

Biological Resources Assessment

124.5-Acre Cove Borrow Pit Project

Community of Lucerne
San Bernardino County, California
Lucerne Valley USGS – 7.5 Minute Quadrangle
South 1/2 of Section 33, Township 5 North, Range 1 West

Prepared for:

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Prepared July 2019

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Certification

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Certification: I hereby certify that the statements furnished herein, and in the attached exhibits present data and information required for this Biological Resources Report to the best of my ability, and the facts, statements, and information presented are true and correct to the best of my knowledge and belief. This report was prepared in accordance with professional requirements and standards. Fieldwork conducted for this assessment was performed by me and/or under my direct supervision.

A handwritten signature in black ink, appearing to read "Shay Lawrey". The signature is written in a cursive, flowing style.

Shay Lawrey, Ecologist/Regulatory Specialist

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1 Introduction

On behalf of Lilburn Corporation, Jericho Systems, Inc. (Jericho) conducted a general biological resources assessment (BRA) habitat suitability assessments, and Jurisdictional Delineation (JD) of the existing conditions at property owned by the County of San Bernardino Department of Public Works (DPW) and referred to the Cove Burrow Pit (Project). The DPW is the lead agency overseeing the mine permitting. The Project consists of permitted mining use over the next 50 years. The Project plans hillside mining from existing grade to property line setback 50ft, slope 3:1.

The property surveyed (which included the Project area) is approximately 124.5 acres in size and is located near the intersection of Cove Road with Exeter Street/Banta Road, northwest of the community of Lucerne and can be found on the *Lucerne Valley* U.S. Geological Survey (USGS) 7.5-minute series quadrangle within the South 1/2 of Section 33, Township 5 North, Range 1 West (Figures 1-2).

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..

1.1 Environmental Setting

The Project site is located in the Lucerne Valley, at the western edge of the Mojave Desert. Because this area is in proximity to montane, foothill, and desert habitats, the Project region contains plants, plant communities, and animals adapted to each of these general habitat classes. The Lucerne Valle is bounded by the Granite, Ord, and Rodman Mountains to the north and the San Bernardino Mountains to the south. The San Bernardino Mountains are the larger of these two ranges, reaching elevations in excess of 11,000 feet at the top of Mt. San Gorgonio, and receive considerable winter snowfall.

The local climate is characterized by cool winter temperatures, warm summer temperatures that are moderated somewhat by the marine influence, with its rainfall occurring almost entirely in the winter and due to this climate several unique desert plant community occur. Juniper and pinyon pines are found at higher elevations, while creosote bush scrub, yuccas, Joshua trees, grasslands, and cholla are found at lower elevations. In addition, some of the larger washes within the desert support desert riparian woodlands. However, the Joshua tree (*Yucca brevifolia*) is the signature plant of the Mojave Desert and

often defines its boundaries. In the Lucerne Valley, vegetation is mainly comprised of creosote bush scrub.

Much of the Project site is relatively undisturbed, comprised of native shrubs with a low-lying understory of native and nonnative herbaceous species. Vegetation on site is characterized by the presence of two distinct plant communities. The Project site vegetation is dominated by shrubs and herbaceous understory closely corresponding with Sawyer et al.'s (2009) creosote bush-white burr sage scrub (*Larrea tridentata*-*Ambrosia dumosa* shrubland alliance).

Hydrologically, the Project site is within the Lucerne Lake hydrologic unit of the Colorado River hydrologic region. This watershed is not tributary to the ocean or any other water body; rather, all water either infiltrates into the groundwater basin, evaporates, or flows toward the dry lakebed of Lucerne Lake located to the northwest of the Project site. All flow channels on-site are intermittent or ephemeral and likely only receive stream flow during and following significant rain events. Typical of arid regions, the area experiences short-duration, high-intensity rainfall storm events producing potentially high rates of runoff when the initial infiltration rates are exceeded. During these periods the small, incised washes become conduits for water flow. The soil in the watershed is predominantly Soil Group D which is characterized as having high runoff potential due to very slow infiltration rates when thoroughly wetted.

