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July 24, 2019

Cheryl A. Tubbs  
Lilburn Corporation  
1905 Business Center Drive  
San Bernardino, CA 92408

RE: Biological Resources Assessment and Jurisdictional Delineation  
Ocotillo Borrow Pit -Unincorporated Area of San Bernardino County, California  
USGS –Apple Valley South Quadrangle, north ½ of Section 24 of Township 4 North, Range 3 West.

Dear Ms. Tubbs,

On behalf of Lilburn Corporation, Jericho Systems, Inc. (Jericho) conducted a general biological resources assessment (BRA), habitat suitability assessments, and Jurisdictional Delineation (JD) of existing conditions at property owned by the County of San Bernardino Department of Public Works and referred to as the Ocotillo Borrow Pit Project (Proposed project). The Project site is located approximately 3.25 miles south of Highway 18, 4.3 miles east of the Mojave River and is bordered by Ocotillo Way to the north, Japatul Road to the east, vacant land to the south and Valley Vista Avenue to the west (Figures 1 and 2). The Project site can be found on the *Apple Valley South* U.S. Geological Survey (USGS) 7.5-minute series quadrangle within the north ½ of Section 24 of Township 4 North, Range 3 West.

This report is designed to address potential effects of the proposed Project to designated Critical Habitats and/or any species currently listed or formally proposed for listing as endangered or threatened under the federal Endangered Species Act (ESA) and the California Endangered Species Act (CESA), or species designated as sensitive by the California Department of Fish and Wildlife (CDFW), or the California Native Plant Society (CNPS).

Attention was focused on sensitive species known to occur locally including the State- and federally-listed as threatened desert tortoise (*Gopherus agassizii*) [DT] and the State-listed as threatened Mohave ground squirrel (*Xerospermophilus mohavensis*) [MGS] as well as burrowing owl (*Athene cunicularia*) [BUOW] which is a State and federal Species of Special Concern (SSC). This report also addresses resources protected under the Migratory Bird Treaty Act; federal Clean Water Act (CWA) regulated by the U.S. Army Corps of Engineers (USACE) and Regional Water Quality Control Board (RWQCB) respectively; and Section 1602 of the California Fish and Game Code (FCG) administered by the CDFW.

In addition to the BRA and habitat assessments, Jericho biologists Shay Lawrey, CJ Fotheringham, Christian Nordal and Todd White conducted a JD of the project site. The purpose of the JD is to determine the extent of State and federal jurisdictional waters within the project area potentially subject to regulation by the USACE under Section 404 of the CWA, RWQCB under Section 401 of the CWA and Porter Cologne Water Quality Control Act, and CDFW under Section 1602 of the FGC, respectively.

## ENVIRONMENTAL SETTING

The project site is situated near the northern edge of San Bernardino foothills 5.5 miles southeast of the Town of Apple Valley in the Mojave Desert. The Apple Valley area is subject to both seasonal and annual variations in temperature and precipitation. Average annual maximum temperatures peak at 96.5 degrees Fahrenheit (° F) in July and fall to an average annual minimum temperature of 32.0° F in December and January. Average annual precipitation is greatest from November through March and reaches a peak in February (1.4 inches). Precipitation is lowest in the month of June (0.09 inches). Annual precipitation averages 8.4 inches. The topography of the local landscape is a slight slope to the north. The Project area is relatively flat with steep ~25-foot slopes on the eastern, southern and northern portions of the Project site as a result of historical excavation and removal. Elevation on site ranges from approximately 3,369 feet above mean sea level (amsl) in the southeastern portion of the site, to 3,414 feet amsl in the northwesternmost portion of the site.

Hydrologically, the Project site is located within the upper Mojave watershed and soils on site are solely comprised of Lucerne sandy loam, 2 to 5 percent slopes (Figure 3).

The general project vicinity consists of rural housing, and undeveloped open space. Habitat surrounding the Project site consists primarily of *Yucca brevifolia* woodland alliance (Joshua tree woodland). The Project site itself is largely devoid of vegetation with some native and non-native species colonizing the edges, stockpiles and other unused areas. The southeast corner of the Project site is largely undisturbed, with small patches of moderate disturbed areas along the eastern portion (Figure 4).

## METHODS

As stated above, the objective of this document is to determine whether the Project site supports special status or otherwise sensitive species and/or their habitats, and to address the potential effects associated with the Proposed project on those resources. The species and habitats addressed in this document are based on database information and field investigation.

Prior to conducting the field study, species and habitat information was gathered from the reports related to the specific project and relevant databases for the *Apple Valley South*, *Fifteenmile Valley*, and *Lucerne Valley* USGS quadrangles to determine which species and/or habitats would be expected to occur on site. The Project site is situated in the central western portion of the *Apple Valley South* quad. The site's similar elevation ecology and proximity to the *Fifteenmile Valley* and *Lucerne Valley* to the site lead to their inclusion in the review. These databases contain records of reported occurrences of State- and federally-listed species or otherwise sensitive species and habitats that may occur within the vicinity of the project site. These sources include:

- U.S. Fish and Wildlife (USFWS) threatened and endangered species occurrence GIS overlay;
- USFWS Information for Planning and Consultation System (IPaC);
- California Natural Diversity Database (CNDDB) *Rarefind 5*;
- CNDDB Biogeographic Information and Observation System (BIOS);
- California Native Plant Society Electronic Inventory (CNPSEI) database;
- Calflora Database;
- USDA Natural Resources Conservation Service (NRCS) Web Soil Survey;
- USFWS National Wetland Inventory;
- Environmental Protection Agency (EPA) Water Program "My Waters" data layers
- USFWS Designated Critical Habitat Maps
- Mohave Ground squirrel Range maps

Other available technical information on the biological resources of the area was also reviewed including previous surveys and recent findings.

Jericho biologists Shay Lawrey, CJ Fotheringham, Christian Nordal, and Todd White conducted a biological resources assessment of the project area on April 3, 4 & 18, 2019. Each biologist has advanced degrees in biology and several years of survey experience throughout San Bernardino County and southern California.

The surveyors conducted the systematic and comprehensive surveys during calm weather, between the hours of 6 a.m. and 3 p.m. Weather conditions during the surveys consisted of clear skies to overcast with temperatures ranging from 62 degrees Fahrenheit (° F) to 76° F and light wind <5 mph. The survey area encompassed the entire Project site and included 100 percent coverage of the site with plots spaced  $\geq$  10 meters apart. A surrounding 500-foot buffer area surrounding the site was also surveyed for species diversity and discovery of rare species.

Wildlife species were detected during field surveys by sight, calls, tracks, scat, or other sign. In addition to species observed, expected wildlife usage of the site was determined per known habitat preferences of regional wildlife species and knowledge of their relative distributions in the area. The focus of the faunal species surveys was to identify potential habitat for special status wildlife within the project area. Disturbance characteristics and all animal sign encountered on the site are recorded in the results section of this report.

The site was also evaluated for the presence of jurisdictional waters, i.e. waters of the U.S. as regulated by the USACE and RWQCB, and/or streambed and associated riparian habitat as regulated by the CDFW. Evaluation of potential federal jurisdiction followed the regulations set forth in 33CFR part 328 and the USACE guidance documents and evaluation of potential State jurisdiction followed guidance in the Fish and Game Code and A Review of Stream Processes and Forms in Dryland Watersheds (CDFW, 2010).

## RESULTS

### *Existing Biological and Physical Conditions*

The Project site consists almost entirely of undeveloped open space, occupying mostly flat to gently sloped terrain. The topography of the site is mostly uniform throughout. Joshua Tree woodland dominates undisturbed areas with disturbed areas being either bare or populated by a subset of species that occur nearby. Most of the Project site is disturbed. Disturbances on site are primarily due to the mining and staging operations that have been associated with San Bernardino road projects and include unpaved roads, removal of materials, and material stockpiles (Figure 4).

