

**Appendix B**

**Biological Resources Assessment Report**

**(Available on City website)**

**DRAFT REFUGE PALM DESERT PROJECT**  
**Assessor's Parcel Numbers 694-310-002, 694-310-003, & 694-310-006**

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



City of Palm Desert, Riverside County, California

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11 March 2022

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## **1.0 INTRODUCTION**

At the request of Terra Nova Planning and Research, Inc., this biological resources assessment & Coachella Valley Multiple Species Habitat Conservation Plan (CVMSHCP) compliance report was prepared by Wood Environment & Infrastructure Solutions, Inc. (Wood) for the proposed Refuge Palm Desert Project (project) in the City of Palm Desert, Riverside County, California. The approximately 105-acre project site is located immediately south of Gerald Ford Drive. The nearest major streets to the east, south, and west are respectively Portola Road, Frank Sinatra Drive, and Monterey Avenue (Figure 1). The site is located within Section 32 of Township 4 South, Range 6 East of the United States Geological Survey (USGS) 7.5' *Cathedral City, CA* and *Myoma, CA* quadrangles. Onsite elevation ranges from approximately 275 – 305 feet (84 – 93 meters) above mean sea level (Figure 2). The project site is on assessor's parcel numbers (APN) 694-310-002, -003, and -006. The project proposes the construction of 504 homes, see the conceptual site plan (Appendix 1).

Information contained herein is intended to be used for compliance with state and federal regulations intended to protect waters, wildlife, special status elements, and their habitats.

## **2.0 REGULATORY FRAMEWORK**

Several relevant biological and environmental regulations have been included in this section, but the CVMSHCP is the primary regulatory entity for this project.

### **2.1 Coachella Valley Multiple Species Habitat Conservation Plan**

Finalized in October 2008, the CVMSHCP is a comprehensive regional plan that addresses the conservation needs of 27 species of native flora and fauna and 27 natural vegetation communities occurring throughout the Coachella Valley region of western Riverside County, California (Coachella Valley Association of Governments [CVAG] 2021). Permits for the CVMSHCP were issued by the California Department of Fish and Game (CDFG) [now the California Department of Fish and Wildlife (CDFW)] on September 9, 2008 and the United States Fish and Wildlife Service (USFWS) on October 1, 2008 (TE104604-0). The CVMSHCP serves two primary purposes: balancing environmental protection and economic development objectives in the CVMSHCP 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 species.

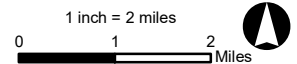
The covered species include plants and animals that are either currently listed as threatened or endangered, are proposed for listing, or are believed by an USFWS and CDFW appointed Scientific Advisory Committee, to have a high probability of being proposed for listing in the future if not provided protection by the CVMSHCP. The goal of the CVMSHCP is to meet the requirements of the state and federal endangered species acts, while at the same time allowing for the economic growth (land development) within the CVMSHCP area without significant delay or hidden costs. Under the CVMSHCP, mitigation is required from all new development projects



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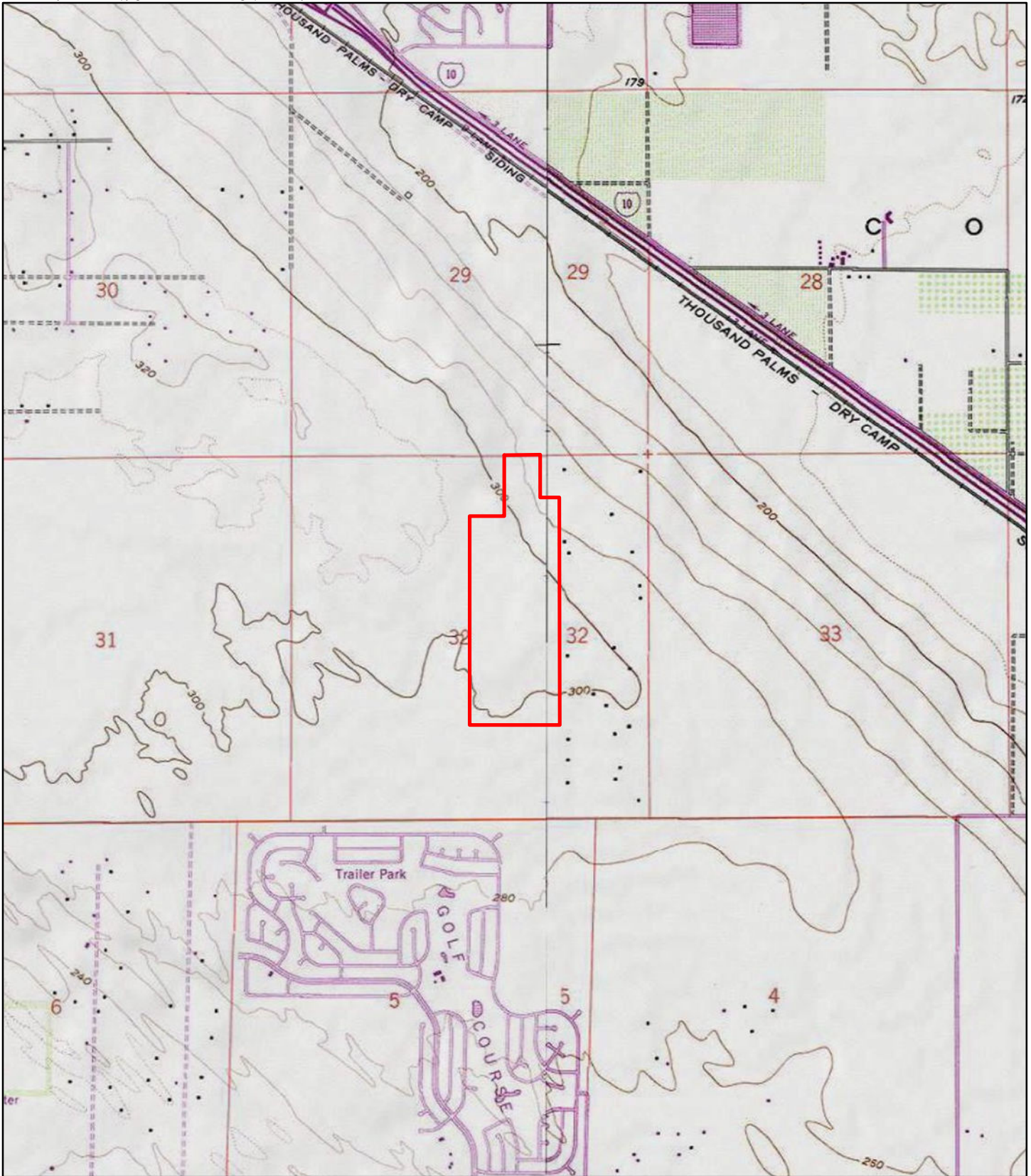
 Project Boundary



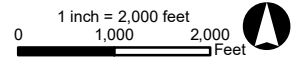
### FIGURE 1

Regional Map  
Refuge Palm Desert Project  
Riverside County, California

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 Project Boundary

**FIGURE 2**

USGS 7.5' Topo Quad: Cathedral City  
Refuge Palm Desert Project  
Riverside County, California



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occurring in the CVMSHCP area for the purpose of assembling a preserve system for the covered species and natural vegetation communities within areas identified as having high conservation value.

Federal approval for the CVMSHCP was achieved under the Endangered Species Act (FESA or Act). The USFWS and the National Marine Fisheries Service are the designated federal agencies accountable for administering the FESA. FESA defines species as “endangered” or “threatened” and provides regulatory protection at the federal level. Section 10(a) of the FESA authorizes the issuance of incidental take permits and establishes standards for the content of habitat conservation plans, such as the CVMSHCP.

State approval for the CVMSHCP was under the Natural Community Conservation Planning (NCCP) Program, managed by the CDFW. NCCPs are 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 listings are required under the California Endangered Species Act (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 Coachella Valley NCCP is included as a part of the CVMSHCP.