Elevations on-site range from 3,352 to 2,860 feet above mean sea level. The Project site is surrounded by vacant land and low density rural residential to the west and northwest.

2 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 *White Horse Mountain*, *Fairview Valley*, *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 northwestern portion of the *Lucerne Valley* 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 (CNDDDB) *Rarefind 5*;
- CNDDDB 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 site on March 30, April 1, 2 and 15, 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 7 a.m. and 4 p.m. Weather conditions during the surveys consisted of clear skies to overcast with temperatures ranging from 58 degrees Fahrenheit (° F) to 74° 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 ≥ 10 meters apart. A surrounding 500-foot buffer area surrounding the site was also surveyed for species diversity and discovery of rare species.

Desert tortoise surveys were conducted in accordance with the protocols described in the USFWS's 2009 "*Desert Tortoise (Mojave Population) Field Manual: (Gopherus agassizii)*," the 2010 "*Pre-Project Field Survey Protocol for Potential Desert Tortoise Habitats*," and the August 31, 2017 survey protocol update, "*Preparing for Any Action That May Occur Within the Range of The Mojave Desert Tortoise (Gopherus agassizii)*". Per the USFWS survey protocol, 100 percent visual coverage of the survey area was achieved by walking 10-meter (30-foot) wide belt transects over the entire Project site wherever there was potentially suitable desert tortoise habitat present (i.e. creosote bush scrub and/or allscale scrub habitats), to provide sufficient coverage to find signs of desert tortoise use (e.g., scat, burrows, carcasses, courtship rings, drinking depressions, etc. in addition to live tortoises).

Areas within the Project site that were not surveyed to protocol-level coverage consisted entirely of steep rugged hillside terrain, which would not be considered suitable for desert tortoise. In addition to the 100 percent coverage of any potentially suitable habitat within the Project site, Jericho biologists walked 200-, 400- and 600-meter transects around the perimeter of the Project site, in accordance with the USFWS 2010 *Pre-Project Field Survey Protocol for Potential Desert Tortoise Habitats*. It should be noted that these "zone of influence" transects are no longer required as of the 2017 updated protocol. However, to provide additional sampling of the areas adjacent the Project site, the 200-, 400- and 600-meter transects around the perimeter of the Project site were included in the survey. The transect routes were calculated and downloaded to handheld global positioning system (GPS) units that were used to accurately navigate the transects.

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).

3 Results

3.1 Existing Biological and Physical Conditions

Habitat

The Project site vegetation is dominated by shrubs and herbaceous understory closely corresponding with Sawyer et al.'s (2009) white burr sage scrub (*Ambrosia dumosa* shrubland alliance). Other native species that are conspicuous in the shrub layer within the survey area include iodine bush (*Allenrolfea occidentalis*), burrobrush (*Ambrosia salsola*), Mormon tea (*Ephedra nevadensis*) and California goldenbush (*Ericameria lindleyi*). The plant community is extremely diverse with a total of 70 species observed, 18 (26%) of which were shrub species and only six (9%) nonnative species. All plant species identified during survey are included in Appendix A.

Wildlife

No amphibian species were observed or otherwise detected within the Project area and none are expected to occur. Reptile species observed within the Project area include desert spiny lizard (*Sceloporus magister*), and western side-blotched lizard (*Uta stansburiana elegans*). Other common reptile species expected to occur within the Project area include desert glossy snake (*Arizona elegans eburnata*), Mohave shovel-nosed snake (*Chionactis occipitalis*), desert banded gecko (*Coleonyx variegatus variegatus*), and northern Mohave rattlesnake (*C. scutulatus scutulatus*).