The habitat on the Project site consists primarily of *Yucca brevifolia* Woodland Alliance (Joshua Tree Woodland). The tree canopy of the community contains only two species and is co-dominated by *Y. brevifolia* and *Y. schiridigera* (Mojave yucca). The shrub canopy is diverse with 21 species with *Ambrosia salsola* (Burrobrush), *Ephedra nevadensis* (Nevada ephedra), *Hesperoyucca whipplei* (Chaparral yucca), and *Salvia dorrii* (Dorr's sage) being the most common. Fifty-one herbaceous species were found, including four non-natives species.

### *Wildlife*

No amphibian species were observed or otherwise detected within the project area and none are expected to occur. The only reptile species observed within the project area was western side-blotched lizard (*Uta*

*stansburiana elegans*), desert spiny lizard (*Sceloporus magister*), Western Whiptail Lizard (*Aspidoscelis tigris*), and Red Racer (*Coluber flagellum piceus*). Other common reptile species expected to occur within the Project area include Panamint rattlesnake (*Crotalus stephensi*), California kingsnake (*Lampropeltis californiae*) and gopher snake (*Pituophis catenifer deserticola*). Avian species observed in the project area include greater roadrunner, red-tailed hawk, American kestrel, prairie falcon, turkey vulture, common raven, and rock wren. Identification of mammals within the project area was generally determined by physical evidence rather than direct visual identification. This is because 1) many of the mammal species that potentially occur onsite are nocturnal and would not have been active during the survey and 2) no mammal trapping was performed. The only mammal species observed was black-tailed jackrabbit (*Lepus californicus*). Other common species expected to occur within the project area include coyote (*Canis latrans*), Merriams' kangaroo rat (*Dipodomys merriami*), and desert cottontail (*Sylvilagus audubonii*).

### *Special Status Species and Habitats*

According to the database queries, 38 sensitive species (23 plants and 15 animals) have been documented in the *Apple Valley South*, *Fifteenmile Valley*, *Lucerne Valley*, and *Hesperia* USGS 7.5-minute series quadrangles. This list of sensitive species includes any State- and/or federally-listed threatened or endangered species, CDFW designated Species of Special Concern (SSC), and otherwise Special Animals. "Special Animals" is a general term that refers to all the taxa the CNDDDB is interested in tracking, regardless of their legal or protection status. This list is also referred to as the list of "species at risk" or "special status species." The CDFW considers the taxa on this list to be those of greatest conservation need.

Table 1, located at the end of this document, represents a compiled list of results from the IPaC, CNDDDB and CNPSEI databases of species which have been documented within three miles of the Project site and/or have the potential to occur based on potentially suitable habitat adjacent to, or within, the Project site (Figure 5). Table 1 also provides a potential to occur assessment based on the field investigation and surveyor's knowledge of the species and local ecology and considers the habitat requirements for each species and the potential for their occurrence on the site, based on required habitat elements relative to the current site conditions and species' range.

No State- and/or federally-listed threatened or endangered species, or other sensitive species were observed on site during the field surveys. However, there is some potentially suitable habitat in the undisturbed areas of the Project site and in the adjacent undisturbed habitat for some of the sensitive species identified in the literature review (Table 1). Therefore, habitat suitability assessments were conducted within the Project area for golden eagle (*Aquila chrysaetos*) [GOEA], DT, BUOW, and MGS.

### Desert Tortoise

The desert tortoise is a State- and federally-listed threatened species. Throughout its range, it is threatened by habitat loss, domestic grazing, predation, collections, and increased mortality rates. The desert tortoise is typically found in creosote bush scrub. They are most often found on level or sloped ground where the substrate is firm but not too rocky. Tortoise burrows are typically found at the base of shrubs, in the sides of washes and in hillsides. Because a single tortoise may have many burrows distributed throughout its home range, it is not possible to predict exact numbers of individuals on a site based upon burrow numbers.

In 1992 the BLM issued the *California Statewide Desert Tortoise Management Policy* which included categorizing habitat into three levels of classification. The management goal for Category I areas is to maintain stable, viable populations and to increase the population where possible. The management goal



for Category II areas is to maintain stable, viable populations. The management goal for Category III areas is to limit population declines to the extent feasible. In April 1993, the BLM amended the CDCA plan to delineate these three categories of desert tortoise habitat on public lands. With the adoption of the West Mojave Plan (BLM 2005), all lands that are outside Desert Wildlife Management Areas are characterized as Category 3 Habitat, which is the lowest priority management area for viable populations of the desert tortoise.

Findings: Per the CNDDDB, the nearest documented desert tortoise occurrence (2006) is approximately 5 miles northwest of the Project site. There are no desert tortoise occurrences documented in the project area and there is no suitable habitat for this species within the Project site. However, some of the surrounding area adjacent to the Project site does contain habitat potentially suitable to support desert tortoise.

Per the USFWS desert tortoise Critical Habitat overlay, the project site is not within any USFWS designated desert tortoise Critical Habitat. Furthermore, the Project site is not within a BLM designated Desert Wildlife Management Area (USFWS 2011). Therefore, the habitat surrounding the site would be characterized as Category 3 Habitat, per the BLM categorization of desert tortoise habitat on public lands.

The site surveys were structured, in part, to detect desert tortoise. The survey consisted of walking transects spaced approximately 10 meters apart to provide 100% visual coverage of the Project site, as well as an approximately 500-foot buffer area surrounding the site. The result of the survey was that no evidence of desert tortoise was found in the survey area. No desert tortoise individuals or sign including burrows or scat were observed. Therefore, desert tortoise are considered absent from the Project site.

### Mohave Ground Squirrel

The MGS is a State-listed threatened species. This small, grayish, diurnal ground squirrel is endemic to two million hectares in the western Mojave Desert. It typically inhabits sandy soils of alkali sink and creosote bush scrub habitat. The Mohave ground squirrel forages on leaves and seeds and aestivate/hibernate for long periods of the year. Plants documented as forage for this species include: fiddleneck (*Amsinckia tessellata*), allscale (*Atriplex canescens* and *A. polycarpa*), desert holly (*A. hymenelytra*), coreopsis (*Coreopsis* sp.), spiny hopsage (*Grayia spinosa*), winterfat (*Krascheninnikovia lanata*), wolfberry (*Lycium andersonii*), Joshua tree (*Yucca brevifolia*) and the seeds of Joshua tree. It is suspected that Mohave ground squirrel forage on the plant species with the highest water content available at the time.

They emerge from hibernation in February and begin pair bonding and mating during March. If rainfall is adequate, MGS will reproduce. If rainfall levels do not provide sufficient rainfall to support significant annual plant growth, then MGS will merely forage on herbaceous perennials and shrubs in order to gain enough body mass to survive another prolonged period of dormancy and will not reproduce in that year. The adult males can enter dormancy as early as late May. Juveniles will remain above-ground until August in order to gain sufficient fat reserves prior to entering dormancy.

MGS occur in the western half of the Mojave Desert. Its historical range encompasses an area between Antelope Valley and Lucerne Valley, in the south. However, MGS occurrences in the southern portion of its range are very rare. The northern limits of the range are near Owens Dry Lakebed, in the north, and through China Lake Naval Weapons Station and Fort Irwin Military Base, in the east. The eastern limits extend to Barstow and south along the Mojave River. The western limits loosely follow Highway 14 and the foothills of the southern Sierra Nevada escarpment. MGS are dormant in the fall and winter months.