## **2.2 Protection of Migratory Birds**

### **2.2.1 Migratory Bird Treaty Act**

The Migratory Bird Treaty Act (MBTA) 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 MBTA document (USFWS 2022). The Secretary of the Interior can issue permits for incidental take of migratory bird species. As with the FESA, the MBTA also allows the Secretary of the Interior to grant permits for the incidental take of these protected migratory bird species.

The USFWS permit for the CVMSHCP allows only for the take of covered bird species *which are also listed under the FESA*, as amended and which are also listed under the MBTA. For other birds protected by the MBTA, and not listed under the FESA, *no take is authorized* (including killing and wounding of any such birds or take of eggs and active nests). Take is defined as “to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, collect, or attempt to engage in such conduct.”

## **2.2.2 Section 3503, 3505.5, & 3513 of the State Fish and Game Code**

Section 3503 makes it unlawful to take, possess, or needlessly destroy the nest or eggs of any bird. Section 3505.5 makes it unlawful to take, possess, or destroy any birds in the order Falconiformes or Strigiformes (birds-of-prey, i.e.: owls, hawks, eagles, etc.) or to take, possess, or destroy the nest or eggs of any bird-of-prey. Section 3513 makes it unlawful to take or possess any migratory nongame bird as designated in the MBTA. See California Legislative Information (2022).

## **2.3 Waters of the United States and the State of California**

Impacts to federal and state jurisdictional waters are not covered by the CVMSHCP.

### **2.3.1 United States Army Corps of Engineers (USACE)**

The USACE regulates the discharge of dredged or fill material in Waters of the United States (WUS) pursuant to Section 404 of the Clean Water Act (CWA).

### **2.3.2 Regional Water Quality Control Board (RWQCB)**

The RWQCB regulates activities pursuant to Section 401(a)(1) of the CWA. Section 401 of the CWA specifies that certification from the State is required for any applicant requesting a federal license or permit to conduct any activity including, but not limited to, the construction or operation of facilities that may result in any discharge into navigable waters. Through the Porter Cologne Water Quality Control Act, the RWQCB asserts jurisdiction over Waters of the State of California (WSC) which is generally the same as 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".

### **2.3.3 California Department of Fish and Wildlife**

The CDFW regulates water resources under Section 1600-1616 of the California Fish and Game Code. Section 1602 states:

"An entity may not substantially divert or obstruct the natural flow of, or substantially change or use any material from the bed, channel, or bank of, any river, stream, or lake, or deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it may pass into any river, stream, or lake."

## **3.0 METHODS**

### **3.1 Literature Review**

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

The literature review included the following documents:

- California Natural Diversity Data Base (CNDDDB) RareFind 5 (CDFW 2022a)
- California Native Plant Society's (CNPS) Inventory of Rare, Threatened, and Endangered Plants of California (CNPS 2022)
- CVMSHCP (CVAG 2022)
- United States Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS). 2019. Web Soil Survey
- USGS 7.5' *Cathedral City, Myoma, Rancho Mirage, and La Quinta, CA* quadrangles

This document utilized the following standard references: for plant communities, the CVMSHCP (2022); for flora, the Jepson Flora Project (2022) and USDA NRCS PLANTS Database (2022); for amphibians, reptiles, and mammals, CDFW (2016); and for birds, the California Bird Records Committee (2022).

### **3.2 Field Assessment**

The field assessment was conducted on 7 March 2022 by Wood Senior Biologist John F. Green. General weather and site conditions were recorded at the beginning and end of the assessment. Temperatures and wind speeds were recorded with a handheld Kestrel anemometer. Temperatures during the 0830-1135 site visit ranged from 64 to 67 degrees Fahrenheit with winds from 0 to 5 miles per hour under nearly clear skies. Suitable habitat was assessed based on the presence or absence of habitat components (e.g., soils, vegetation and topography) characteristic of special status biological resources which were determined by the literature review to be potentially present. Pedestrian transects were walked around the entire site. All flora and fauna observed or otherwise detected (e.g., dead remains [primarily plants], vocalizations, presence of scat, tracks, and/or bones) during the assessment were recorded in field notes and are included in Appendices 2 and 3. Plant species of uncertain identity were photographed for identification. Photos representing general site conditions were taken at various points (Appendix 4).

## 4.0 RESULTS

The project site is largely undeveloped, but not entirely undisturbed. The surrounding area is almost entirely developed with a golf course, sheriff's station, and residences immediately adjacent to the site. Active construction is underway on the east project boundary where the largest remaining adjoining undeveloped land had been. These adjacent developments have caused edge effects to the project site such as construction disturbance; intrusion of landscaping vegetation; growth of atypical native vegetation around site margins due to adjacent irrigation; trash and debris; and site entry by vehicles, domestic dogs, and pedestrians. Drift fencing presumably meant to control blow-sand were also installed onsite. Only one small area adjacent to the northeastern-most portions of the site remains undeveloped and in similar condition to the project area (Figure 3).

### 4.1 Hydrology / Jurisdictional Waters

There are no drainages or jurisdictional features onsite. Therefore, there will be no further discussion of hydrology or jurisdictional waters.

### 4.2 Topography and Soils

The project site is covered with a surprising amount of blow-sand for a location so isolated by development. It forms small dunes in some areas and has also overtopped the golf course wall at some points. Some areas have lost sand depth or stabilized around athel trees or other obstacles.

The Web Soil Survey (USDA, NRCS 2019) shows the following soil types on the site (Figure 4):

- Myoma fine sand, 0 - 5% slopes
- Myoma fine sand, 5 to 15 percent slopes

Myoma soils are somewhat excessively drained with very slow runoff and rapid permeability. They are moderately alkaline fine and very fine sands which formed in sand blown from recent alluvium. Slopes are level to rolling.

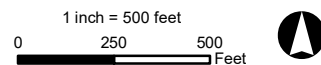
Sandy soils are associated with several potentially occurring special status species.

### 4.3 Vegetation

A review of vegetation communities described by the CVMSHCP (natural communities) revealed "stabilized and partially stabilized desert dunes" as the community matching the physical and vegetative parameters of the site (Figure 5). This community is described as: "sand dune accumulations that are stabilized or partially stabilized" and "characterized by prominent dune features, with consistent cover of vegetation. This community may intergrade with" "stabilized and partially stabilized desert sand fields" and "includes perennial plant species typical of a creosote bush scrub matrix, with perennial shrub species including creosote bush (*Larrea tridentata*), four-wing saltbush (*Atriplex canescens*), California croton (*Croton californicus*), and indigo bush (*Psoralea sp.*)." All of these species occur onsite.



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 Project Boundary

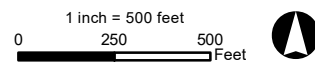
### FIGURE 3


Site Location  
Refuge Palm Desert Project  
Riverside County, California

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 Project Boundary

**Soils**

-  MaB - Myoma fine sand, 0 to 5 percent slopes
-  MaD - Myoma fine sand, 5 to 15 percent slopes

**FIGURE 4**

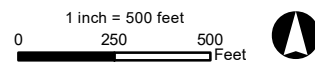
Soils  
Refuge Palm Desert Project  
Riverside County, California





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**wood.**

-  Project Boundary
- Vegetation Communities**
-  Stabilized and partially stabilized desert dunes and sand fields

**FIGURE 5**  
Vegetation  
Coachella Valley MSHCP  
Refuge Palm Desert Project  
Riverside County, California

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Twenty-three plant species were detected during the field visit. A list including common and scientific names, is attached (Appendix 2). Seventeen were native (74%). It should be noted that short-term biological studies of this nature are limited by the seasonality of plants and the timing of field visits. Drought conditions have likely limited the number of annuals as well as stunted those that have germinated.

#### **4.4 Wildlife**

Vertebrate wildlife directly observed and/or detected otherwise (e.g., scat, bones, prints, feathers, burrows, etc.) during the assessment included a minimum of 19 species. This included two reptiles, 14 birds and at least three mammals. See Appendix 3 for a list of the species detected.

