

# WASTEWATER COLLECTION SYSTEM, PHASES 1 AND 2 RESULTS OF SENSITIVE PLANT SURVEYS



# **CITY OF TWENTYNINE PALMS, SAN BERNARDINO COUNTY, CALIFORNIA**

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# 1.0 INTRODUCTION

Wood Environment & Infrastructure Solutions, Inc. (Wood) was contracted by Terra Nova Planning and Research to conduct a biological resources assessment at the site of Phases 1 and 2 of a proposed wastewater collection system project (project) in Twentynine Palms, San Bernardino County, California. The assessment (Wood 2022) identified twenty special status (sensitive) plant species which are known from the project area and at project elevations. Therefore, focused surveys were conducted for those species. The results of those surveys are presented here.

# 1.1 Project Location and Topography

The project is entirely within the City of Twentynine Palms, San Bernardino County, California (see Figure 1). It is located primarily on the 7.5-minute Twentynine Palms, Calif. United States Geological Survey (USGS) quadrangle extending slightly south into the Queen Mountain, Calif. USGS quadrangle. It is in Township 1 North, Range 9 East, in portions of Sections 15, 16, 20-22, 27-29, 32 and 33 (see Figure 2). Project topography is roughly level overall, with some low hills in the southwestern area. Elevations range from approximately 1,795 feet (547 meters) in the northeast to 2,140 feet (652 meters) in the southwest. The land within the study area generally slopes from the southwest to the northeast (NV5 2022).

## 1.2 **Project Description**

Phase 1 includes:

- Trunk sewers for Phase 1.
- Collector sewers for Phase 1.
- Two existing package treatment plants for the Turtle Rock and Desert Knoll Developments.
- The two large dense military housing developments on Two Mile Road and Joe Davis Drive.
- The residential area northeast of the Adobe Road Two Mile Road intersection.
- The commercial area on Adobe Road and Amboy Road north of Samarkand Drive.

Phase 2 includes:

- Trunk sewers for Phase 2.
- Collector sewers for Phase 2.
- Two planned package treatment plants for project Phoenix and the Wander Hotel.

• The dense downtown area east of Donnell Hill. This area has a balanced mix of both residential and commercial land use.

See Figure 3 for a project overview.





Regional Vicinity Twentynine Palms Wastewater Collection System Phases 1 and 2 Sensitive Plant Surveys Twentynine Palms, CA

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Proposed Trunk Sewer
Proposed Collector Sewer
Project Area

FIGURE 3 Project Overview Twentynine Palms Sanitation Sewer Trunk Line Project Sensitive Plant Surveys Twentynine Palms, CA

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# 2.0 **REGULATORY FRAMEWORK**

# 2.1 Federal

*National Environmental Policy Act* (NEPA) – Portions of the proposed project could fall under the jurisdiction of a federal agency (i.e., U.S. Army Corps of Engineers). The 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."

# 2.2 State of California

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

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

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

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

The CEQA applies to "projects" proposed to be undertaken or requiring approval by State and/or local governmental agencies. projects are activities which have the potential to have a physical

impact on the environment and may include the enactment of zoning ordinances, the issuance of conditional use permits and the approval of tentative subdivision maps. Where a project requires approvals from more than one public agency, the CEQA requires one of these public agencies to serve as the "lead agency."

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

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

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

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

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

# 3.0 METHODS

# 3.1 Literature Review and Records Search

A literature review and record search were conducted to identify occurrences of special status biological resources in the project vicinity. The review included:

- A report from the CDFW's California Natural Diversity Data Base (CNDDB) for a five-mile radius of the project site (CDFW 2022),
- The California Native Plant Society (CNPS) including records from the following California USGS 7.5-minute topographic quadrangles within five miles of the project: 29 Palms, Queen Mountain, Sunfair, Indian Cove, 29 Palms Mountain, and Valley Mountain (CNPS 2022),
- Pertinent documents from the Wood library and project files (*e.g.*, other biological surveys from the general vicinity).