**Findings:** Although a focused MGS trapping survey was not performed, Jericho conducted a Mohave ground squirrel habitat suitability assessment of the Project site and adjacent habitat. The habitat assessment included a pedestrian field assessment, review of reported occurrences of the MGS in the region (CNDDDB 2019), and adherence to CDFW's criteria for assessing potential impacts to the Mohave ground squirrel. The criteria questions are as follows:

1. *Is the site within the range of the Mohave ground squirrel?;*
2. *Is there native habitat with a relatively diverse shrub component?;* and
3. *Is the site surrounded by development and therefore isolated from potentially occupied habitat?*

The Project site occurs outside the established current range for this species and no further discussion or investigation is warranted. Previously documented occurrences are north of the Project site and were recorded in the 1920's. This species is likely extirpated from the local vicinity and is likely the reason for exclusion from the current range maps. MGS are considered absent from the Project site and adjacent areas.

### Golden Eagle

The GOEA is a CDFW Fully Protected species. GOEA are found throughout North America, but are more common in western North America (CDFW 2017). Habitat typically consists of rolling foothills and mountain terrain, wide arid plateaus deeply cut by streams and canyons, open mountain slopes, and cliffs and rock outcrops (Polite and Pratt 1990). GOEA build large platform nests, typically on cliffs and in large trees in open areas of rugged, open habitats with canyons and escarpments (Polite and Pratt 1990). Threats include loss of foraging areas, loss of nesting habitat, pesticide poisoning, lead poisoning and collision with man-made structures such as wind turbines (CDFW 2019).

Raptors and all migratory bird species, whether listed or not, receive protection under the Migratory Bird Treaty Act (MBTA) of 1918. The MBTA prohibits individuals to kill, take, possess or sell any migratory bird, or bird parts (including nests and eggs) except in accordance with regulations prescribed by the Secretary of the Interior Department (16 U. S. Code 7035). Additional protection is provided to all bald and golden eagles under the Bald and Golden Eagle Protection Act of 1940, as amended. State protection is extended to all birds of prey by the California FGC, Section 2503.57. No take is allowed under these provisions except through the approval of the agencies or their designated representatives.

**Findings:** Although the local vicinity surrounding the Project site likely provides suitable foraging habitat for GOEA, there are no tall trees or cliffside habitat present that could provide potential GOEA nest sites. Furthermore, no GOEA were observed within the project area during the site surveys. Given the level of disturbance from the existing site conditions and the general lack of suitable nest sites within the immediate project vicinity, the Project site and surrounding area is not considered suitable to support nesting GOEA.

### Burrowing Owl

The BUOW is a ground dwelling owl typically found in arid prairies, fields, and open areas where vegetation is sparse and low to the ground. The BUOW is heavily dependent upon the presence of mammal burrows, with ground squirrel burrows being a common choice, in its habitat to provide shelter from predators, inclement weather and to provide a nesting place (Coulombe 1971). They are also known to make use of human-created structures, such as cement culverts and pipes, for burrows. BUOW spend a great deal of time standing on dirt mounds at the entrance to a burrow or perched on a fence post or other low to the ground perch from which they hunt for prey. They feed primarily on insects such as grasshoppers, June beetles and moths, but will also take small rodents, birds, and reptiles. They are active

during the day and night, but are considered a crepuscular owl; generally observed in the early morning hours or at twilight. The breeding season for BUOW is February 1 through August 31.

The BUOW is not listed under the State or federal ESA, but is considered both a State and federal SSC. The BUOW is a migratory bird protected by the international treaty under the Migratory Bird Treaty Act of 1918 and by State law under the California FGC (FGC #3513 & #3503.5).

Findings: There are no BUOW occurrences documented in the project area. The nearest documented occurrences are three miles west of the Project site. The assessment survey was structured, in part, to detect BUOW. The survey consisted of walking transects spaced to provide 100% visual coverage of the project site, including an approximately 500-foot buffer area around the Project site. The result of the survey was that no evidence of BUOW was found in the survey area. No BUOW individuals or sign including pellets, feathers or white wash were observed.

Per the definition provided in the *2012 CDFG Staff Report on Burrowing Owl Mitigation*, “Burrowing owl habitat generally includes, but is not limited to, short or sparse vegetation (at least at some time of year), presence of burrows, burrow surrogates or presence of fossorial mammal dens, well-drained soils, and abundant and available prey.” Therefore, although the Project site does contain friable soils, it would not be considered suitable for BUOW because the it is mostly bare and no appropriately sized burrows or burrow surrogates were detected within the Project site or adjacent areas.

No sensitive plants were observed during survey and are addressed in the Plant Species Observed list and Table 1 (located at the end of this document).

### *Jurisdictional Delineation*

There is a blue line stream course mapped by the USGS National Hydrography Dataset (NHD) that was historically mapped on the eastern edge of the Project site. The current site conditions have resulted in a realignment of flows further east to the very eastern edge of the site (Figure 6). The desert dry wash flows from the south to the north. The visual character of the drainage is difficult to define as flows enter the site due to a road, but the drainage pattern becomes clearer as the flows exit the site. Once the flows leave the site they fan out and become sheet flow across the desert in a northwest direction.

### Waters of the U.S.

The USACE has authority to permit the discharge of dredged or fill material in waters of the U.S. under Section 404 CWA. WoUS are defined as: “All waters used in interstate or foreign commerce; all interstate waters including interstate wetlands; all other waters such as intrastate lakes, rivers, streams (including intermittent and ephemeral streams), mudflats, sand flats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes or natural ponds, where the use, degradation, or destruction of which could affect interstate commerce; impoundments of these waters; tributaries of these waters; or wetlands adjacent to these waters” (Section 404 of the CWA; 33 CFR 328.3 (a)). CWA jurisdiction exists over the following:

1. all traditional navigable waters (TNWs);
2. all wetlands adjacent to TNWs;
3. non-navigable tributaries of TNWs that are relatively permanent waters (RPWs) i.e., tributaries that typically flow year-round or have continuous flow at least seasonally; and
4. every water body determined to have a significant nexus with TNWs.

The drainage feature onsite does not meet the definition of WoUS due to the lack of a significant nexus to a TNW as the concentrated flow with a definable ordinary highwater mark (OHWM) fans out into sheet flows with no definable OHWM.

### Wetlands

No hydrophytic vegetation, hydric soils and/or wetland hydrology, are present within the Project site. Therefore, no wetlands were identified during the survey.

### State Lake/Streambed

The unnamed drainage feature would likely be considered a CDFW jurisdictional feature due to the presence of a definable bed with apparent flow line. This feature, however, is outside of any areas of disturbance.

## **CONCLUSIONS AND RECOMMENDATIONS**

### *Sensitive Biological Resources*

No State- and/or federally-listed threatened or endangered species or otherwise sensitive species were observed on site during the field surveys and due to the lack of suitable habitat on site, and none are expected to occur. The Project site is completely within an unvegetated area. Further investigation is not warranted or required.

There is habitat adjacent to the Project site that is suitable to support nesting birds. Since the Project site is devoid of vegetation, nesting birds would not be impacted.

### *Jurisdictional Waters*

The drainage feature located on the far eastern edge of the Project site may be subject to the Fish and Game Code under the jurisdictions of the California Department of Fish and Wildlife. There are no planned operations within this jurisdictional area and no permanent or temporary impacts to jurisdictional features are expected. Therefore, no permits or authorizations will be required. Should future impacts occur to this feature, a notification to the CDFW would be prudent and warranted.

Please do not hesitate to contact me at 909-915-5900 should you have any questions or require further information.