Avian species observed in the Project area include verdin, greater roadrunner, red-tailed hawk, American kestrel, prairie falcon, turkey vulture, common raven, rock wren, lesser nighthawk, loggerhead shrike, black-tailed gnatcatcher and LeConte's thrasher.

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. Mammal species observed or otherwise detected on site included white-tailed antelope ground squirrel (*Ammospermophilus leucurus*), black-tailed jackrabbit (*Lepus californicus*), desert cottontail (*Sylvilagus audubonii*) and Merriam's kangaroo rat (*Dipodomys merriami*). Mammal sign consisted primarily of scat and fossorial mammal burrows or dens. Numerous small mammal burrows were observed on site and two kit fox dens were observed.

3.2 Special Status Species and Habitats

According to the database queries, 32 sensitive species (20 plants and 12 animals) have been documented in the *Lucerne Valley*, *Fifteenmile Valley*, *Apple Valley S Valley*, and *White Horse Mountain* 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 7 and Attachment 4). 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 the Project site during the field surveys. However, there is some potentially suitable habitat in the undisturbed areas of the Project site and adjacent to it for 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: Desert tortoise are documented to occur approximately 1.75 miles north of the Project site. There are no desert tortoise occurrences documented on site or directly adjacent to it. Excluding the rocky outcrop/rugged hills on the south half of the Project site, suitable habitat for desert tortoise is present.

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 200-, 400- and 600-meter transects when and where possible surrounding the east, north and west of the Project 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 currently considered absent from the Project site and adjacent areas surveyed.

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?*

An occurrence of Mohave ground squirrel is documented southeast of the Project site. This occurrence is from the 1920's. Mohave ground squirrel are thought to be extirpated east of the Interstate 15, south of Barstow and west of Highway 247. The Project site occurs outside the established current range for this species and no further discussion or investigation is warranted.

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: There are three GOEA nest site locations documented near the Project site, two within a mile to southwest and one within 2.5 miles to the northwest. These locations occur in the hillside terrain similar to what is found on the south boundary of the Project site. No GOEA were observed within the Project site boundaries during surveys.

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: BUOW are documented approximately 3 miles southeast of the Project site. There are no BUOW occurrences documented on site. The assessment survey was structured 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 whitewash 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.” With the exception of the rocky hills to the south, the site provides suitable habitat for this species.

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

3.3 Jurisdictional Delineation

According to the USGS National Hydrography Dataset (NHD) waterbody identified as dry lakebed occurs on the NE quarter of the NE parcel outside of the Project area as shown on Figure 5.

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 dry lakebed does not meet the definition of WoUS due to the isolated nature of Lucerne Valley and is not subject to the CWA.

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 dry lakebed is would be subject to the California FGC Section 1600 regulations that fall under the jurisdiction of the CDFW, but the project will not encroach into the limits of this waterbody that would require a Lake or Streambed Alteration Agreement..

4 Conclusions and Recommendations

4.1 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. Habitat on site is potentially suitably to support desert tortoise, burrowing owl and golden eagle and nesting birds in general.

Desert Tortoise

The result of the protocol desert tortoise survey was that no desert tortoise individuals or sign including desert tortoise burrows, carcasses, scat, courtship rings or drinking depressions were detected within the survey area. Therefore, desert tortoise are currently considered absent from the Project site. However,

because there is suitable creosote bush scrub and allscale scrub habitat on site and there are documented desert tortoise populations to the north, east and southwest of the Project area, desert tortoise movement or occupation could potentially occur in the future.

Therefore, the following precautionary measures are recommended to avoid potentially injuring or killing any desert tortoise that may wander on site during operations of the burrow pit within suitable desert tortoise habitat:

1. A qualified biologist shall provide an Environmental Awareness Presentation to workers on an as needed basis.
2. A qualified biologist shall conduct a pre-sweep survey of any areas slated for new land disturbance
3. A biological monitor shall be present during initial land disturbing activities.

