaceae		**Vervain Family**
Lantana	*camara*	lantana*
Poaceae		**Grass Family**
Cynodon	*dactylon*	Bermuda grass*
Pennisetum	*setaceum*	fountain grass*
Phragmites	*australis*	common reed*
Schismus	*barbatus*	Mediterranean schismus*

* - Non-Native

Fauna Compendium

Phrynosomatidae		**Lizards**
Uta	*stansburiana*	side-blotched lizard
Falconidae		**Falcons**
Falco	*sparverius*	American kestrel
Columbidae		**Pigeons/Doves**
Columba	*livia*	rock pigeon*
Streptopelia	*decaocto*	Eurasian collared-dove*
Zenaida	*macroura*	mourning dove
Strigidae		**True Owls**
Athene	*cunicularia*	burrowing owl **
Apodidae		**Swifts**
Chaetura	*vauxi*	Vaux's swift**
Trochilidae		**Hummingbirds**
Calypte	*anna*	Anna's hummingbird
Vireonidae		**Vireos**
Vireo	*cassinii*	Cassin's vireo
Corvidae		**Jays/Crows**
Corvus	*corax*	common raven
Hirundinidae		**Swallows**
Petrochelidon	*pyrrhonota*	cliff swallow
Hirundo	*rustica*	barn swallow
Remizidae		**Verdins**
Auriparus	*flaviceps*	verdin
Mimidae		**Mockingbirds/Thrashers**
Mimus	*polyglottos*	northern mockingbird
Sturnidae		**Starlings**
Sturnus	*vulgaris*	European starling *
Parulidae		**New world warblers**
Vermivora	*celata*	orange-crowned warbler
Vermivora	*ruficapilla*	Nashville warbler
Emberizidae		**Warblers, sparrow, etc.**
Pipilo	*aberti*	Abert's towhee
Passeridae		**True sparrows**
Passer	*domesticus*	house sparrow *
Leporidae		**Hares and Rabbits**
Sylvilagus	*audubonii*	desert cottontail

* - Non-Native
** - Sensitive Species

APPENDIX C

SITE PHOTOS

Photo 1. Looking east from the northwest corner of the project site.

Photo 2. Looking west along the northern edge of the northeast corner of the project site.

Photo 3. Looking south along the eastern edge of the project site from the northeast corner.

Photo 4. Looking west at the central portion of the project site from the eastern boundary.

Photo 5. Looking north from the central portion of the project site.

Photo 6. Looking south at the burrowing owl burrow with sign (whitewash, feathers, pellets, and gathered scat).

APPENDIX D

CVMSHCP Table 4-112:
Coachella Valley Native Plants Recommended for Landscaping

Coachella Valley Native Plants Recommended for Landscaping

BOTANICAL NAME	COMMON NAME
Trees	
Washingtonia filifera	California fan palm
Cercidium floridum	blue palo verde
Chilopsis linearis	desert willow
Olneya tesota	ironwood tree
Prosopis glandulosa var. *torreyana*	honey mesquite
Shrubs	
Acacia greggii	cat's claw acacia
Ambrosia dumosa	burro bush
Atriplex canescens	four wing saltbush
Atriplex lentiformis	quailbush
Atriplex polycarpa	cattle spinach
Baccharis sergiloides	squaw water-weed
Bebia juncea	sweet bush
Cassia (Senna) covesii	desert senna
Condalia parryi	crucilllo
Crossosoma bigelovii	crossosoma
Dalea emoryi	dye weed
Dalea (Psorothamnus) schottii	indigo bush
Datura meteloides	jimson weed
Encelia farinosa	brittle bush
Ephedra aspera	Mormon tea
Eriogonum fasciculatum	California buckwheat
Eriogonum wrightii membranaceum	Wright's buckwheat
Fagonia laevis	no common name
Gutierrezia sarothrae	matchweed
Haplopappus acradenius	goldenbush
Hibiscus denudatus	desert hibiscus
Hoffmannseggia microphylla	rush pea
Hymenoclea salsola	cheesebush
Hyptis emoryi	desert lavender
Isomeris arborea	bladder pod
Juniperus californica	California juniper
Krameria grayi	ratany
Krameria parvifolia	little-leaved ratany
Larrea tridentata	creosote bush
Lotus rigidus	desert rock pea
Lycium andersonii	box thorn
Petalonyx linearis	long-leaved sandpaper plant
Petalonyx thurberi	sandpaper plant
Peucephyllum schottii	pygmy cedar
Prunus fremontii	desert apricot
Rhus ovata	sugar-bush
Salazaria mexicana	paper-bag bush
Salvia apiana	white sage
Salvia eremostachya	Santa Rosa sage