# 3.2 Sensitive Plant Surveys

Field reconnaissance surveys were conducted by Wood Senior Biologist John F. Green on 22 and 28 March 2022 to evaluate the suitability of existing habitat onsite to support special status biological resources. The areas identified as being suitable for the detection of rare plants were then surveyed by a team of Wood biologists from 5 through 12 April 2022 and from 13 through 15 June 2022. Wood PhD botanist Timothy Chumley led the effort and was in the field on all survey days. Other Wood biologists conducting focused surveys during that time period included John F. Green, Nathan Moorhatch, Michael Wilcox, Alec Williams, Phil Clevinger, Lauryn Duoto, Emily Urquidi, Kevin Salgado, and Melanie Bukovac. Survey methodology was guided by CDFW (2018), CNPS (2001), and USFWS (2000). All plant species observations were recorded in field notes and special status species locations were recorded using Global Positioning System (GPS) technology. Representative photos were taken (see cover page).

# 4.0 **RESULTS**

## 4.1 Literature Review

The results of the literature review and focused surveys are presented in Table 1.

Table 1. Special Status Plants & Vegetation Which Occur or Potentially Occur in the Vicinity of the Proposed Project						
Scientific	Common Name	Status <sup>1</sup>			Habitat (for plants includes	Occurrence Probability <sup>2</sup>
Name		Federal	State	CRPR	blooming period)	
Ayenia compacta	California ayenia	None	S3	2B.3	Mojavean & Sonoran desert scrub, rocky. 150 - 1095 meters (m). Blooms (B): March - April.	Absent Not found during any survey.
Calochortus striatus	alkali mariposa- lily	None	S2S3	1B.2	Chaparral, chenopod scrub, meadows and seeps, Mojavean desert scrub, alkaline, mesic.70 – 1595 m. B: April – June.	Absent CNDDB records on project site, but not found during any survey.
Coryphantha alversonii	Alverson's foxtail cactus	None	S3	4.3	Mojavean and Sonoran desert scrub, usually in granitic areas, sometimes rocky or sandy. 75 – 1525 m. B: April – June (September -October).	Occurs Found during April and June focused surveys.
Eschscholzia androuxii	Joshua tree poppy	None	S3	4.3	Joshua tree "woodland", Mojavean desert scrub on flats, gravelly, rocky, sandy, slopes, washes. 585 – 1685 m. B: February -May (June).	Absent Not found during any survey.
Funastrum utahense	Utah vine milkweed	None	54	4.2	Mojavean and Sonoran desert scrub, sometimes in gravelly or sandy. 100 - 1435 m. B: (March) April - June (September - October).	Occurs Found during April and June focused surveys.
Galium angustifolium ssp. gracillimum	slender bedstraw	None	S4	4.2	Joshua tree "woodland" and Sonoran desert scrub in granitic or rocky places. 130 - 1550 m. B: April -June (July).	Absent Not found during any survey.