It should be noted that short-term biological studies of this nature are limited by seasonality (for example migratory birds and "hibernating" mammals and reptiles), the fossorial and nocturnal habits of many mammals and reptiles, and the timing of field surveys. A complete inventory of the wildlife on the site would require extensive year-round surveys for invertebrates, amphibians, reptiles, birds, and mammals including, for example: diurnal netting/collecting and nocturnal black light traps for invertebrates, pitfall traps for amphibians and reptiles, and live trapping and/or the placement of tracking stations for the detection of nocturnal mammals.

#### **4.5 Special Status Elements**

Plant or animal taxa may be considered "sensitive" or as having "special status" due to declining populations, vulnerability to habitat change, or because they have restricted ranges. Some are listed as threatened or endangered by the USFWS or by the CDFW and are protected by the FESA and/or CESA. Others have been identified as sensitive or as special status species by the USFWS, the CDFW, or by private conservation organizations, including the CNPS. Unlisted sensitive species do not have formal state or federal status but impacts to these species (if any) may nevertheless be considered significant.

Knowledge of habitat associations, natural history, seasonality, and distribution is essential in the assessment of the potential for occurrence of the various sensitive plants and animals known to occur throughout the region. This knowledge, along with the literature review and site reconnaissance resulted in the identification of 43 special status elements which were either observed on the site, had CNDDDB records within an approximate five-mile radius of the site, and/or which have potentially suitable habitat on the site. These included 18 plants, one vegetation community, five insects, one fish, two reptiles, nine birds, and seven mammals. Tables 1 through 7 provide a complete list of these sensitive biological resources, their associated status, their general habitat associations, and their respective site occurrence potential based on geographic distribution, the presence of potentially suitable habitat, and the collective expertise of Wood biologists.

**Table 1 Special Status Plants**

<b>Species</b>	<b>Status</b>	<b>Habitat</b>	<b>Probability</b>
<i>Abronia villosa</i> var. <i>aurita</i> <b>chaparral sand-verbena</b>	CVMSHCP = No F = ND C = S2 CNPS = 1B.1	Sandy areas in chaparral, coastal scrub, desert dunes. 75 to 1600 meters (m.). Blooms (B): January – September.	<b>Low</b> Species present onsite, but expected to be desert variety, not var. <i>aurita</i> .
<i>Astragalus hornii</i> var. <i>hornii</i> <b>Horn’s milk-vetch</b>	CVMSHCP = No F = ND C = S1 CNPS = 1B.1	Alkaline areas of lake margins, playas, meadows and seeps. 60 to 850 meters (m). B: May - October	<b>Absent</b> No suitable habitat
<i>Astragalus lentiginosus</i> var. <i>coachellae</i> <b>Coachella Valley milk-vetch</b>	CVMSHCP = <b>Yes</b> F = <b>END</b> C = S1 CNPS = 1B.2	Sonoran Desert scrub; sandy flats, washes, outwash fans, sometimes on dunes. 40 to 665 m. B: January - September	<b>High</b> Habitat suitable, site in modeled habitat, recorded onsite.
<i>Astragalus sabulorum</i> <b>gravel milk-vetch</b>	CVMSHCP = No F = ND C = S2 CNPS = 2B.2	Sandy or gravelly flats, washes, and roadsides in desert dunes, Mojavean desert scrub, & Sonoran Desert scrub. –60 to 930 m. B: February – June.	<b>High</b> Habitat suitable
<i>Cuscuta californica</i> var. <i>apiculata</i> <b>pointed dodder</b>	CVMSHCP = No F = ND C = S3? CNPS = 3	Mojavean & Sonoran Desert scrub. 0 to 500 m. B: February – August.	<b>Moderate</b> Habitat suitable
<i>Ditaxis claryana</i> <b>glandular ditaxis</b>	CVMSHCP = No F = ND C = S2 CNPS = 2B.2	Sandy soils in dry washes and on rocky hillsides in Mojavean & Sonoran Desert scrub. 0 to 465 m. B: October – March.	<b>Low</b> Habitat marginal
<i>Ditaxis serrata</i> var. <i>californica</i> <b>California ditaxis</b>	CVMSHCP = No F = ND C = S2? CNPS = 3.2	Sonoran Desert scrub. 30 to 1000 m. B: March - December.	<b>Moderate</b> Habitat suitable
<i>Euphorbia abramsiana</i> <b>Abram’s spurge</b>	CVMSHCP = No F = ND C = S2 CNPS = 2B.2	Sandy sites in Mojave and Sonoran Desert scrub. - 5 – 1,450 m. B: (August) September - November	<b>High</b> Habitat suitable
<i>Euphorbia arizonica</i> <b>Arizona spurge</b>	CVMSHCP = No F = ND C = S3 CNPS = 2B.3	Sonoran Desert scrub. 50 – 300 m. B: March - April	<b>Moderate</b> Habitat suitable

**Table 1 Special Status Plants**

<b>Species</b>	<b>Status</b>	<b>Habitat</b>	<b>Probability</b>
<i>Euphorbia platysperma</i> <b>flat-seeded spurge</b>	CVMSHCP = No F = ND C = S1 CNPS = 1B.2	Desert dunes, Sonoran Desert scrub. 65 – 100 m. B: February - September	<b>High</b> Habitat suitable
<i>Johnstonella costata</i> <b>ribbed cryptantha</b>	CVMSHCP = No F = ND C = S4 CNPS = 4.3	Desert dunes in Mojavean & Sonoran Desert scrub. -60 – 500 m. B: February - May	<b>High</b> Habitat suitable
<i>Juncus acutus</i> ssp. <i>leopoldii</i> <b>southwestern spiny rush</b>	CVMSHCP = No F = ND C = S4 CNPS = 4.2	Coastal dunes, marshes and swamps, meadows and seeps. 3-900 m. B: (March) May-June.	<b>Absent</b> No suitable habitat
<i>Juncus cooperi</i> <b>Cooper's rush</b>	CVMSHCP = No F = ND C = S3 CNPS = 4.3	Meadows and seeps. -260 -1770 m. B: April-May (August).	<b>Absent</b> No suitable habitat
<i>Lycium torreyi</i> <b>Torrey's box-thorn</b>	CVMSHCP = No F = ND C = S3 CNPS = 4.2	Rocky, sandy, areas, streambanks & washes in Mojavean & Sonoran Desert scrub. -50 – 1220 m. B: (January-February) March-June (September-November).	<b>Low</b> No focused survey conducted, but this is a large plant unlikely to have been overlooked unless at seedling stage.
<i>Nemacaulis denudata</i> var. <i>gracilis</i> <b>slender cottonheads</b>	CVMSHCP = No F = ND C = S2 CNPS = 2B.2	Sandy places in coastal dunes, desert dunes, & Sonoran Desert scrub. -50 to 400 m. B: March - May	<b>High</b> Habitat suitable
<i>Petalonyx linearis</i> <b>narrow-leaf sandpaper-plant</b>	CVMSHCP = No F = ND C = S2S3 CNPS = 2B.3	Mojavean & Sonoran Desert scrub in sandy or rocky canyons. -25 to 1,115 m. B: (January – February) March – May (June – December).	<b>Very Low</b> Habitat marginal
<i>Pseudorontium cyathiferum</i> <b>Deep Canyon snapdragon</b>	CVMSHCP = No F = ND C = S1 CNPS = 2B.3	Sonoran Desert scrub in rocky washes and on rocky slopes in the immediate vicinity of Deep Canyon. 0-800 m. B: February -April	<b>Absent</b> Site not in immediate vicinity of Deep Canyon
<i>Xylorhiza cognata</i> <b>Mecca-aster</b>	CVMSHCP = <b>Yes</b> F = ND C = S2 CNPS = 1B.2	Sonoran Desert scrub. 20 - 400 m. B: January – June.	<b>Low</b> Site probably not within the range of the species.

**Table 2 Special Status Vegetation (Natural) Community**

Species	Status	Habitat	Probability
Desert Fan Palm Oasis Woodland	CVMSHCP = <b>Yes</b> F = ND C = S3.2	Not applicable	<b>Absent</b> No palm oasis.