Sincerely,



Shay Lawrey, President  
Ecologist/Regulatory Specialist

### Attachments:

- Plant Species Observed List
- Table 1. Database Queries (CNDDDB, IPAC, CNPSEI) Results
- Figures 1-6
- Site Photos 1-10

# PLANT SPECIES OBSERVED

Latin Name	Common name	Growth form	Status	Family
<i>Yucca schidigera</i>	Mohave yucca	Tree	native	Agavaceae
<i>Yucca brevifolia</i>	Joshua tree	Tree	native	Agavaceae
<i>Ericameria pinifolia</i>	Pine bush	Shrub	native	Asteraceae
	Wallace			
<i>Eriophyllum wallacei</i>	erriophyllum	Annual herb	native	Asteraceae
<i>Encelia actoni</i>	Acton encelia	Shrub	native	Asteraceae
	Pringle			
<i>Eriophyllum pringlei</i>	erriophyllum	Annual herb	native	Asteraceae
<i>Chaenactis stevioides</i>	Esteve pincushion	Annual herb	native	Asteraceae
<i>Lasthenia gracilis</i>	Needle goldfields	Annual herb	native	Asteraceae
<i>Rafinesquia neomexicana</i>	Desert chicory	Annual herb	native	Asteraceae
	Fremont			
<i>Chaenactis fremontii</i>	pincushion	Annual herb	native	Asteraceae
	Interior			
<i>Ericameria linearifolia</i>	goldenbush	Shrub	native	Asteraceae
<i>Stylocline micropoides</i>	Desert nest straw	Annual herb	native	Asteraceae
<i>Stylocline</i>				
<i>psilocarphoides</i>	Peck's stylocline	Annual herb	native invasive non-	Asteraceae
<i>Lactuca serriola</i>	Prickly lettuce	Annual herb	native	Asteraceae
<i>Ambrosia dumosa</i>	Burro weed	Shrub	native	Asteraceae
	Emory's rock			
<i>Perityle emoryi</i>	daisy	Annual herb	native	Asteraceae
		Shrub (stem		
<i>Gutierrezia microcephala</i>	Sticky snakeweed	succulent)	native	Asteraceae
	Rubber			
<i>Ericameria nauseosa</i>	rabbitbrush	Shrub	native	Asteraceae
<i>Gutierrezia sarothrae</i>	Matchweed	Shrub	native	Asteraceae
	Narrow scaled felt			
<i>Tetradymia stenolepis</i>	thorn	Shrub	native	Asteraceae
<i>Layia glandulosa</i>	White layia	Annual herb	native	Asteraceae
	California			
<i>Logfia filaginoides</i>	cottonrose	Annual herb	native	Asteraceae
<i>Malacothrix glabrata</i>	Desert dandelion	Annual herb	native	Asteraceae
	Mojave			
<i>Xylorhiza tortifolia</i>	woodyaster	Perennial herb	native	Asteraceae
<i>Malacothrix coulteri</i>	Snake's head	Annual herb	native	Asteraceae
<i>Uropappus lindleyi</i>	Silver puffs	Annual herb	native	Asteraceae
<i>Brickellia desertorum</i>	Desert brickellia	Shrub	native	Asteraceae
	Bearded			
<i>Cryptantha barbigera</i>	cryptantha	Annual herb	native	Boraginaceae
<i>Emmenanthe</i>				
<i>penduliflora</i>	Whispering bells	Annual herb	native	Boraginaceae
	Chuckwalla			
<i>Pectocarya heterocarpa</i>	pectocarya	Annual herb	native	Boraginaceae
	Arizona popcorn			
<i>Plagiobothrys arizonicus</i>	flower	Annual herb	native	Boraginaceae
	Narrow leaved			
<i>Cryptantha angustifolia</i>	forget me not	Annual herb	native	Boraginaceae

Latin Name	Common name	Growth form	Status	Family
	Western forget me not			
<i>Cryptantha circumscissa</i>	Purple root	Annual herb	native	Boraginaceae
<i>Cryptantha micrantha</i>	cryptantha	Annual herb	native	Boraginaceae
<i>Amsinckia tessellata</i>	Devil's lettuce	Annual herb	native	Boraginaceae
	Fremont's phacelia			
<i>Phacelia fremontii</i>	phacelia	Annual herb	native	Boraginaceae
<i>Phacelia distans</i>	Common phacelia	Annual herb	native	Boraginaceae
	Guadalupe island cryptantha			
<i>Cryptantha maritima</i>	cryptantha	Annual herb	native	Boraginaceae
	Winged nut forget me not			
<i>Cryptantha pterocarya</i>	me not	Annual herb	native	Boraginaceae
	Tansy leafed phacelia			
<i>Phacelia tanacetifolia</i>	phacelia	Annual herb	native	Boraginaceae
	Notch leaved phacelia			
<i>Phacelia crenulata</i>	phacelia	Annual herb	native	Boraginaceae
	Small flowered phacelia			
<i>Phacelia cryptantha</i>	phacelia	Annual herb	native	Boraginaceae
<i>Brassica nigra</i>	Black mustard	Annual herb	invasive non-native	Brassicaceae
<i>Brassica tournefortii</i>	Mustard	Annual herb	invasive non-native	Brassicaceae
	Yellow tansy mustard			
<i>Descurainia pinnata</i>	mustard	Annual herb	native	Brassicaceae
	Shaggyfruit pepperweed			
<i>Lepidium lasiocarpum</i>	pepperweed	Annual herb	native	Brassicaceae
			invasive non-native	
<i>Hirschfeldia incana</i>	Mustard	Perennial herb	native	Brassicaceae
	Cooper caulanthus			
<i>Caulanthus cooperi</i>	caulanthus	Annual herb	native	Brassicaceae
	California mustard			
<i>Caulanthus lasiophyllus</i>	mustard	Annual herb	native	Brassicaceae
	Narrow leaved lacepod			
<i>Thysanocarpus laciniatus</i>	lacepod	Annual herb	native	Brassicaceae
<i>Sisymbrium altissimum</i>	Tumble mustard	Annual herb	non-native	Brassicaceae
	Common fish hook cactus			
<i>Mammillaria tetrancistra</i>	hook cactus	Shrub (stem succulent)	native	Cactaceae
<i>Cylindropuntia ramosissima</i>	Branched pencil cholla	Shrub (stem succulent)	native	Cactaceae
<i>Opuntia basilaris</i> var. <i>basilaris</i>		Shrub (stem succulent)		
	Beavertail cactus	Shrub (stem succulent)	native	Cactaceae
<i>Echinocereus engelmannii</i>		Shrub (stem succulent)		
	Calico cactus	Shrub (stem succulent)	native	Cactaceae
<i>Echinocactus polycephalus</i>		Shrub (stem succulent)		
	Cottontop cactus	Shrub (stem succulent)	native	Cactaceae
<i>Cylindropuntia echinocarpa</i>		Shrub (stem succulent)		
	Silver cholla	Shrub	native	Cactaceae
<i>Krascheninnikovia lanata</i>	Winter fat	Shrub	native	Chenopodiaceae
<i>Atriplex canescens</i>	Hoary saltbush	Shrub	native	Chenopodiaceae
<i>Grayia spinosa</i>	Hop sage	Shrub	native	Chenopodiaceae
<i>Crassula connata</i>	Sand pygmy weed	Annual herb	native	Crassulaceae