	1	Status <sup>1</sup>			Habitat (for plants includes	
Scientific Name	Common Name	Federal	State	CRPR	elevational range in meters &	Occurrence Probability <sup>2</sup>
Grusonia parishii	Parish's club- cholla	None	S2	282	Mojavean and Sonoran desert scrub, Joshua tree "woodland" in sandy or rocky locations. 300- 1524m. B: May-July.	Absent Not found during any survey.
Jaffueliobryum raui	Rau's jaffueliobryum moss	None	S2	2B.3	Alpine dwarf scrub, chaparral, & Mojavean and Sonoran desert scrub. Known from dry places, carbonate, openings, and rock crevices. 490 - 2100 m.	Absent Not found during any survey.
Jaffueliobryum wrightii	Wright's jaffueliobryum moss	None	S2S3	2B.3	Chaparral, Mojavean & Sonoran desert scrub, alpine dwarf scrub. Openings: dry places, rock crevices, carbonate. 160-2500 m.	Absent Not found during any survey.
Lasthenia glabrata ssp. coulteri	Coulter's goldfields	None	S2	1B.1	Marshes and swamps, playas, vernal pools. 1 - 1220 m. B: February - June.	Absent CNDDB records on project site, but not found during any survey.
Linanthus maculatus ssp. maculatus	Little San Bernardino Mountains linanthus	None	S2	1B.2	Desert dunes, Sonoran and Mojavean desert scrub, Joshua tree "woodland." Sandy places. Usually in light-colored quartz sand; often in wash or bajada. 140 – 1220 m. B: March-May	Absent Not found during any survey.
Matelea parvifolia	spear-leaf matelea	None	S3	2B.3	Rocky places in Mojavean and Sonoran desert scrub. 440 - 1095 m. B: March -May (July).	Absent Not found during any survey.
Monardella robisonii	Robison's monardella	None	S3	1B.3	Pinyon-juniper woodland. 610 - 1500 m., B: (February) April – September (October).	Absent. No suitable habitat.
Muhlenbergia appressa	appressed muhly	None	S3	2B.2	Coastal scrub, Mojavean desert scrub, valley and foothill grassland in rocky places. 20 - 1600 m. B: April - May.	Absent Not found during any survey.

Table 1. Special Status Plants & Vegetation Which Occur or Potentially Occur in the Vicinity of the Proposed Project						
Scientific Name	Common Name	Status <sup>1</sup>			Habitat (for plants includes	Occurrence Probability <sup>2</sup>
		Federal	State	CRPR	blooming period)	
Penstemon thurberi	Thurber's beardtongue	None	S3	4.2	Chaparral, Joshua tree "woodland", Sonoran desert scrub, pinyon-juniper woodland. 500 - 1220 m. B: May-July.	Absent Not found during any survey.
Saltugilia latimeri	Latimer's woodland-gilia	None	S3	1B.2	Chaparral, Mojavean desert scrub, pinyon-juniper woodland. 400-1900m. B: March-June	Absent Not found during any survey.
Sidalcea neomexicana	salt spring checkerbloom	None	S2	2B.2	Chaparral, coastal scrub, lower montane coniferous forest, Mojavean desert scrub, playas. 15 - 1530 m. B: March - June.	Absent CNDDB records on project site, but not found during any survey.
Tetracoccus hallii	Hall's tetracoccus	None	S4	4.3	Mojavean and Sonoran desert scrub. 30 - 1200 m. B: January - May.	Absent Not found during any survey.
Wislizenia refracta ssp. refracta	jackass-clover	None	S1	2B.2	Desert dunes, playas, Mojavean and Sonoran desert scrub. 600 - 800 m. B: April - November.	Absent Not found during any survey.
Yucca brevifolia	western Joshua tree	None	SCT	None	Mojavean desert scrub, Joshua tree "woodland."	Absent Not found during any survey.