**Table 3 Special Status Insects**

Species	Status	Habitat	Probability
<i>Bombus crotchii</i> <b>Crotch bumble bee</b>	MSHCP: No F: ND C: S1S2	Found from coastal California east to the Sierra-Cascade crest & south into Baja, Mexico. Primarily southwestern California, including Pacific coast, western desert, great valley, & adjacent foothills through most of California. Has also been recorded in southwest Nevada. Inhabits open grassland & scrub habitats. Primarily nests underground. Food plant genera include, but are not limited to: <i>Antirrhinum</i> , <i>Phacelia</i> , <i>Clarkia</i> , <i>Dendromecon</i> , <i>Eschscholzia</i> , and <i>Eriogonum</i> .	<b>Low</b> Habitat marginal
<i>Dinacoma caseyi</i> <b>Casey's June beetle</b>	CVMSHCP = No F = <b>END</b> C = S1	Found only in two populations in a small area of southern Palm Springs (Palm Canyon Wash).	<b>Absent</b> Site not in range of the species.
<i>Macrobaenetes valgum</i> <b>Coachella giant sand treader cricket</b>	CVMSHCP = <b>Yes</b> F = ND C = S1S2	Active sand dune hummocks & ridges. Sites most favorable include spring-moistened sands.	<b>Moderate</b> Habitat suitable, site is in modeled habitat for the species. Adjacency to golf course and residences provides residual soil moisture, evidenced by plants associated with moisture growing at site margins.

**Table 3 Special Status Insects**

Species	Status	Habitat	Probability
<i>Oliarces clara</i> <b>cheeseweed owlfly</b> (cheeseweed moth lacewing)	CVMSHCP = No F = ND C = S2	Inhabits the lower Colorado River drainage and associated areas. Found under rocks or in flight over streams. <i>Larrea tridentata</i> is the suspected larval host.	<b>Low/Unknown</b> No streams in vicinity, but larval host plant is present. Species natural history is poorly known.
<i>Stenopelmatus cahuilensis</i> <b>Coachella Valley Jerusalem cricket</b>	CVMSHCP = <b>Yes</b> F: ND C: S1S2	Sand dune and sand field habitats, in the vicinity of the north base of the San Jacinto Mountains	<b>Low</b> Habitat suitable, but site is at or beyond the edge of the species range.

**Table 4 Special Status Fish**

Species	Status	Habitat	Probability
<i>Cyprinodon macularius</i> <b>desert pupfish</b>	CVMSHCP = <b>Yes</b> F = <b>END</b> C = <b>END</b> , S1	Desert ponds, springs, marshes and streams.	<b>Absent</b> Habitat unsuitable (no water).

**Table 5 Special Status Reptiles**

Species	Status	Habitat	Probability
<i>Phrynosoma mcallii</i> <b>flat-tailed horned lizard</b>	CVMSHCP = <b>Yes</b> F = ND C = SSC, S2	Restricted to desert washes and desert flats; requires vegetative cover, ants, and fine sand.	<b>Low</b> Habitat suitable and in modeled habitat for the species. CVMSHCP surveys, however, have found the species to be extirpated over most of its former range in the Coachella Valley. Unlikely to have survived at this isolated location.
<i>Uma inornata</i> <b>Coachella Valley fringe-toed lizard</b>	CVMSHCP = <b>Yes</b> F = <b>THR</b> C = <b>END</b> , S1	Requires fine, loose, windblown sand interspersed with hardpan and widely spaced desert shrubs.	<b>Low</b> Habitat suitable and in modeled habitat for the species. Unlikely to have survived at this isolated location, however.



**Table 6 Special Status Birds**

<b>Species</b>	<b>Status</b>	<b>Habitat</b>	<b>Probability</b>
<i>Athene cunicularia</i> <b>burrowing owl</b>	CVMSHCP = <b>Yes*</b> F = MBTA, BCC C = SSC, S2	Open, dry annual or perennial grassland, deserts & scrublands characterized by low-growing vegetation. Burrows essential.	<b>Low</b> Habitat suitable, but limited burrow opportunities.
<i>Calypte costae</i> <b>Costa's hummingbird</b>	CVMSHCP = No F = MBTA, BCC C = S4	Primary habitats are desert wash, edges of desert riparian and valley foothill riparian, coastal scrub, desert scrub, desert succulent shrub, lower-elevation chaparral, and palm oasis.	<b>Occurs</b> Nesting and foraging habitat onsite.
<i>Empidonax traillii extimus</i> <b>southwestern willow flycatcher</b>	CVMSHCP: <b>Yes*</b> F: <b>END</b> , MBTA C: <b>END</b> , S1	Breeds in dense riparian areas.	<b>Absent (nesting)</b> Habitat unsuitable <b>Moderate (migration)</b> Occurs in many habitats.
<i>Falco mexicanus</i> <b>prairie falcon</b>	CVMSHCP = No F = MBTA, BCC C = SSC, S3	Breeding sites located on cliffs, but forages far afield.	<b>Low</b> No nesting habitat, potential for foraging only.
<i>Lanius ludovicianus</i> <b>loggerhead shrike</b>	CVMSHCP = No F = MBTA, BCC C = SSC, S4	Found in open habitats with widely spaced vegetation.	<b>Moderate</b> Nesting and foraging habitat onsite.
<i>Polioptila melanura</i> <b>black-tailed gnatcatcher</b>	CVMSHCP = No F = MBTA C = WL, S3S4	Primarily inhabits wooded desert wash habitats; also occurs in desert scrub habitat, especially in winter.	<b>Moderate</b> Nesting and foraging habitat present.
<i>Pyrocephalus rubinus</i> <b>vermilion flycatcher</b>	CVMSHCP = No F = MBTA C = SSC (nesting), S2S3	During nesting, inhabits desert riparian adjacent to irrigated fields, irrigation ditches, pastures, & other open, mesic areas with nest in cottonwood, willow, mesquite, or other large desert riparian trees.	<b>High</b> Nesting, foraging habitat at west margin of site.
<i>Toxostoma crissale</i> <b>crissal thrasher</b>	CVMSHCP = <b>Yes*</b> F = MBTA C = SSC, S3	Resident of deserts in riparian and wash habitats. Nests in dense vegetation.	<b>Absent</b> No suitable habitat.
<i>Toxostoma lecontei</i> <b>LeConte's thrasher</b>	CVMSHCP = <b>Yes*</b> F = MBTA, BCC C = SSC (San Joaquin population only), S3	Primarily utilizes open desert washes, desert scrub, alkali desert scrub, and desert succulent scrub habitats; commonly nests in a dense, spiny shrub or densely branched cactus.	<b>Low</b> Habitat marginal, but site is in CVMSHCP modeled habitat. Very unlikely to have persisted on this isolated site.

\* Species is to be conserved under the CVMSHCP, but is still protected by the MBTA