According to protocol and standard practices, the results of the focused desert tortoise surveys will remain valid for the period of one year, or until April 2020, after which time, if the site has not been disturbed in the interim, another survey may be required to determine the persisting absence of desert tortoise on-site. Regardless of survey results and conclusions given herein, desert tortoise are protected by applicable State and/or federal laws, including but not exclusive to the CESA and Federal ESA. As such, if a desert tortoise is found on-site during work activities, all activities likely to affect the animal(s) should cease immediately and regulatory agencies should be contacted to determine appropriate management actions. Importantly, nothing given in this report, including any recommended avoidance, minimization and mitigation measures, is intended to authorize the incidental take of desert tortoise or any other listed species during Project activities. Such authorization must come from the appropriate regulatory agencies, including CDFW (i.e., authorization under section 2081 of the FGC) and USFWS. Additionally, it should be noted that desert tortoise may be handled only by a qualified biologist who has been given authorization by the appropriate agencies (i.e. USFWS and CDFW).

Burrowing owl

No evidence of BUOW was found in the survey area. No BUOW individuals or sign including pellets, feathers or whitewash were observed. Therefore, BUOW are currently considered absent from the Project site. However, because there is suitable creosote bush scrub and allscale scrub habitat on site and there are documented BUOW occurrences to the southeast of the Project area, future BUOW occupation could potentially occur.

Therefore, the following precautionary measure is recommended to avoid potential impacts to BUOW during operations of the burrow pit.

*The measures above for desert tortoise apply to this species as well.

Golden Eagle

The proposed work area will be outside of the direct line of site and over 2,500 feet away from nesting GOEA. Project-related impacts to GOEA will be less than significant and no direct impacts will result.

Since the south half of the Project boundary provides potentially suitable nesting habitat for GOEA the following precautionary measure is recommended to avoid potential impacts to nesting GOEA during operations of the burrow pit.

1. Have a pre-construction survey performed to verify the continued absence of this species in the area of operations.
2. If GOEA are found, avoid work during the nesting season for this species which is February 1-August 31.

Nesting Birds

The federal Migratory Bird Treaty Act (MBTA) of 1918 (16 U.S.C 703-711) provides protection for nesting birds that are both residents and migrants whether or not they are considered sensitive by resource agencies. The MBTA makes it unlawful to take, possess, buy, sell, purchase, or barter any migratory bird listed under 50 CFR 10, including feathers or other parts, nests, eggs, or products, except as allowed by implementing regulations (50 CFR 21). The direct injury or death of a migratory bird, due to construction activities or other construction-related disturbance that causes nest abandonment, nestling abandonment, or forced fledging would be considered take under federal law. The USFWS, in coordination with the CDFW administers the MBTA. CDFW's authoritative nexus to MBTA is provided in FGC Sections 3503.5 which protects all birds of prey and their nests and FGC Section 3800 which protects all non-game birds that occur naturally in the State.

Vegetation suitable for nesting birds does exist within and adjacent to the Project area. Most birds are protected by the MBTA. In general, impacts to all bird species (common and special status) can be avoided by conducting work outside of the nesting season, which is generally January/February to August/September, and by conducting a worker environmental awareness training. However, if all work cannot be conducted outside of nesting season, a Project-specific Nesting Bird Management Plan can be prepared to determine suitable buffers.

- Preconstruction Nesting Bird Surveys are recommended prior to new land disturbing activities that fall within the bird nesting season (April 15 – August 31). The nesting bird surveys would serve to identify any active nests. If no active nests are found, no further action will be required. If an active nest is found, the biologist will set appropriate no-work buffers around the nest which will be based upon the nesting species, its sensitivity to disturbance, nesting stage and expected types, intensity and duration of disturbance. The nests and buffer zones shall be field checked weekly by a qualified biological monitor. The approved no-work buffer zone shall be clearly marked in the field, within which no disturbance activity shall commence until the biologist has determined the young birds have successfully fledged and the nest is inactive.