1Status Codes:         Federal         FE = Federal Endangered         FT = Federal Threatened         FC = Federal Candidate         State         SE = State Endangered         ST = State Threatened         SCT=State Candidate         FP = Fully Protected         The California Natural Diversity         Database program is a member         of the NatureServe Network of         natural heritage programs, &         uses the same conservation         status methodology as other         network programs.         Elements are ranked using         standard criteria & definitions.         This standardization makes the         ranks comparable between         organisms & across political         boundaries.	• Overall threat impact as well as intrinsic vulnerability (if threats are unknown). • Long-term & short-term trends. S1 = Critically Imperiled - At very high risk of extirpation in the state due to very restricted range, very few populations or occurrences, very steep declines, severe threats, or other factors S2 = Imperiled - At high risk of extirpation in the state due to restricted range, few populations or occurrences, steep declines, severe threats, or other factors. S3 = Vulnerable - At moderate risk of extirpation in the state due to a fairly restricted range, relatively few populations or occurrences, recent & widespread declines, threats, or other factors. S4 = Apparently Secure - At a fairly low risk of extirpation in the state due to an extensive range &/or many populations or occurrences, but with possible cause for some concern as a result of local recent declines, threats, or other factors. S5 = Secure - At very low or no risk of extirpation in the	<ul> <li>state due to a very extensive range, abundant populations or occurrences, &amp; little to no concern from declines or threats.</li> <li><i>SX</i> = Presumed Extirpated – Species is believed to be extirpated from the state Not located despite intensive searches of historical sites &amp; other appropriate habitat, &amp; virtually no likelihood that it will be rediscovered</li> <li><i>SH</i> = Possibly Extirpated – Known from only historical records but still some hope of rediscovery. There is evidence that the species may no longer be present in the state, but not enough to state this with certainty.</li> <li><i>SNR</i> = Unranked – State rank not yet assessed.</li> <li><u>California Rare Plant Rank (CRPR)</u></li> <li>1A = Presumed extirpated in California &amp; either rare or extinct elsewhere</li> <li>1B = Rare or Endangered in California, but more common elsewhere</li> <li>2B = Rare or Endangered in California, more common elsewhere</li> <li>3 = Plants for which we need more information – Review list</li> <li>4 = Plants of limited distribution – Watch list</li> <li><b>2Occurrence Probability</b></li> <li><i>Occurs</i> = Observed on the site by Wood personnel or recorded there by other qualified biologists.</li> </ul>
<ul> <li>The three main categories that are taken into consideration when assigning an element rank are rarity, threats, &amp; trends.</li> <li>Within these three categories, various factors are considered, including:</li> <li>Range extent, area of occupancy, population size, total number of occurrences, &amp; number of good occurrences (ranked A or B). Environmental specificity can also be used if other information is lacking.</li> </ul>		<ul> <li>High = Observed in similar habitat in region by qualified biologists, or habitat on the site is a type often utilized by the species &amp; the site is within the known range of the species.</li> <li>Moderate = Reported sightings in surrounding region, or site is within the known range of the species &amp; habitat on the site is a type occasionally used by the species.</li> <li>Low = Site is within the known range of the species but habitat on the site is rarely used by the species.</li> <li>Absent = A focused study failed to detect the species, or no suitable habitat is present.</li> <li>Unknown = Distribution &amp; habitat use has not been clearly determined.</li> </ul>

# 4.2 Field Visits

Weather conditions during the focused surveys were favorable for the detection of plant species. All plant species detected (excluding obvious horticultural plantings) are included in Appendix A. Two sensitive plant species were detected: Alverson's foxtail cactus and Utah vine milkweed (see Figure 4 and the photographs on the cover page).











# FIGURE 4a

Sensitive Plant Detections Twentynine Palms Wastewater Collection System, Phases 1 & 2 Twentynine Palms, CA









Service Layer Credits: Esri, HERE, Garmin, (c) OpenStreetMap contributors Source: Esri, Maxar, Earthstar Geographics, and the GIS User



Path: \\sdg1-fs1\GIS\3554\_NaturalResources\TerraNova\_29Palms\_SewerLine\_322520122\MXD\ReportFigures\RarePlants\Fig4\_VegetationCommunities\_Series.mxd, amanda.schwab, 7/20/2022



Service Layer Credits: Esri, HERE, Garmin, (c) OpenStreetMap contributors Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

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# 5.0 DISCUSSION

Twenty special status plant species are known from project area habitats and elevations. Two do not occur: the Joshua tree (not detected by focused surveys) and Robison's monardella (no suitable habitat). Two were detected by focused surveys: Alverson's foxtail cactus and Utah vine milkweed. The remaining 16 species were not found by the focused surveys. We have marked them absent based on the focused survey results, however it is a drought year, and it is possible that some of these species failed to germinate and/or bloom at all this year.