**Table 7 Special Status Mammals**

<b>Species</b>	<b>Status</b>	<b>Habitat</b>	<b>Probability</b>
<i>Chaetodipus fallax pallidus</i> <b>pallid San Diego pocket mouse</b>	CVMSHCP = No F = ND C = SSC, S3S4	Desert border areas mainly in east San Diego Co. in desert wash, desert scrub, desert succulent scrub, pinyon-juniper, etc.	<b>Low</b> Marginal habitat present. Site likely beyond range of the species.
<i>Dipodomys merriami collinus</i> <b>Earthquake Merriam's (Aguanga) kangaroo rat</b>	CVMSHCP = No F = ND C = S1S2	Known only from San Diego & Riverside Counties. Associated with Riversidean sage scrub, chaparral, & non-native grassland. Needs sandy loam substrates for digging of burrows.	<b>Absent</b> The CNDDDB records near the project are out of range and habitat for this subspecies. Presumably the records are in error and refer to a different subspecies.
<i>Lasiurus xanthinus</i> <b>western yellow bat</b>	CVMSHCP = <b>Yes</b> F = ND C = SSC, S3 WBWG = H	Found in valley foothill riparian, desert riparian & wash, & palm oasis habitats. Forages over water & among trees. Roosts in trees, particularly palms.	<b>Low</b> No suitable palms onsite but could forage and potentially utilize trees onsite and on site margins for roosting.
<i>Neotoma lepida intermedia</i> <b>San Diego desert woodrat</b>	CVMSHCP = No F: ND C: SSC, S3S4	Coastal scrub of southern California, moderate to dense canopies preferred. They are particularly abundant in rock outcrops, rocky cliffs, and slopes.	<b>Absent</b> No suitable habitat
<i>Ovis canadensis nelsoni</i> pop. 2 <b>Peninsular bighorn sheep DPS</b>	CVMSHCP = <b>Yes</b> F: <b>END</b> C: <b>THR</b> , S1	Desert rocky slopes of the Peninsular Ranges in San Diego, Riverside, and Imperial Counties	<b>Absent</b> No suitable habitat
<i>Perognathus longimembris bangsi</i> <b>Palm Springs pocket mouse</b>	CVMSHCP = <b>Yes</b> F = ND C = SSC, S2	Inhabits flat or gently sloping areas with sparse vegetative cover and packed or sandy soils.	<b>High</b> Habitat suitable, site is in CVMSHCP modeled habitat.
<i>Xerospermophilus tereticaudus chlorus</i> <b>Coachella Valley (Palm Springs) round-tailed ground squirrel</b>	CVMSHCP = <b>Yes</b> F = ND C = SSC, S1S2	Prefers open, flat, grassy areas in fine-textured, sandy soil in desert succulent scrub, desert wash, desert scrub, alkali scrub, & levees.	<b>High</b> Habitat suitable, site is in CVMSHCP modeled habitat.

**Definitions of status designations and occurrence probabilities for Tables 1-6**

**Definitions of occurrence probability:**

**Occurs:** Observed onsite by Wood personnel or recently reported onsite by another reliable source.

**High:** Observed in similar habitat in region by qualified biologists, or habitat onsite 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 onsite is a type occasionally used by the species.

**Low:** Site is within the known range of the species but habitat onsite is rarely used by the species

**Absent:** A focused study failed to detect the species, suitable habitat not present, or site is outside the geographic distribution of the species.

**Unknown:** No focused surveys have been performed in the region, species' distribution and habitat are poorly known.

**CVMSHCP designations**

**Yes: Conserved by the CVMSHCP**

No: Not Specifically Conserved by the CVMSHCP

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

**END: Federally listed, Endangered**

**THR: Federally listed, Threatened**

**CAN: Candidate for Federal listing**

MBTA: Migratory Bird Treaty Act

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

BCC: Birds of Conservation Concern

ND: No designation

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

**END: State listed, Endangered**

**THR: State listed, Threatened**

**CAN: Candidate for State listing**

**RARE: State listed, Rare**

**FP: Fully Protected Species**

**SSC: Species of Special Concern**

**WL: Watch List Species**

**ND: No designation**

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

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

**S1.1** = very threatened

**S1.2** = threatened

**S1.3** = no current threats known

**S2** = Imperiled. 6-20 EO's OR 1,000-3,000 individuals OR 2,000-10,000 acres

**S2.1** = very threatened

**S2.2** = threatened

**S2.3** = no current threats known

**S3** = Vulnerable. 21-80 EO's OR 3,000-10,000 individuals OR 10,000-50,000 acres

**S3.1** = very threatened

**S3.2** = threatened

**S3.3** = no current threats known

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

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

**SH** = All known California sites are historical, not extant

**California Native Plant Society (CNPS) designations:**

Primary Categories

LIST 1A: Plants Presumed Extirpated in California and Either Rare or Extinct Elsewhere

LIST 1B: Plants Rare, Threatened, or Endangered in California and Elsewhere

LIST 2A: Plants Presumed Extirpated in California, But Common Elsewhere

LIST 2B: Plants Rare, Threatened, or Endangered in California, But More Common Elsewhere

LIST 3: Plants About Which More Information is Needed - A Review List

LIST 4: Plants of Limited Distribution - A Watch List

Subdivisions within Categories

0.1: Seriously threatened in California

0.2: Moderately threatened in California

0.3: Not very threatened in California

**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.

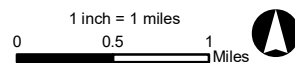
- H:** High: Species which are imperiled or are at high risk of imperilment based on available information on distribution, status, ecology and known threats.
- M:** Medium: Species which warrant a medium level of concern and need closer evaluation, more research, and conservation actions of both the 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.



#### **4.6 CVMSHCP Conservation Areas**

The project site is not within or adjacent to any CVMSHCP conservation areas (Figure 6), so it is not subject to conservation area guidelines. Therefore, there will be no further discussion of CVMSHCP conservation areas.



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-  Project Boundary
-  CVMSHCP Conservation Area

**FIGURE 6**

CVMSHCP Conservation Areas  
Refuge Palm Desert Project  
Riverside County, California



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## **5.0 DISCUSSION**

### **5.1 Special Status Elements Tables**

Of the 43 special status elements identified by the literature review and site visit as occurring, or potentially occurring in the site vicinity (see Tables 1-7 above), 11 were determined to be absent due to a lack of suitable habitat (see probability column).

Of the remaining 32 species which have some occurrence potential, nine are fully covered and conserved through participation in the CVMSHCP: Coachella Valley milk-vetch, Mecca-aster, Coachella giant sand treader cricket, Coachella Valley Jerusalem cricket, flat-tailed horned lizard, Coachella Valley fringe-toed lizard, western yellow bat, Palm Springs pocket mouse, and Coachella Valley (Palm Springs) round-tailed ground squirrel. Since potential impacts to these nine species will be mitigated through participation in the CVMSHCP they will not be discussed further. The remaining 23 species are discussed below.

#### **5.1.1 Plants**

Thirteen special status plant species not covered by the CVMSHCP have potential to occur onsite: chaparral sand-verbena, gravel milk-vetch, pointed dodder, glandular ditaxis, California ditaxis, Abram's spurge, Arizona spurge, flat-seeded spurge, ribbed cryptantha, Torrey's box-thorn, slender cottonheads, narrow-leaved sandpaper plant, and Mecca-aster. None are state or federally listed as endangered or threatened. The site is isolated by development, becoming a small island of habitat. Research has shown that such sites tend to lose biodiversity over time, so even if any of these plant species persist now, they are likely to decline and be lost even if the site were to remain undeveloped. Given this, we do not anticipate the presence of any populations of significance. Since the project site is not within or immediately adjacent to a conservation area, no additional pre-construction surveys are required.

#### **5.1.2 Insects**

Two insects not covered by the CVMSHCP have potential to occur on-site: Crotch bumble bee and cheeseweed owl. Neither is state or federally listed as endangered or threatened. For the reasons outlined in Section 5.1.1, even if present these species would not be expected to persist in the long term. We do not anticipate the presence of any populations of significance. Since the project site is not located within a conservation area and the project site is not likely to contain any long-term beneficial use for these species, no additional surveys are required.

#### **5.1.3 Burrowing Owl**

The burrowing owl is a covered species under the CVMSHCP, but the federal permit for the CVMSHCP does not allow take of this species under the MBTA. This species nests and roosts underground and is thus particularly vulnerable to ground disturbing activities. Marginal habitat is present onsite for the owl, but the isolated nature of the site and limited burrowing opportunities observed make the possibility of occurrence quite low. Nevertheless, to avoid take of the burrowing owl the "CDFW recommends two take avoidance surveys. The first should

occur between 14 and 30 days prior to ground disturbance and the second within 24 hours of ground disturbance” (CDFG 2012, CDFW 2014).

#### **5.1.4 Non-Nesting Special Status Bird Species Potentially Occurring**

Prairie falcon and willow flycatcher (southwestern and other subspecies) could occur onsite as migrants and/or foragers, but no nesting habitat is available. We do not recommend any further action regarding these species.