5 Literature Cited

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PLANT SPECIES OBSERVED

Latin Name	Common name	Growth form	Status	Family
<i>Hesperoyucca whipplei</i>	Chaparral yucca	Shrub	native	Agavaceae
<i>Yucca brevifolia</i>	Joshua tree	Tree	native	Agavaceae
<i>Yucca schidigera</i>	Mohave yucca	Tree	native	Agavaceae
<i>Ambrosia acanthicarpa</i>	Annual burrweed	Annual herb	native	Asteraceae
<i>Ambrosia dumosa</i>	Burro weed	Shrub	native	Asteraceae
<i>Ambrosia salsola</i>	Burrobrush	Shrub	native	Asteraceae
<i>Chaenactis fremontii</i>	Fremont pincushion	Annual herb	native	Asteraceae
<i>Chaenactis stevioides</i>	Esteve pincushion	Annual herb	native	Asteraceae
<i>Ericameria linearifolia</i>	Interior goldenbush	Shrub	native	Asteraceae
<i>Ericameria nauseosa</i>	Rubber rabbitbrush	Shrub	native	Asteraceae
<i>Ericameria teretifolia</i>	Green rabbitbrush	Shrub	native	Asteraceae
<i>Gutierrezia microcephala</i>	Sticky snakeweed	Shrub (stem succulent)	native	Asteraceae
			invasive non-	
<i>Lactuca serriola</i>	Prickly lettuce	Annual herb	native	Asteraceae
<i>Lasthenia gracilis</i>	Needle goldfields	Annual herb	native	Asteraceae
<i>Layia glandulosa</i>	White layia	Annual herb	native	Asteraceae
	California			
<i>Logfia filaginoides</i>	cottonrose	Annual herb	native	Asteraceae
<i>Malacothrix coulteri</i>	Snake's head	Annual herb	native	Asteraceae
<i>Malacothrix glabrata</i>	Desert dandelion	Annual herb	native	Asteraceae
<i>Senecio flaccidus</i>	Shrubby ragwort	Shrub	native	Asteraceae
<i>Stylocline micropoides</i>	Desert nest straw	Annual herb	native	Asteraceae
<i>Syntrichopappus lemmonii</i>	Lemmon's syntrichopappus	Annual herb	native	Asteraceae
<i>Tetradymia axillaris</i>	Catclaw horsebrush	Shrub	native	Asteraceae
<i>Tetradymia spinosa</i>	Spiny horsebrush	Shrub (stem succulent)	native	Asteraceae
<i>Uropappus lindleyi</i>	Silver puffs	Annual herb	native	Asteraceae
<i>Xylorhiza tortifolia</i>	Mojave woodyaster	Perennial herb	native	Asteraceae
<i>Amsinckia tessellata</i>	Devil's lettuce	Annual herb	native	Boraginaceae
<i>Cryptantha barbiger</i>	Bearded cryptantha	Annual herb	native	Boraginaceae
	Western forget me			
<i>Cryptantha circumscissa</i>	not	Annual herb	native	Boraginaceae
	Guadalupe island			
<i>Cryptantha maritima</i>	cryptantha	Annual herb	native	Boraginaceae
	Winged nut forget			
<i>Cryptantha pterocarya</i>	me not	Annual herb	native	Boraginaceae
	Chuckwalla			
<i>Pectocarya heterocarpa</i>	pectocarya	Annual herb	native	Boraginaceae
<i>Phacelia fremontii</i>	Fremont's phacelia	Annual herb	native	Boraginaceae
	Tansy leafed			
<i>Phacelia tanacetifolia</i>	phacelia	Annual herb	native	Boraginaceae
	Arizona popcorn			
<i>Plagiobothrys arizonicus</i>	flower	Annual herb	native	Boraginaceae
	Yellow tansy			
<i>Descurainia pinnata</i>	mustard	Annual herb	native	Brassicaceae
			invasive non-	
<i>Hirschfeldia incana</i>	Mustard	Perennial herb	native	Brassicaceae
<i>Sisymbrium altissimum</i>	Tumble mustard	Annual herb	non-native	Brassicaceae
<i>Thysanocarpus desertorum</i>	Narrow leaved lacepod	Annual herb	native	Brassicaceae
	Small flowered			
<i>Nemacladus sigmoideus</i>	nemacladus	Annual herb	native	Campanulaceae