Latin Name	Common name	Growth form	Status	Family
<i>Ephedra viridis</i>	Green ephedra	Shrub	native	Ephedraceae
<i>Ephedra nevadensis</i>	Nevada ephedra	Shrub	native	Ephedraceae
<i>Lupinus odoratus</i>	Mojave lupine	Annual herb	native	Fabaceae
<i>Psoralea argophylla</i>	Mojave indigo bush	Shrub	native	Fabaceae
<i>Acmispon strigosus</i>	Strigose lotus	Annual herb	native	Fabaceae
<i>Lupinus sparsiflorus</i>	Coulter's lupine	Annual herb	native	Fabaceae
<i>Lupinus bicolor</i>	Lupine Dwarf white milk	Annual, Perennial herb	native	Fabaceae
<i>Astragalus didymocarpus</i>	vetch	Annual herb	native	Fabaceae
<i>Lupinus concinnus</i>	Bajada lupine	Annual herb	native	Fabaceae
<i>taxon</i>	common	lifeform	status	Family
<i>Erodium cicutarium</i>	Coastal heron's bill	Annual herb	invasive non-native	Geraniaceae
<i>Salvia carduacea</i>	Thistle sage	Annual herb	native	Lamiaceae
<i>Salvia dorrii</i>	Dorr's sage	Shrub	native	Lamiaceae
<i>Calochortus kennedyi</i>	Desert mariposa	Perennial herb	native	Liliaceae
<i>Mentzelia albicaulis</i>	White stemmed blazing star	Annual herb	native	Loasaceae
<i>Mentzelia veatchiana</i>	Veatch's blazing star	Annual herb	native	Loasaceae
<i>Mirabilis laevis</i>	Desert wishbone bush	Perennial herb	native	Nyctaginaceae
<i>Chylismia claviformis</i>	Clavate fruited primrose	Annual, Perennial herb	native	Onagraceae
<i>Camissoniopsis pallida</i>	Pale yellow sun cup	Annual herb	native	Onagraceae
<i>Castilleja chromosa</i>	Desert paintbrush	Perennial herb	native	Orobanchaceae
<i>Eschscholzia minutiflora</i>	Coville's poppy	Annual herb	native	Papaveraceae
<i>Stipa speciosa</i>	Desert needle grass	Perennial grass	native	Poaceae
<i>Elymus elymoides</i>	Squirrel tail grass	Perennial grass	native	Poaceae
<i>Bromus madritensis</i>	Foxtail chess,	Annual grass	non-native	Poaceae
<i>Melica imperfecta</i>	foxtail brome	Perennial grass	native	Poaceae
<i>Eragrostis pectinacea</i>	Coast range melic	Annual grass	native	Poaceae
<i>Schismus barbatus</i>	Tufted lovegrass	Annual grass	invasive non-native	Poaceae
<i>Gilia latiflora</i>	Old han schismus	Annual grass	native	Polemoniaceae
<i>Gilia sinuata</i>	Broad flowered gilia	Annual herb	native	Polemoniaceae
<i>Gilia tenuiflora</i>	Cinder gilia	Annual herb	native	Polemoniaceae
<i>Linanthus/Leptosiphon sp</i>	Slender flowered gilia	Annual herb	native	Polemoniaceae
<i>Loeseliastrum matthewsii</i>	gilia	Annual herb	native	Polemoniaceae
<i>Langloisia setosissima</i>	Desert calico	Annual herb	native	Polemoniaceae
<i>Gilia stellata</i>	Lilac sunbonnet	Annual herb	native	Polemoniaceae
<i>Eriogonum maculatum</i>	Star gilia	Annual herb	native	Polygonaceae
	Angle stermed buckwheat	Annual herb	native	Polygonaceae

Cheryl A. Tubbs  
 BRA/JD – Ocotillo Borrow Pit  
 July 24, 2019

Latin Name	Common name	Growth form	Status	Family
<i>Eriogonum fasciculatum</i>	California buckwheat	Shrub	native	Polygonaceae
<i>Chorizanthe brevicornu</i>	Brittle spine flower	Annual herb	native	Polygonaceae
<i>Pterostegia drymarioides</i>	Fairy mist	Annual herb	native	Polygonaceae
<i>Eriogonum inflatum</i>	Desert trumpet	Perennial herb	native	Polygonaceae
<i>Delphinium parishii</i>	Parish's larkspur	Perennial herb	native	Ranunculaceae
<i>Prunus fasciculata</i>	Desert almond	Shrub	native	Rosaceae
<i>Coleogyne ramosissima</i>	Black brush	Shrub	native	Rosaceae
<i>Thamnosma montana</i>	Turpentine broom	Shrub	native	Rutaceae
<i>Lycium andersonii</i>	Anderson thornbush	Shrub	native	Solanaceae
<i>Dichelostemma capitatum</i>	Blue dicks	Perennial herb	native	Themidaceae
<i>Larrea tridentata</i>	Creosote bush	Shrub	native	Zygophyllaceae



**Table 1. Database Queries (CNDDDB, IPAC, CNPSEI) Results**

Scientific Name	Common Name	Federal/State Ranking	Habitat	Potential to Occur
<b>Plants</b>				
<i>Acanthoscyphus parishii</i> var. <i>goodmaniana</i>	Cushenbury oxytheca	Endangered/None	Pinyon and juniper woodland. On limestone talus and rocky slopes. 1400-2350 m.	Low to no probability of occurrence. No carbonate/limestone soil habitat on site and below known elevational range. Species not found on site during surveys.
<i>Astragalus albens</i>	Cushenbury milk-vetch	Endangered / None	Joshua tree woodland, Mojavean desert scrub, pinyon and juniper woodland. Sandy or stony flats, rocky hillsides, canyon washes, & fans, on carbonate or mixed granitic-calcareous debris. 1185-1950 m.	Low to no probability of occurrence. No carbonate/limestone soil habitat on site and below known elevational range. Species not found on site during surveys.
<i>Astragalus bernardinus</i>	San Bernardino milk-vetch	None/None	Joshua tree woodland, pinyon and juniper woodland. Granitic or carbonate substrates. 290-2290 m.	Low probability of occurrence. Lucerne sandy loam is granitic but nearest occurrence and the western most for the species is 27.25 km by air ESE. Species not found on site during surveys.
<i>Boechera dispar</i>	pinyon rockcress	None/None	Joshua tree woodland, pinyon and juniper woodland, Mojavean desert scrub. Granitic, gravelly slopes & mesas. Often under desert shrubs which support it as it grows. 1005-2805 m.	Low probability of occurrence. Lucerne sandy loam is granitic and the nearest occurrence and the western most for the species is <5 km by air SW. Species not found on site during surveys.
<i>Boechera shockleyi</i>	Shockley's rockcress	None/None	Pinyon and juniper woodland. On ridges, rocky outcrops and openings on limestone or quartzite. 875-2515 m.	Low to no probability of occurrence. No carbonate/limestone soil habitat on site. Species not found on site during surveys.
<i>Calochortus striatus</i>	alkali mariposa-lily	None/None	Chaparral, chenopod scrub, Mojavean desert scrub, meadows and seeps. Alkaline meadows and ephemeral washes. 70-1600m.	Low to no probability of occurrence. No alkaline meadows and ephemeral washes on site. Species not found on site during surveys.