#### **5.1.5 Special Status Bird Species**

The Costa’s hummingbird, loggerhead shrike, black-tailed gnatcatcher, vermilion flycatcher, and LeConte’s thrasher are all special status species which may nest onsite and in the project area. Costa’s hummingbird was present onsite during the field assessment. Of these five, only the LeConte’s thrasher is covered by the CVMSHCP. Regardless of their status, all are protected from take by the MBTA and state code. Nesting bird surveys for compliance with the MBTA and state code will prevent impacts to these species. This will be discussed further below.

### **5.2 Migratory Bird Treaty Act (MBTA) and State Code**

Virtually all native migratory and resident bird species, including many of the birds already known to occur in the vicinity (Appendix 3) are protected by the MBTA and state code. Avoidance of impacts to nesting migratory and resident birds is a requirement of the federal permit issued for the CVMSHCP. In order to avoid impacting nesting birds, either avoidance of project-related disturbance during the nesting season (generally from approximately 1 February to 31 August) or nesting bird surveys conducted by a qualified ornithologist or biologist immediately prior to site disturbance during the nesting season would be required. If an active nest is detected, a buffer would be established around it and no work would be permitted in that area near the nest until young have fledged. While there is no established protocol for nest avoidance, when consulted, the CDFW generally recommends avoidance buffers of about 500 feet for birds-of-prey and listed species, and 100 – 300 feet for unlisted songbirds. These measures will protect nesting birds, including the potentially occurring special status species.

### **5.3 Special Status Mammals**

Only one special status mammal not covered by the CVMSHCP was identified as being of potential occurrence: pallid San Diego pocket mouse. The possibility of occurrence is low, as the site is likely beyond the edge of this species’ range. Because of that, and for the reasons outlined in Section 5.1.1, even if present this species would not be expected to persist in the long term. We do not anticipate the presence of any population of significance and have no further recommendations.



## **6.0 CONCLUSION**

Implementation of the proposed project would result in permanent impacts to the project site (see Appendix 1) including the biological resources occurring or potentially occurring in the impacted area. Project impacts will be mitigated through participation in the CVMSHCP. CVMSHCP landscaping suggestions are included in Appendices 5 and 6.

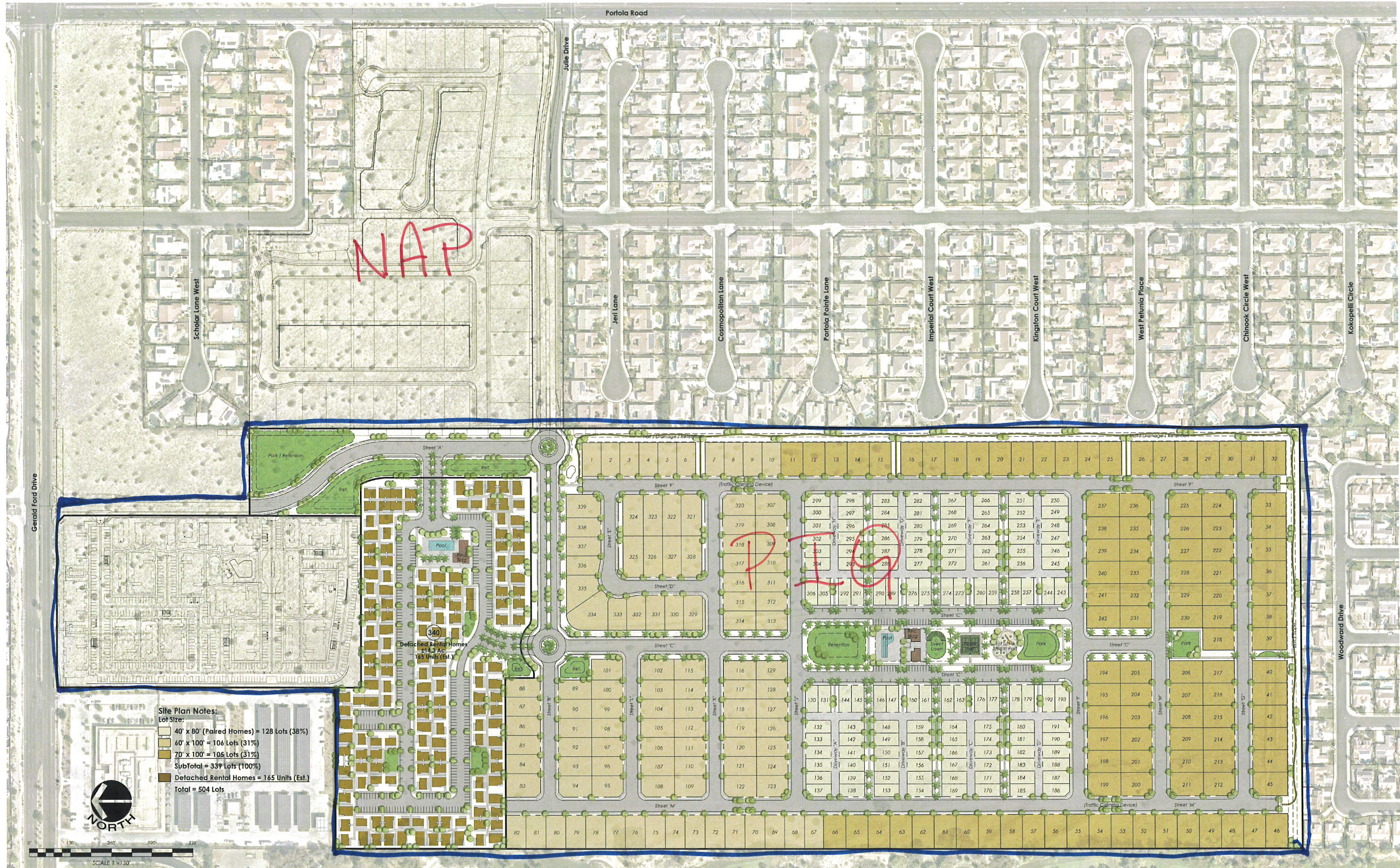
With the implementation of the recommendations in this report, impacts to special-status species potentially occurring in the project area and their habitats would be expected to be less than significant. Recommendations include pre-construction surveys for burrowing owl and MBTA protected nesting birds.

## 7.0 LITERATURE CITED AND REFERENCES

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## **APPENDIX 1**

### **CONDITIONAL USE PERMIT**



**Site Plan Notes:**  
 Lot Size:  
 40' x 80' (Paired Homes) = 128 Lots (38%)  
 60' x 100' = 106 Lots (31%)  
 70' x 100' = 105 Lots (31%)  
 SubTotal = 339 Lots (100%)  
 Detached Rental Homes = 165 Units (Est.)  
 Total = 504 Lots



SCALE 1" = 30'

**CONCEPTUAL SITE PLAN ALT. 3**

AUGUST 10, 2021

Refuge Palm Desert

## **APPENDIX 2**

### **SPECIES LIST: VASCULAR PLANTS**

## **Species List: Vascular Plants**

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This list reports only plants observed onsite by this study. Other species may have been overlooked or undetectable due to their growing season.

† = special status species, \* = non-native species, sp. = identified only to genus, spp. = two or more species, cf = compares favorably with, var. = variety, ssp. = subspecies

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### **DICOTYLEDONEAE**

#### **Asteraceae**

*Ambrosia salsola*  
*Baccharis sergiloides*  
*Dicoria canescens*  
*Geraea canescens*  
*cf. Microseris lindleyi*  
*Palafoxia arida*  
*Pluchea sericea*

#### **Boraginaceae**

*Eremocarya micrantha* var. *micrantha*  
*Johnstonella angustifolia*

#### **Brassicaceae**

\**Brassica tournefortii*

#### **Chenopodiaceae**

*Atriplex canescens*

#### **Ehretiaceae**

*Tiquilia plicata*

#### **Euphorbiaceae**

*Croton californicus*

#### **Fabaceae**

\**Acacia* sp.  
*Psoralea emoryi*

#### **Loasaceae**

*Mentzelia albicaulis*

#### **Nyctaginaceae**

*Abronia villosa*

#### **Onagraceae**

*Chylismia claviformis*

#### **Tamaricaceae**

\**Tamarix aphylla*  
\**Tamarix ramosissima*

### **DICOT FLOWERING PLANTS**

#### **Sunflower Family**

cheesebush  
desert baccharis  
desert twinbugs  
desert-sunflower  
Lindley's silverpuffs (seedlings)  
Spanish-needle  
arrow-weed

#### **Borage Family**

desert red-root  
narrow-leaved Johnstonella

#### **Mustard Family**

Sahara mustard

#### **Goosefoot Family**

four-wing saltbush

#### **Ehretia Family**

fan-leaved tiquilia

#### **Spurge Family**

California croton

#### **Pea Family**

wattle  
dyebush

#### **Loasa Family**

whitestem blazingstar

#### **Four O'Clock Family**

sand verbena

#### **Evening-Primrose Family**

browneyes

#### **Tamarisk Family**

athel  
saltcedar

**Zygophyllaceae**

*Larrea tridentata*

**MONOCOTYLEDONEAE**

**Areaceae**

^*Washingtonia* sp.