Although the two sensitive plant species known to occur on site are not state or federally listed as threatened or endangered, impacts could be considered significant under the CEQA. Alverson's foxtail cactus and Utah vine milkweed should be avoided. A worker's environmental awareness program (WEAP) should be implemented to educate the construction crew of the special status plant species present on the project site. Biological monitoring should be conducted near their populations. If unavoidable, these plant species should be transplanted and/or have seeds and/or the topsoil around the plants (which contains the seed bank) collected with guidance from the CDFW. If additional special status plants are detected in the future due to a more favorable rainfall year, these same recommendations would apply.

# 6.0 **REFERENCES**

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# Appendix A Plant Species Detected

### **Plant Species Detected**

#### **GNETAE (GNETOPHYTA)**

**Ephedraceae** *Ephedra californica* 

# **EUDICOTS (EUDICOTIDAE)**

#### Amaranthaceae

Amaranthus blitoides Tidestromia suffruticosa var. oblongifolia

#### Apocynaceae

Asclepias erosa Asclepias subulata \*\*Funastrum utahense

#### Asteraceae

Ambrosia acanthicarpa Ambrosia dumosa Ambrosia salsola Baileya multiradiata Bebbia juncea var. aspera Chaenactis fremontii Chaenactis stevioides Dicoria canescens Encelia farinosa Encelia frutescens Geraea canescens Isocoma acradenia \*Lactuca serriola Laennecia coulteri Malacothrix glabrata Palafoxia arida Rafinesquia neomexicana \*Sonchus asper ssp. asper Stephanomeria pauciflora

#### Bignoniaceae

Chilopsis linearis ssp. arcuata

#### Boraginaceae

Amsinckia tessellata Cryptantha dumetorum Greeneocharis circumscissa Johnstonella angustifolia Pectocarya platycarpa Pectocarya recurvata Ephedra Family desert tea

Amaranth Family procumbent pigweed honeysweet

#### Dogbane and Milkweed Family

desert milkweed rush milkweed Utah vine milkweed

#### **Sunflower Family**

annual bur-sage white bur-sage cheesebush desert marigold sweetbush Fremont pincushion desert pincushion desert twinbugs brittlebush button brittlebush desert-sunflower alkali goldenbush prickly lettuce Coulter's horseweed desert dandelion Spanish-needle desert chicory prickly sow thistle wire-lettuce

# Trumpet-Creeper Family

desert willow

#### **Borage Family**

bristly fiddleneck scrambling cryptantha cushion cryptantha narrow-leaved Johnstonella wide-toothed pectocarya arched-nut pectocarya

#### Brassicaceae

\*Brassica tournefortii Lepidium densiflorum Lepidium fremontii \*Sisymbrium irio \*Sisymbrium orientale Streptanthella longirostris

#### Cactaceae

\*\*Coryphantha alversonii Cylindropuntia bigelovii Cylindropuntia echinocarpa \*Cylindropuntia fulgida Cylindropuntia ramosissima Echinocereus engelmannii Ferocactus cylindraceus Opuntia basilaris

# Caryophyllaceae

Achyronychia cooperi

# Chenopodiaceae

Atriplex canescens Atriplex polycarpa \*Chenopodium murale \*Salsola tragus Suaeda nigra

#### Cleomaceae

Peritoma arborea

# **Cucurbitaceae** *Cucurbita palmata*

**Ehretiaceae** *Tiquilia plicata* 

### Euphorbiaceae

Croton californicus \*Euphorbia maculata Euphorbia polycarpa

#### **Mustard Family**

Sahara mustard common pepperweed desert pepperweed London rocket Indian hedgemustard longbeak streptanthella

#### **Cactus Family**

(Alverson's) foxtail cactus teddy-bear cholla golden/silver cholla jumping cholla pencil cactus Engelmann's hedgehog cactus California barrel cactus beavertail pricklypear

# Pink Family

frost-mat

# **Goosefoot Family**

four-wing saltbush allscale saltbush nettleleaf goosefoot Russian thistle bush seepweed