Salvia vaseyi	wand sage
Simmondsia chinensis	jojoba
Sphaeralcia ambigua	globemallow (desert mallow)
Sphaeralcia ambigua rosacea	apricot mallow
Trixis californica	trixis
Zauschneria californica	California fuchsia

Groundcovers

Mirabilis bigelovii	wishbone bush (four o'clock)
Mirabilis tenuiloba	white four o'clock (thin-lobed)

Vines

Vitis girdiana	desert grape

Accent

Muhlenbergia rigens	deer grass

Herbaceous Perennials

Adiantum capillus-veneris	maiden-hair fern
Carex alma	sedge
Dalea parryi	Parry dalea
Eleocharis montevidensis	spike rush
Equisetum laevigatum	horsetail
Juncus bufonis	toad rush
Juncus effuses	juncus
Juncus macrophyllus	juncus
Juncus mexicanus	Mexican rush
Juncus xiphioides	juncus
Notholaena parryi	Parry cloak fern
Pallaea mucronata	bird-foot fern

Cacti and Succulents

Agave deserti	desert agave
Asclepias albicans	desert milkweed (buggy-whip)
Asclepias subulata	ajamete
Dudleya arizonica	live-forever
Dudleya saxosa	rock dudleya
Echinocereus engelmannii	calico hedgehog cactus
Ferocactus acanthodes	barrel cactus
Fouquieria splendens	ocotillo
Mamillaria dioica	nipple cactus
Mamillaria tetrancistra	corkseed cactus
Nolina parryi	Parry nolina
Opuntia acanthocarpa	stag-horn or deer-horn cholla
Opuntia bigelovii	teddy bear or jumping cholla
Opuntia basilaris	beavertail cactus
Opuntia echinocarpa	silver or golden cholla
Opuntia ramosissima	pencil cholla, darning needle cholla
Yucca schidigera	Mojave yucca, Spanish dagger
Yucca whipplei	Our Lord's candle

APPENDIX E

Prohibited Invasive Ornamental Plants

Prohibited Invasive Ornamental Plants

BOTANICAL NAME	COMMON NAME
Acacia spp. (all species except A. greggii)	(all species except native catclaw acacia)
Arundo donax	giant reed or arundo grass
Atriplex semibaccata	Australian saltbush
Avena barbata	slender wild oat
Avena fatua	wild oat
Brassica tournefortii	African or Saharan mustard
Bromus madritensis ssp. rubens	red brome
Bromus tectorum	cheat grass or downy brome
Cortaderia jubata [syn.C. atacamensis]	jubata grass or Andean pampas grass
Cortaderia dioica [syn. C. selloana]	pampas grass
Descurainia sophia	tansy mustard
Eichhornia crassipes	water hyacinth
Elaegnus angustifolia	Russian olive
Foeniculum vulgare	sweet fennel
Hirschfeldia incana	Mediterranean or short-pod mustard
Lepidium latifolium	perennial pepperweed
Lolium multiflorum	Italian ryegrass
Nerium oleander	oleander
Nicotiana glauca	tree tobacco
Oenothera berlandieri	Mexican evening primrose
Olea europea	European olive tree
Parkinsonia aculeata	Mexican palo verde
Pennisetum clandestinum	Kikuyu grass
Pennisetum setaceum	fountain grass
Phoenix canariensis	Canary Island date palm
Phoenix dactylifera	date palm
Ricinus communis	castorbean
Salsola tragus	Russian thistle
Schinus mole	Peruvian pepper tree
Schinus terebinthifolius	Brazilian pepper tree
Schismus arabicus	Mediterranean grass
Schismus barbatus	Saharan grass, Abu Mashi
Stipa capensis	no common name
Tamarix spp. (all species)	tamarisk or salt cedar
Taeniatherum caput-medusae	Medusa-head
Tribulus terrestris	puncturevine
Vinca major	periwinkle
Washingtonia robusta	Mexican fan palm
Yucca gloriosa	Spanish dagger

Sources: California Exotic Pest Plant Council, United States Department of Agriculture-Division of Plant Health and Pest Prevention Services, California Native Plant Society, Fremontia Vol. 26 No. 4, October 1998, The Jepson Manual; Higher Plants of California, and County of San Diego Department of Agriculture.