**Poaceae**

\**Schismus* sp.

**Caltrop Family**

creosote bush

**MONOCOT FLOWERING PLANTS**

**Palm Family**

fan palm

**Grass Family**

Mediterranean grass

^Fan palms onsite were small and presumed to have sprouted from the seeds of palms planted as landscaping on adjacent developments. They could potentially be native *Washingtonia*, but they are not native at this location.

**APPENDIX 3-**  
**SPECIES LIST: ANIMALS**



## Species List: Animals

---

This list reports only animals observed by this study. Other species may have been overlooked or undetectable due to their activity patterns or weather conditions. [*†*= *special status species*, \* = non-native species, sp. = identified only to genus, spp. = two or more species, cf = compares favorably with]

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### REPTILIA

#### Iguanidae

*Dipsosaurus dorsalis*

#### Phrynosomatidae

*Uta stansburiana*

### AVES

#### Columbidae

*Zenaida macroura*

#### Trochilidae

*†Calypte costae*

#### Cathartidae

*Cathartes aura*

#### Falconidae

*Falco sparverius*

#### Tyrannidae

*Sayornis saya*

#### Corvidae

*Corvus corax*

#### Remizidae

*Auriparus flaviceps*

#### Hirundinidae

*Petrochelidon pyrrhonota*

#### Regulidae

*Corthylio calendula*

#### Poliptilidae

*Poliptila caerulea*

#### Mimidae

*Mimus polyglottos*

### REPTILES

#### Iguanids

desert iguana

#### Spiny Lizards

common side-blotched lizard

### BIRDS

#### Pigeons and Doves

mourning dove

#### Hummingbirds

Costa's hummingbird

#### New World Vultures

turkey vulture

#### Caracaras and Falcons

American kestrel

#### Tyrant Flycatchers

Say's phoebe

#### Crows and Jays

common raven

#### Penduline Tits and Verdins

verdin

#### Swallows

cliff swallow

#### Kinglets

ruby-crowned kinglet

#### Gnatcatchers and Gnatwrens

blue-gray gnatcatcher

#### Mockingbirds and Thrashers

northern mockingbird

**Fringillidae**

*Haemorhous mexicanus*

*Spinus psaltria*

**Parulidae**

*Setophaga coronata*

**MAMMALIA**

**LEPORIDAE**

*Lepus californicus*

**Rodentia**

≥ one species

**Canidae**

*Canis latrans*

**Fringilline & Cardueline Finches and Allies**

house finch

lesser goldfinch

**Wood-Warblers**

yellow-rumped warbler

**MAMMALS**

**Rabbits and Hares**

black-tailed jackrabbit

**Rodents**

burrows, scat, tracks, etc.

**Foxes, Wolves and Relatives**

coyote (scat)

**APPENDIX 4**  
**PHOTOGRAPHIC EXHIBITS**

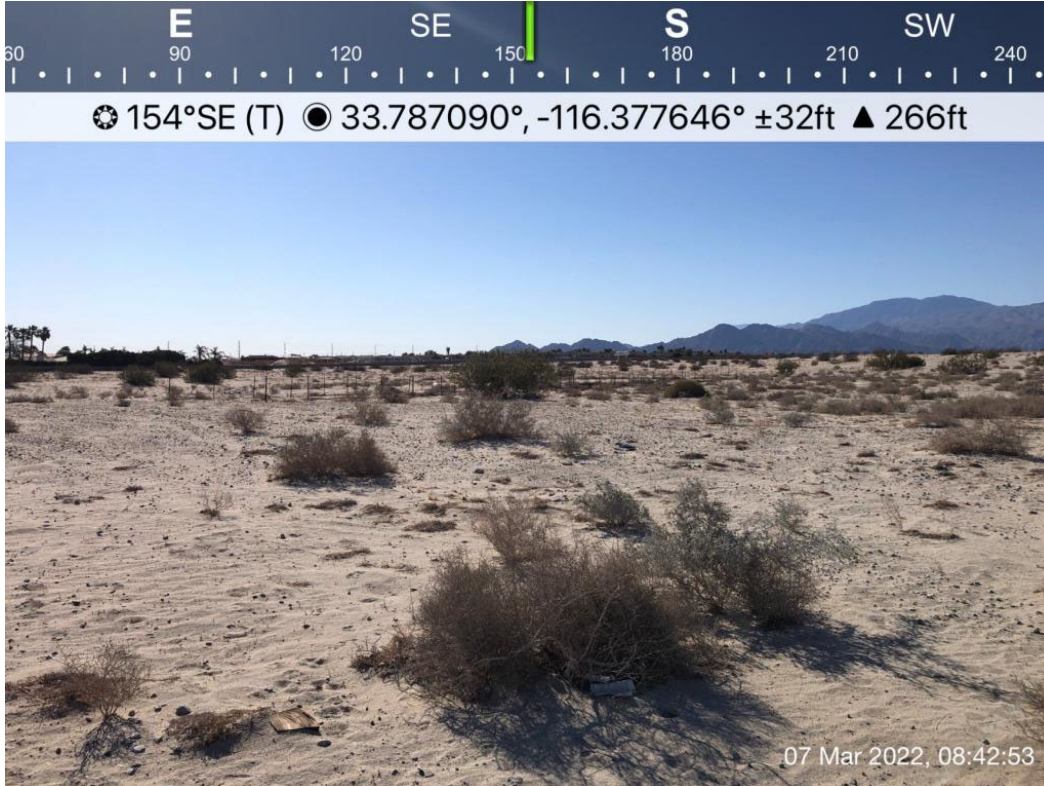


Photo 1. Typical site conditions where minimally impacted by edge effects.



Photo 2. Edge effects (disturbance) along Gerald Ford Drive.



Photo 3. Edge effects along the west site boundary.



Photo 4. Edge effects from golf course landscaping, west site boundary.



Photo 5. Dune / blow-sand from site overtopping the golf course wall on west boundary.



Photo 6. Drift fencing near south site boundary.



Photo 7. Drift fencing extending across much of the site center.



Photo 8. Hummock with dying athel trees at site center.



Photo 9. Extensive onsite impacts from offsite active development, east boundary.



Photo 10. Area adjacent to northeastern site is only undeveloped land remaining on site boundary.



## **APPENDIX 5**

### **COACHELLA VALLEY NATIVE PLANTS RECOMMENDED FOR LANDSCAPING**

## COACHELLA VALLEY NATIVE PLANTS RECOMMENDED FOR LANDSCAPING

Note: Many of the following scientific names have undergone taxonomic changes in recent years. Refer to Jepson Flora Project (2022).