Latin Name	Common name	Growth form	Status	Family
<i>Atriplex canescens</i>	Hoary saltbush	Shrub	native	Chenopodiaceae
<i>Crassula connata</i>	Sand pygmy weed	Annual herb	native	Crassulaceae
<i>Juniperus californica</i>	California juniper	Shrub	native	Cupressaceae
<i>Ephedra nevadensis</i>	Nevada ephedra	Shrub	native	Ephedraceae
<i>Acmispon strigosus</i>	Strigose lotus	Annual herb	native	Fabaceae
<i>Lupinus bicolor</i>	Lupine	Annual, Perennial herb	native	Fabaceae
<i>Lupinus concinnus</i>	Bajada lupine	Annual herb	native	Fabaceae
			invasive non-	
<i>Erodium cicutarium</i>	Coastal heron's bill	Annual herb	native	Geraniaceae
<i>Salvia carduacea</i>	Thistle sage	Annual herb	native	Lamiaceae
<i>Salvia dorrii</i>	Dorr's sage	Shrub	native	Lamiaceae
	Mexican bladder			
<i>Scutellaria mexicana</i>	sage	Shrub	native	Lamiaceae
	Veatch's blazing			
<i>Mentzelia veatchiana</i>	star	Annual herb	native	Loasaceae
<i>Camissoniopsis pallida</i>	Pale yellow sun cup	Annual herb	native	Onagraceae
	Clavate fruited			
<i>Chylismia claviformis</i>	primrose	Annual, Perennial herb	native	Onagraceae
<i>Tetrapteron palmeri</i>	Palmer's sun cup	Annual herb	native	Onagraceae
<i>Castilleja chromosa</i>	Desert paintbrush	Perennial herb	native	Orobanchaceae
<i>Eschscholzia</i>				
<i>glyptosperma</i>	Desert gold poppy	Annual herb	native	Papaveraceae
<i>Eschscholzia minutiflora</i>	Coville's pygmy			
<i>ssp. covillei</i>	poppy	Annual herb	native	Papaveraceae
	Foxtail chess,			
<i>Bromus madritensis</i>	foxtail brome	Annual grass	non-native	Poaceae
<i>Elymus elymoides</i>	Squirrel tail grass	Perennial grass	native	Poaceae
<i>Hilaria rigida</i>	Big galleta	Perennial grass	native	Poaceae
<i>Melica imperfecta</i>	Coast range melic	Perennial grass	native	Poaceae
			invasive non-	
<i>Schismus barbatus</i>	Old han schismus	Annual grass	native	Poaceae
<i>Stipa hymenoides</i>	Indian rice grass	Perennial grass	native	Poaceae
	Broad flowered			
<i>Gilia latiflora</i>	gilia	Annual herb	native	Polemoniaceae
<i>Gilia stellata</i>	Star gilia	Annual herb	native	Polemoniaceae
	California			
<i>Eriogonum fasciculatum</i>	buckwheat	Shrub	native	Polygonaceae
	Angle stermed			
<i>Eriogonum maculatum</i>	buckwheat	Annual herb	native	Polygonaceae
<i>Delphinium parishii</i>	Parish's larkspur	Perennial herb	native	Ranunculaceae
<i>Thamnosma montana</i>	Turpentine broom	Shrub	native	Rutaceae
<i>Lycium andersonii</i>	Anderson thornbush	Shrub	native	Solanaceae
<i>Cylindropuntia</i>				
<i>echinocarpa</i>	Silver cholla	Shrub (stem succulent)	native	Cactaceae
<i>Cylindropuntia</i>	Branched pencil			
<i>ramosissima</i>	cholla	Shrub (stem succulent)	native	Cactaceae
<i>Echinocereus</i>				
<i>engelmannii</i>	Calico cactus	Shrub (stem succulent)	native	Cactaceae