Scientific Name	Common Name	Federal/State Ranking	Habitat	Potential to Occur
<i>Canbya candida</i>	white pygmy-poppy	None/None	Joshua tree woodland, Mojavean desert scrub, pinyon and juniper woodland. Gravelly, sandy, granitic places. 600-1460 m	Moderate probability of occurrence. Several known occurrences are $\leq 10$ km by air. Species not found on site during surveys.
<i>Cymopterus multinervatus</i>	purple-nerve cymopterus	None/None	Mojavean desert scrub, pinyon and juniper woodland. Sandy or gravelly places. 765-2195 m.	Moderate probability of occurrence. Appropriate habitat on site, nearest occurrence is 17.25 km ENE by air. Species not found on site during surveys.
<i>Diplacus mohavensis</i>	Mojave monkeyflower	None/None	Joshua tree woodland, Mojavean desert scrub. Dry sandy or rocky washes along the Mojave River. 660-1270 m.	Low to no probability of occurrence. No Dry sandy or rocky washes on site and not along the Mojave river. Species not found on site during surveys.
<i>Elymus salina</i>	Salina Pass wild-rye	None/None	Pinon & juniper woodlands. Rocky sites. 880-2865 m.	Moderate probability of occurrence. Marginal habitat on site, nearest occurrence is 18.5 km ENE by air. Species not found on site during surveys.
<i>Erigeron parishii</i>	Parish's daisy	Threatened/None	Mojavean desert scrub, pinyon and juniper woodland. Often on carbonate limestone mountain slopes often associated with drainages. Sometimes on granite. 1050-2245 m.	Low to no probability of occurrence. No carbonate/limestone soil habitat on site and at lowest known species elevational range. Species not found on site during surveys.
<i>Eriogonum ovalifolium</i> var. <i>vineum</i>	Cushenbury buckwheat	Endangered	Mojavean desert scrub, pinyon and juniper woodland, Joshua tree woodland. Limestone mountain slopes. Dry, usually rocky places. 1430-2440 m.	Low to no probability of occurrence. No carbonate/limestone soil habitat on site and below known species elevational range. Species not found on site during surveys.
<i>Menodora spinescens</i> var. <i>mohavensis</i>	Mojave menodora	None/None	Mojavean desert scrub. Rocky hillsides, canyons. Andesite gravel. 700-1405 m.	Moderate probability of occurrence. Marginal habitat on site, nearest occurrence is $>50$ km NNE by air. Species not found on site during surveys.
<i>Mentzelia tridentata</i>	creamy blazing star	None/None	Mojavean desert scrub 545-1100 m.	Moderate probability of occurrence. Marginal habitat on site, nearest occurrence is $>13.33$ km NE by air. Species not found on site during surveys.

Scientific Name	Common Name	Federal/State Ranking	Habitat	Potential to Occur
<i>Pediomelum castoreum</i>	Beaver Dam breadroot	None/None	Joshua tree woodland, Mojavean desert scrub. Sandy soils washes and roadcuts. 605-1485 m.	Moderate probability of occurrence. Appropriate habitat on site, nearest occurrence is >12.75 km SW by air. Species not found on site during surveys.
<i>Phacelia parishii</i>	Parish's phacelia	None/None	Mojavean desert scrub, playas. Alkaline flats and slopes or on clay soils. 540-875 m.	Low to no probability of occurrence. No alkaline habitat or clay soils on site and above elevational distribution of the species. Species not found on site during surveys.
<i>Plagiobothrys parishii</i>	Parish's popcornflower	None/None	Great Basin scrub, Joshua tree woodland. Alkaline soils mesic sites. 750-1400 m.	Low to no probability of occurrence. No alkaline habitat on site. Nearest occurrence is 17.25 km ENE. Species not found on site during surveys.
<i>Polygala intermontana</i>	intermountain milkwort	None/None	Pinyon and juniper woodland 940-3080 m.	Moderate probability of occurrence. Appropriate habitat on site, nearest occurrence is >30 km E by air. Species not found on site during surveys.
<i>Puccinellia parishii</i>	Parish's alkali grass	None/None	Meadows and seeps. Alkali springs and seeps in deserts. 700-1000 m.	Low to no probability of occurrence. No alkaline mesic habitat on site and above elevational distribution of the species. Species not found on site during surveys.
<i>Puccinellia simplex</i>	California alkali grass	None/None	Meadows and seeps, chenopod scrub, valley and foothill grasslands, vernal pools. Alkaline, vernal mesic. Sinks, flats, and lake margins. 1-915 m.	Low to no probability of occurrence. No alkaline mesic habitat on site and above elevational distribution of the species. Species not found on site during surveys.
<i>Rosa woodsii</i> var. <i>glabrata</i>	Cushenbury rose	None/None	Mojavean desert scrub. Springs. 1095-1220 m.	Low to no probability of occurrence. No spring habitat on site. Species not found on site during surveys.
<i>Saltugilia latimeri</i>	Latimer's woodland-gilia	None/None	Chaparral, Mojavean desert scrub, pinyon and juniper woodland. Rocky or sandy substrate; sometimes in washes, sometimes limestone. 120-2200 m.	Moderate probability of occurrence. Appropriate habitat on site, nearest occurrence is 17.25 km ENE by air. Species not found on site during surveys.

Scientific Name	Common Name	Federal/State Ranking	Habitat	Potential to Occur
<i>Sidalcea neomexicana</i>	salt spring checkerbloom	None/None	Playas, chaparral, coastal scrub, lower montane coniferous forest, Mojavean desert scrub. Alkali springs and marshes. 3-2380 m	Low to no probability of occurrence. No alkaline mesic habitat on site. Species not found on site during surveys.
<b>Birds</b>				
<i>Aquila chrysaetos</i>	golden eagle	BLM Sensitive, CDFW Fully Protected, USFWS Birds of Conservation Concern	Broadleaved upland forest, Cismontane woodland, Coastal prairie, Great Basin grassland, Great Basin scrub, Lower montane coniferous forest, pinyon & juniper woodlands, Upper montane coniferous forest, Valley & foothill grassland.	No suitable habitat for nesting, but some potentially suitable foraging habitat in the adjacent areas. This species was not observed during survey. Probability of occurrence is low.
<i>Athene cunicularia</i>	burrowing owl	none/none	Coastal prairie   Coastal scrub   Great Basin grassland   Great Basin scrub   Mojavean desert scrub   Sonoran desert scrub   Valley & foothill grassland	No burrows were found on site and soils are not easily friable. Potential to occur is low.
<i>Gymnogyps californianus</i>	California condor	Endangered/Fully Protected	Semi-arid mountain ranges surrounding the southern San Joaquin Valley	Outside of species current range. Species is absent.
<i>Falco mexicanus</i>	prairie falcon	USFWS Birds of Conservation Concern	Great Basin grassland, Great Basin scrub, Mojavean desert scrub, Sonoran desert scrub, Valley & foothill grassland	Potentially suitable foraging habitat in adjacent areas. Species was not observed during survey.
<i>Empidonax traillii extimus</i>	Southwestern willow flycatcher	Endangered/Endangered	Riparian woodland with multiple canopy layers and slow flowing waters	No riparian habitat occurs on site for this riparian obligate species.. Potential to occur is low.
<i>Toxostoma lecontei</i>	Le Conte's thrasher	CDFW Species of Special Concern, USFWS Birds of Conservation Concern	Desert wash, Mojavean desert scrub, Sonoran desert scrub, open desert	Suitable habitat in adjacent areas. Occurrence potential is moderate.
<i>Vireo bellii pusillus</i>	least Bell's vireo	Endangered/Endangered	Riparian scrub, riparian forest	No riparian habitat occurs on site for this riparian obligate species.. Potential to occur is low.