<b>BOTANICAL NAME</b>	<b>COMMON NAME</b>
<b>Trees</b>	
<i>Washingtonia filifera</i>	California fan palm
<i>Cercidium floridum</i>	blue palo verde
<i>Chilopsis linearis</i>	desert willow
<i>Olneya tesota</i>	ironwood tree
<i>Prosopis glandulosa var. torreyana</i>	honey mesquite
<b>Shrubs</b>	
<i>Acacia greggii</i>	cat's claw acacia
<i>Ambrosia dumosa</i>	burro bush
<i>Atriplex canescens</i>	four wing saltbush
<i>Atriplex lentiformis</i>	quailbush
<i>Atriplex polycarpa</i>	cattle spinach
<i>Baccharis sergiloides</i>	squaw water-weed
<i>Bebia juncea</i>	sweet bush
<i>Cassia (Senna) covesii</i>	desert senna
<i>Condalia parryi</i>	crucillo
<i>Crossosoma bigelovii</i>	crossosoma
<i>Dalea emoryi</i>	dye weed
<i>Dalea (Psorothamnus) schottii</i>	indigo bush
<i>Datura meteloides</i>	jimson weed
<i>Encelia farinosa</i>	brittle bush
<i>Ephedra aspera</i>	Mormon tea
<i>Eriogonum fasciculatum</i>	California buckwheat
<i>Eriogonum wrightii membranaceum</i>	Wright's buckwheat
<i>Fagonia laevis</i>	no common name
<i>Gutierrezia sarothrae</i>	matchweed
<i>Haplopappus acradenius</i>	goldenbush
<i>Hibiscus denudatus</i>	desert hibiscus
<i>Hoffmannseggia microphylla</i>	rush pea
<i>Hymenoclea salsola</i>	cheesebush
<i>Hyptis emoryi</i>	desert lavender
<i>Isomeris arborea</i>	bladder pod
<i>Juniperus californica</i>	California juniper
<i>Krameria grayi</i>	ratany
<i>Krameria parvifolia</i>	little-leaved ratany
<i>Larrea tridentata</i>	creosote bush
<i>Lotus rigidus</i>	desert rock pea

<b>BOTANICAL NAME</b>	<b>COMMON NAME</b>
<i>Lycium andersonii</i>	box thorn
<i>Petalonyx linearis</i>	long-leaved sandpaper plant
<i>Petalonyx thurberi</i>	sandpaper plant
<i>Peucephyllum schottii</i>	pygmy cedar
<i>Prunus fremontii</i>	desert apricot
<i>Rhus ovata</i>	sugar-bush
<i>Salazaria mexicana</i>	paper-bag bush
<i>Salvia apiana</i>	white sage
<i>Salvia eremostachya</i>	Santa Rosa sage
<i>Salvia vaseyi</i>	wand sage
<i>Simmondsia chinensis</i>	jojoba
<i>Sphaeralcia ambigua</i>	desert mallow
<i>Sphaeralcia ambigua rosacea</i>	apricot mallow
<i>Trixis californica</i>	trixis
<i>Zauschneria californica</i>	California fuchsia
<b>Groundcovers</b>	
<i>Mirabilis bigelovii</i>	wishbone bush
<i>Mirabilis tenuiloba</i>	white four o'clock
<b>Vines</b>	
<i>Vitis girdiana</i>	desert grape
<b>Accent</b>	
<i>Muhlenbergia rigens</i>	deer grass
<b>Herbaceous Perennials</b>	
<i>Adiantum capillus-veneris</i>	maiden-hair fern (w)
<i>Carex alma</i>	sedge (w)
<i>Dalea parryi</i>	Parry dalea (w)
<i>Eleocharis montevidensis</i>	spike rush (w)
<i>Equisetum laevigatum</i>	horsetail (w)
<i>Juncus bufonis</i>	toad rush (w)
<i>Juncus effuses</i>	juncus (w)
<i>Juncus macrophyllus</i>	juncus (w)
<i>Juncus mexicanus</i>	Mexican rush (w)
<i>Juncus xiphioides</i>	juncus (w)
<i>Notholaena parryi</i>	Parry cloak fern
<i>Pallaea mucronata</i>	bird-foot fern
<b>Cacti and Succulents</b>	
<i>Agave deserti</i>	desert agave
<i>Asclepias albicans</i>	desert milkweed
<i>Asclepias subulata</i>	ajamete

<b>BOTANICAL NAME</b>	<b>COMMON NAME</b>
<i>Dudleya arizonica</i>	live-forever
<i>Dudleya saxosa</i>	rock dudleya
<i>Echinocereus engelmannii</i>	calico hedgehog cactus
<i>Ferocactus acanthodes</i>	barrel cactus
<i>Fouquieria splendens</i>	ocotillo
<i>Mamillaria dioica</i>	nipple cactus
<i>Mamillaria tetrancistra</i>	corkseed cactus
<i>Nolina parryi</i>	Parry nolina
<i>Opuntia acanthocarpa</i>	stag-horn cholla
<i>Opuntia bigelovii</i>	teddy bear or jumping cholla
<i>Opuntia basilaris</i>	beavertail cactus
<i>Opuntia echinocarpa</i>	silver or golden cholla
<i>Opuntia ramosissima</i>	pencil cholla
<i>Yucca schidigera</i>	Mojave yucca, Spanish dagger
<i>Yucca whipplei</i>	our Lord's candle

## **APPENDIX 6**

### **PROHIBITED INVASIVE ORNAMENTAL PLANTS**

## PROHIBITED INVASIVE ORNAMENTAL PLANTS

BOTANICAL NAME	COMMON NAME
<i>Acacia</i> spp. (all species except <i>A. greggii</i> )	acacia (all species except native catclaw acacia)
<i>Arundo donax</i> <sup>1</sup>	giant reed
<i>Atriplex semibaccata</i> <sup>1</sup>	Australian saltbush
<i>Avena barbata</i>	slender wild oat
<i>Avena fatua</i>	wild oat
<i>Brassica tournefortii</i> <sup>2</sup>	African or Saharan mustard
<i>Bromus madritensis</i> ssp. <i>rubens</i> <sup>1</sup>	red brome
<i>Bromus tectorum</i> <sup>2</sup>	cheat grass
<i>Cortaderia jubata</i> [syn. <i>C. atacamensis</i> ]	Jubata crass or Andean pampas grass
<i>Cortaderia dioica</i> [syn. <i>C. selloana</i> ]	pampas grass
<i>Descurainia sophia</i>	tansy mustard
<i>Eichhornia crassipes</i>	water hyacinth
<i>Elaeagnus angustifolia</i>	Russian olive
<i>Foeniculum vulgare</i>	sweet fennel
<i>Hirschfeldia incana</i>	short-pod mustard
<i>Lepidium latifolium</i>	perennial pepperweed
<i>Lolium multiflorum</i>	Italian ryegrass
<i>Nerium oleander</i>	oleander
<i>Nicotiana glauca</i> <sup>1</sup>	tree tobacco
<i>Oenothera berlandieri</i> <sup>3</sup>	Mexican evening primrose
<i>Olea europea</i>	European olive tree
<i>Parkinsonia aculeata</i> <sup>1</sup>	Mexican palo verde
<i>Pennisetum clandestinum</i>	Kikuyu grass
<i>Pennisetum setaceum</i> <sup>2</sup>	fountain grass
<i>Phoenix canariensis</i> <sup>3</sup>	Canary Island date palm
<i>Phoenix dactylifera</i> <sup>3</sup>	date palm
<i>Ricinus communis</i> <sup>1</sup>	castorbean
<i>Salsola tragus</i> <sup>1</sup>	Russian thistle
<i>Schinus molle</i>	Peruvian pepper tree
<i>Schinus terebinthifolius</i>	Brazilian pepper tree
<i>Schismus arabicus</i>	Mediterranean grass
<i>Schismus barbatus</i> <sup>2</sup>	Saharan grass
<i>Stipa capensis</i> <sup>2</sup>	no common name
<i>Tamarix</i> spp. (all species) <sup>2</sup>	tamarisk or salt cedar
<i>Taeniatherum caput-medusae</i>	Medusa-head
<i>Tribulus terrestris</i>	puncturevine
<i>Vinca major</i>	periwinkle
<i>Washingtonia robusta</i>	Mexican fan palm
<i>Yucca gloriosa</i> <sup>3</sup>	Spanish dagger

<sup>1</sup> indicates species known to be invasive in the Plan Area

<sup>2</sup> indicates particularly troublesome invasive species

<sup>3</sup> indicates species not on CalEPPC October 1999 "Exotic Pest Plants of Greatest Ecological Concern"