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

Scientific Name	Common Name	Federal Status	State Status	Other Statuses	Habitats	Potential To Occur
<i>Aquila chrysaetos</i>	golden eagle	None	None	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, Pinon & juniper woodlands, Upper montane coniferous forest, Valley & foothill grassland	Suitable habitat on south side of property boundary and known occurrences of nest sites within 3 miles of the Project site. Occurrence potential is moderate.
<i>Athene cunicularia</i>	burrowing owl	None	None	BLM Sensitive, CDFW Species of Special Concern, USFWS Birds of Conservation Concern	Coastal prairie, Coastal scrub, Great Basin grassland, Great Basin scrub, Mojavean desert scrub, Sonoran desert scrub, Valley & foothill grassland,	Suitable habitat on north half of property and known occurrences within 3 miles of the Project site. Occurrence potential is moderate.
<i>Falco mexicanus</i>	prairie falcon	None	None	CDFW Watch List, USFWS Birds of Conservation Concern	Great Basin grassland, Great Basin scrub, Mojavean desert scrub, Sonoran desert scrub, Valley & foothill grassland. Breeding sites located on cliffs. Forages far afield, even to marshlands and ocean shores.	Suitable habitat on north half of property and known occurrences within 3 miles of the Project site. Occurrence potential is moderate.
<i>Gymnogyps californianus</i>	California condor	Endangered	Endangered	Fully protected	Semi-arid mountain ranges surrounding the southern San Joaquin Valley	Outside of species current range. Species is absent.
<i>Toxostoma bendirei</i>	Bendire's thrasher	None	None	BLM Sensitive, CDFW Species of Special Concern, IUCN Vulnerable, NABCI Red Watch List, USFWS Birds of Conservation Concern	Migratory; local spring/summer resident in flat areas of desert succulent shrub/Joshua tree habitats in Mojave Desert. Nests in cholla, yucca, Palo Verde, thorny shrub, or small tree, usually 0.5 to 20 feet above ground.	Suitable habitat on north half of property and known occurrences within 3 miles of the Project site. Occurrence potential is moderate.

Scientific Name	Common Name	Federal Status	State Status	Other Statuses	Habitats	Potential To Occur
<i>Toxostoma lecontei</i>	Le Conte's thrasher	None	None	CDFW Species of Special Concern, NABCI Red Watch List, USFWS_BCC-Birds of Conservation Concern	Desert resident; primarily of open desert wash, desert scrub, alkali desert scrub, and desert succulent scrub habitats. Commonly nests in a dense, spiny shrub or densely branched cactus in desert wash habitat, usually 2-8 feet above ground.	Suitable habitat on north half of property and known occurrences within 3 miles of the Project site. Occurrence potential is moderate. Species present.
<i>Chaetodipus fallax pallidus</i>	pallid San Diego pocket mouse	None	None	CDFW Species of Special Concern	Desert border areas in eastern San Diego County in desert wash, desert scrub, desert succulent scrub, pinyon-juniper, etc. Sandy, herbaceous areas, usually in association with rocks or coarse gravel.	Potentially suitable habitat in adjacent areas. Species was not observed during survey. Occurrence potential is moderate.
<i>Corynorhinus townsendii</i>	Townsend's big-eared bat	None	None	BLM Sensitive, CDFW Species of Special Concern, IUCN Least 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.	Suitable habitat on site. Species was not observed during survey. Occurrence potential is moderate.
<i>Eumops perotis californicus</i>	western mastiff bat	None	None	BLM Sensitive, CDFW Species of Special Concern, WBWG High Priority	Many open, semi-arid to arid habitats, including conifer & deciduous woodlands, coastal scrub, grasslands, chaparral, etc. Roosts in crevices in cliff faces, high buildings, trees and tunnels.	Suitable habitat on site. Species was not observed during survey. Occurrence potential is moderate.
<i>Lasionycteris noctivagans</i>	silver-haired bat	None	None	IUCN Least Concern WBWG Medium Priority	Primarily a coastal and montane forest dweller, feeding over streams, ponds & open brushy areas. Roosts in hollow trees, beneath exfoliating bark, abandoned woodpecker holes, and rarely under rocks. Needs drinking water.	Marginally suitable habitat on site. Species was not observed during survey. Occurrence potential is low.