#### Spiderflower Family bladderpod

Gourd and Melon Family

coyote melon

Ehretia Family fan-leaved tiquilia

#### **Spurge Family**

California croton spotted spurge smallseed sandmat

#### Fabaceae

Caesalpinia gilliesii Dalea mollissima \*Parkinsonia aculeata Parkinsonia florida Prosopis glandulosa var. torreyana Psorothamnus spinosus Senegalia greggii Senna armata

Geraniaceae \*Erodium cicutarium

**Hydrophyllaceae** Phacelia crenulata Phacelia cf. tanacetifolia

Krameriaceae Krameria bicolor

Lamiaceae Condea emoryi Salvia columbariae Scutellaria mexicana

Loasaceae Mentzelia albicaulis

Malvaceae Eremalche exilis

> \*Malva parviflora Sphaeralcea ambigua

Nyctaginaceae Abronia villosa var. villosa Allionia incarnata Boerhavia coccinea

Onagraceae Chylismia claviformis Eremothera boothii ssp. desertorum Oenothera deltoides

**Orobanchaceae** Aphyllon cooperi

Papaveraceae Eschscholzia minutiflora Legume Family

bird-of-paradise soft prairie clover Mexican palo verde blue palo verde honey mesquite smoke tree catclaw spiny senna

Geranium Family redstem filaree

Waterleaf Family cleftleaf wildheliotrope lacy phacelia

Rhatany Family white rhatany

Mint Family desert lavender chia bladder-sage

Loasa Family whitestem blazingstar

Mallow Family white mallow cheeseweed desert globemallow

Four-o'clock Family desert sand verbena trailing windmills scarlet spiderling

Evening-Primrose Family browneyes desert suncup Devil's lantern

Broom-Rape Family desert broomrape

Poppy Family pygmy poppy

**Polygonaceae** Chorizanthe brevicornu Chorizanthe rigida

Eriogonum deflexum Eriogonum inflatum Eriogonum reniforme Eriogonum thomasii

**Rosaceae** Petalonyx thurberi

Simmondsiaceae Simmondsia chinensis

## Solanaceae

Datura wrightii \*Nicotiana glauca Lycium cooperi

# Tamaricaceae

\*Tamarix aphylla \*Tamarix ramosissima

Viscaceae Phoradendron californicum

**Zygophyllaceae** Larrea tridentata

# MONOCOTS (MONOCOTYLEDONAE) Arecaceae

*^Washingtonia* sp.

Agavaceae Yucca schidigera

## Poaceae

Aristida purpurea \*Bromus rubens \*Cynodon dactylon Dasyochloa pulchella Festuca octoflora Hilaria rigida \*Hordeum murinum \*Pennisetum setaceum \*Schismus sp.

**Buckwheat Family** brittle spineflower Devil's spineflower skeleton weed desert trumpet kidney-leaf wild buckwheat Thomas' wild buckwheat Loasa Family sandpaper-plant **Jojoba Family** jojoba **Nightshade Family** sacred thorn-apple tree tobacco peach thorn **Tamarisk Family** athel saltcedar **Mistletoe Family** desert mistletoe **Caltrop Family** creosote bush **Palm Family** fan palm **Century Plant Family** Mojave yucca **Grass Family** purple three-awn red brome Bermuda grass low woollygrass

sixweeks grass big galleta wall barley crimson fountain grass Mediterranean grass

<sup>^</sup>Fan palms onsite were seedlings and presumed to have sprouted from the seeds of palms planted as landscaping on surrounding developments. They could potentially be *Washingtonia* native to California, but they are not native at this location.

# <u>KEY</u>

- \* = non-native species
- \*\* = special-status species
- cf. = compares favorably with
- sp. = plant identified to genus only

This list reports only plants observed on the site by this study. Other species may have been overlooked or undetectable due to their growing season. Plants were identified from keys, descriptions and drawings in the Jepson Flora Project (2022). Plant nomenclature and systematics follows the Jepson Flora Project and/or United States Department of Agriculture, Natural Resources Conservation Service (2022).