Scientific Name	Common Name	Federal/State Ranking	Habitat	Potential to Occur
<b>Mammals</b>				
<i>Antrozous pallidus</i>	pallid bat	none/none	Chaparral   Coastal scrub   Desert wash   Great Basin grassland   Great Basin scrub   Mojavean desert scrub   Riparian woodland   Sonoran desert scrub   Upper montane coniferous forest   Valley & foothill grassland	Potentially suitable habitat in adjacent areas. Species was not observed during survey. Occurrence potential is moderate in the adjacent areas.
<i>Chaetodipus fallax fallax</i>	northwestern San Diego pocket mouse	none/none	Chaparral   Coastal scrub	Potentially suitable habitat in adjacent areas. Species was not observed during survey. Occurrence potential is moderate in the adjacent areas.
<i>Corynorhinus townsendii</i>	Townsend's big-eared bat	BLM Sensitive, CDFW Species of Special Concern,, USFS Sensitive, WBWG High Priority	Broadleaved upland forest, Chaparral, Chenopod scrub, Great Basin grassland, Great Basin scrub, Joshua tree woodland, Lower montane coniferous forest, Meadow & seep, Mojavean desert scrub, Riparian forest, Riparian woodland, Sonoran desert scrub, Sonoran thorn woodland, Upper montane coniferous forest, Valley & foothill grassland.	Potentially suitable habitat in adjacent areas. Species was not observed during survey. Occurrence potential is moderate in the adjacent areas.
<i>Xerospermophilus mohavensis</i>	Mohave ground squirrel	None/Threatened	Chenopod scrub, Joshua tree woodland, Mojavean desert scrub, open desert scrub, sandy to gravelly soils.	Outside of species current range. Previous records to the north are from a population thought to be extirpated. Potentially suitable habitat in adjacent areas. Occurrence potential is low in the adjacent areas.
<b>Reptiles</b>				
<i>Gopherus agassizii</i>	desert tortoise	Threatened/Threatened	Joshua tree woodland, Mojavean desert scrub, Sonoran desert scrub with friable soils	Potentially suitable habitat in adjacent areas. No evidence of this species was observed during survey. Occurrence potential is low to moderate in the adjacent areas.

Cheryl A. Tubbs  
 BRA/JD – Ocotillo Borrow Pit  
 July 24, 2019

Scientific Name	Common Name	Federal/State Ranking	Habitat	Potential to Occur
<i>Anaxyrus californicus</i>	arroyo toad	Endangered/None	Slow moving streams with sandy soil	Required habitat does not exist on site, including upland winter habitat. Species is absent.
<i>Phrynosoma blainvillii</i>	coast horned lizard	none/none	Chaparral   Cismontane woodland   Coastal bluff scrub   Coastal scrub   Desert wash   Pinon & juniper woodlands   Riparian scrub   Riparian woodland   Valley & foothill grassland	Potentially suitable habitat in adjacent areas. Species was not observed during survey. Occurrence potential is moderate in the adjacent areas.
<b>Fish</b>				
<i>Siphateles bicolor mohavensis</i>	Mohave tui chub	Endangered/Endangered	Aquatic, Artificial flowing waters, Artificial standing waters with deep pools and vegetation, endemic to Mojave River basin	Required habitat does not exist on site. Species is absent.

## Coding and Terms

E = Endangered    T = Threatened    C = Candidate    FP = Fully Protected    SSC = Species of Special Concern    R = Rare

**State Species of Special Concern:** An administrative designation given to vertebrate species that appear to be vulnerable to extinction because of declining populations, limited acreages, and/or continuing threats. Raptor and owls are protected under section 3502.5 of the California Fish and Game code.

**State Fully Protected:** Fully Protected species may not be taken or possessed at any time and no licenses or permits may be issued for their take except for collecting these species for necessary scientific research and relocation of the bird species for the protection of livestock.

### Global Rankings (Species or Natural Community Level):

- G1 = Critically Imperiled – At very high risk of extinction due to extreme rarity (often 5 or fewer populations), very steep declines, or other factors.
- G2 = Imperiled – At high risk of extinction due to very restricted range, very few populations (often 20 or fewer), steep declines, or other factors.
- G3 = Vulnerable – At moderate risk of extinction due to a restricted range, relatively few populations (often 80 or fewer), recent and widespread declines, or other factors.
- G4 = Apparently Secure – Uncommon but not rare; some cause for long-term concern due to declines or other factors.
- G5 = Secure – Common; widespread and abundant.

**Subspecies Level:** Taxa which are subspecies or varieties receive a taxon rank (T-rank) attached to their G-rank. Where the G-rank reflects the condition of the entire species, the T-rank reflects the global situation of just the subspecies. For example: the Point Reyes mountain beaver, *Aplodontia rufa* ssp. *phaea* is ranked G5T2. The G-rank refers to the whole species range i.e., *Aplodontia rufa*. The T-rank refers only to the global condition of ssp. *phaea*.

### State Ranking:

- S1 = Critically Imperiled – Critically imperiled in the State because of extreme rarity (often 5 or fewer populations) or because of factor(s) such as very steep declines making it especially vulnerable to extirpation from the State.
- S2 = Imperiled – Imperiled in the State because of rarity due to very restricted range, very few populations (often 20 or fewer), steep declines, or other factors making it very vulnerable to extirpation from the State.
- S3 = Vulnerable – Vulnerable in the State due to a restricted range, relatively few populations (often 80 or fewer), recent and widespread declines, or other factors making it vulnerable to extirpation from the State.
- S4 = Apparently Secure – Uncommon but not rare in the State; some cause for long-term concern due to declines or other factors.
- S5 = Secure – Common, widespread, and abundant in the State.

### California Rare Plant Rankings (CNPS List):

- 1A = Plants presumed extirpated in California and either rare or extinct elsewhere.
- 1B = Plants rare, threatened, or endangered in California and elsewhere.
- 2A = Plants presumed extirpated in California, but common elsewhere.
- 2B = Plants rare, threatened, or endangered in California, but more common elsewhere.
- 3 = Plants about which more information is needed; a review list.
- 4 = Plants of limited distribution; a watch list.

### Threat Ranks:

- .1 = Seriously threatened in California (over 80% of occurrences threatened / high degree and immediacy of threat)
- .2 = Moderately threatened in California (20-80% occurrences threatened / moderate degree and immediacy of threat)
- .3 = Not very threatened in California (less than 20% of occurrences threatened / low degree and immediacy of threat or no current threats known)



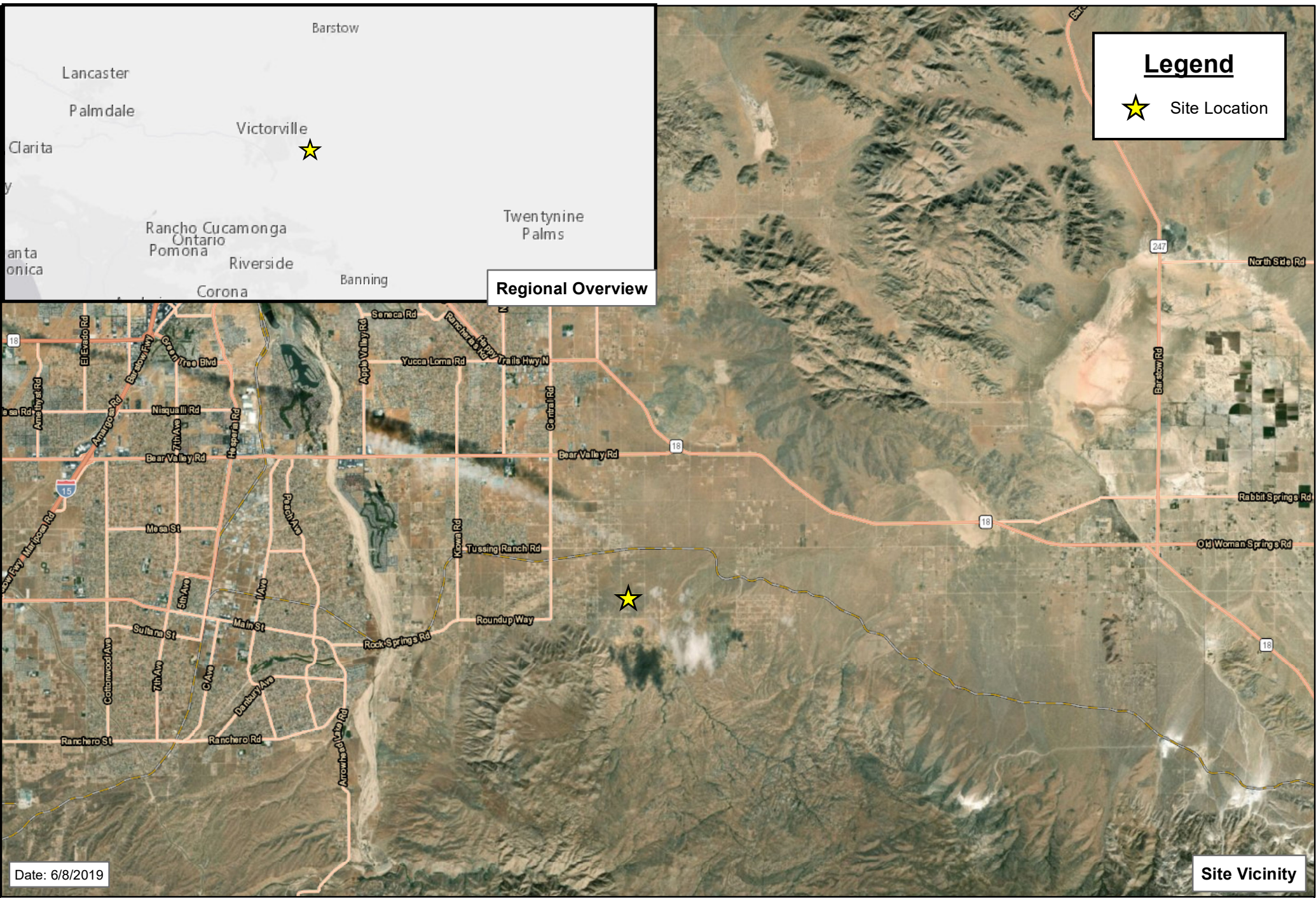


Figure 1 - Regional Overview  
Site Vicinity

Ocotillo Borrow Pit









# Legend

Site Location

Lucerne Sandy  
Loam, 2-5%  
Slopes





## Legend

- Joshua tree - Woodland
- Disturbed - Joshua tree - Woodland
- Disturbed - Bare

Ocotillo Way

Dover Rd

Ocotillo Way

Valley Vista Ave

Date: 6/8/2019

0 0.0275 0.055 0.11 0.165 0.22 Miles

Imagery Date: 8/6/2017

Service Layer Credits: Esri, HERE, Garmin, (c) OpenStreetMap contributors  
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS,



1 inch = 295 feet

Figure 4  
Vegetation Disturbance Map

Ocotillo Borrow Pit



# Legend

— NHD Waters

□ Site Location

Date: 7/25/2019

0 0.0275 0.055 0.11 0.165 0.22 Miles

Imagery Date: 8/6/2017

Service Layer Credits: Esri, HERE, Garmin, (c) OpenStreetMap contributors  
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS,

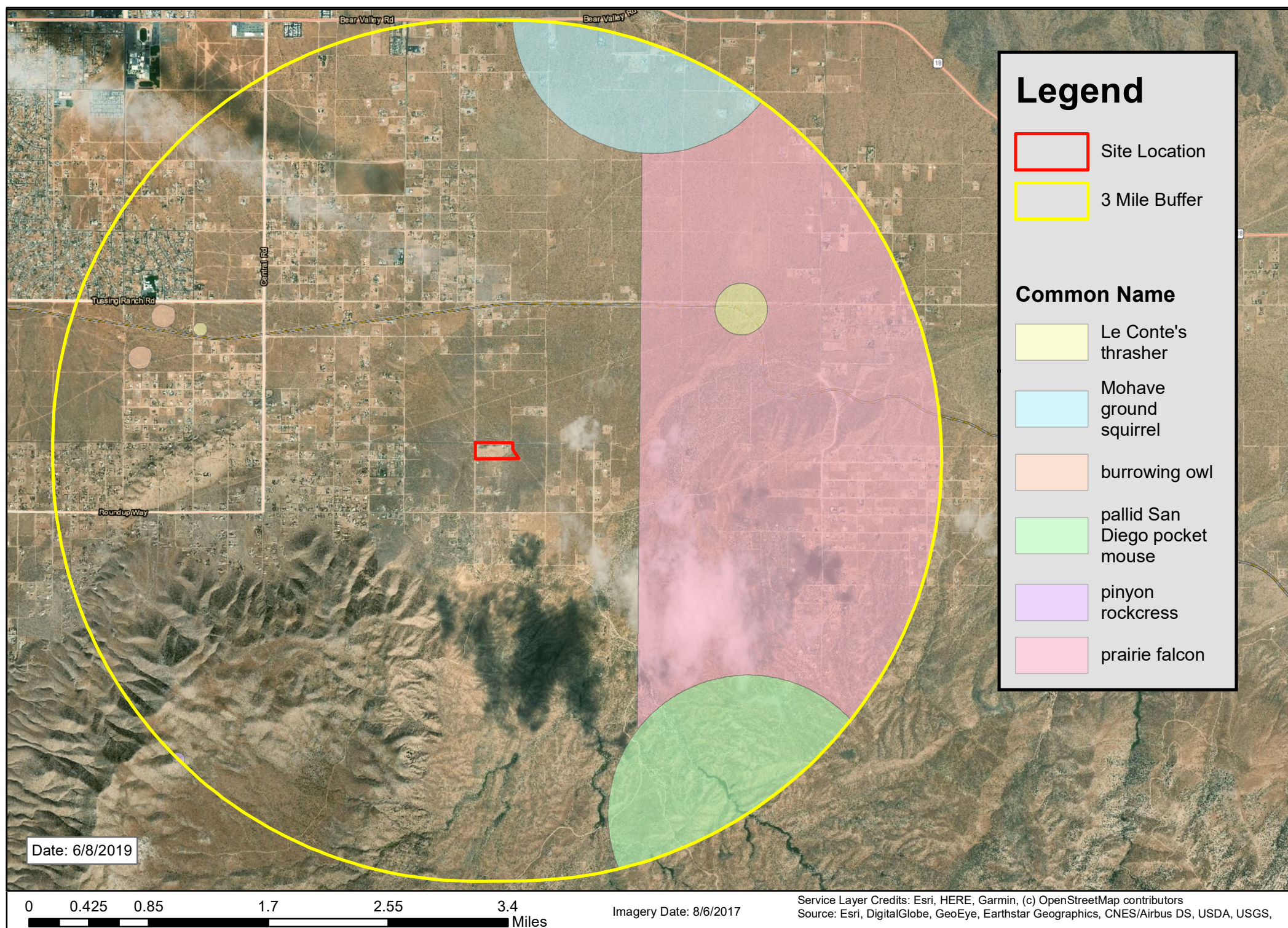


1 inch = 295 feet

Figure 5  
National Hydrography Dataset (NHD)  
Streams and Waterbodies

Ocotillo Borrow Pit







## Ocotillo Borrow Pit Site Photos – April 2019



**Photo 1.**  
Looking west  
from eastern  
Site boundary.



**Photo 2.**  
Looking west  
down northern  
Site boundary  
along Ocotillo  
Way.





**Photo 3.**  
Looking south  
along eastern  
Site boundary.



**Photo 4.**  
Aerial view  
looking down  
east northern  
Site boundary  
along Ocotillo  
Way.





**Photo 5.**  
Aerial view  
looking south  
down western  
Site boundary  
along Valley  
Vista Ave  
from  
intersection  
with Ocotillo  
Way.



**Photo 6.**  
Aerial view  
looking  
northeast from  
southwest  
corner of Site.





**Photo 7.**  
Aerial view  
looking east  
along southern  
Site boundary  
from Valley  
Vista Ave.



**Photo 8.**  
Aerial view  
looking  
northwest from  
southern Site  
boundary.





**Photo 9.**  
Aerial view  
looking east  
along southern  
Site boundary  
towards  
southeast  
corner of Site.



**Photo 10.**  
Aerial view  
looking  
northwest from  
southeast  
corner of Site.