Scientific Name	Common Name	Federal Status	State Status	Other Statuses	Habitats	Potential To Occur
<i>Xerospermophilus mohavensis</i>	Mohave ground squirrel	None	Threatened	BLM Sensitive, IUCN Vulnerable	Open desert scrub, alkali scrub & Joshua tree woodland. Also feeds in annual grasslands. Restricted to Mojave Desert. Prefers sandy to gravelly soils, avoids rocky areas. Uses burrows at base of shrubs for cover. Nests are in burrows.	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.
<i>Gopherus agassizii</i>	desert tortoise	Threatened	Threatened	IUCN Vulnerable	Most common in desert scrub, desert wash, and Joshua tree habitats; occurs in almost every desert habitat. Require friable soil for burrow and nest construction. Creosote bush habitat with large annual wildflower blooms preferred.	Suitable habitat in the flatter portions of the site surrounding the hillside rock outcrops. No evidence of this species was observed during survey. Occurrence potential is low to moderate.
<i>Acanthoscyphus parishii</i> var. <i>goodmaniana</i>	Cushenbury oxytheca	Endangered	None	1B.1	On limestone talus and rocky slopes in pinyon and juniper woodland, 1400-2360 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	1B.1	On carbonate soils in Joshua Tree Woodland and Pinyon-Juniper Woodland, 1200-1900 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>Boechera shockleyi</i>	Shockley's rockcress	None	None	2B.2	Ridges, rocky outcrops, and openings on limestone or quartzite within pinyon and juniper woodland, 875-2515 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.

Scientific Name	Common Name	Federal Status	State Status	Other Statuses	Habitats	Potential To Occur
<i>Calochortus striatus</i>	alkali mariposa-lily	None	None	1B.2	Alkaline meadows and washes in chaparral, chenopod scrub, Mojavean desert scrub, meadows and seeps, 70-1600 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>Canbya candida</i>	white pygmy-poppy	None	None	4.2	Gravelly, sandy, and granitic soils in Joshua tree woodland, Mojavean desert scrub, pinyon and juniper woodland, 600-1460 m	Low to no probability of occurrence. No carbonate/limestone soil habitat on site. Species not found on site during surveys.
<i>Cryptantha clokeyi</i>	Clokey's cryptantha	None	None	1B.2	Sandy or gravelly soils in Mojavean desert scrub/creosote bush scrub, 750-1890 m	Moderate probability of occurrence. Several known occurrences are ≤ 10 km by air. Species not found on site during surveys.
<i>Cymopterus multinervatus</i>	purple-nerve cymopterus	None	None	2B.2	Sandy or gravelly soils in Mojavean desert scrub, pinyon and juniper woodland, 765-2195 m	Moderate probability of occurrence. Several known occurrences are ≤ 10 km by air. Species not found on site during surveys.
<i>Diplacus mohavensis</i>	Mojave monkeyflower	None	None	1B.2	Dry sandy or rocky washes along the Mojave River, 660-1270 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>Elymus salina</i>	Salina Pass wild rye	None	None	2B.3	Rocky sites in Pinyon & juniper woodlands, 880-2865 m	No pinyon juniper woodland on site. Probability of occurrence is low. Species not found on site during surveys.

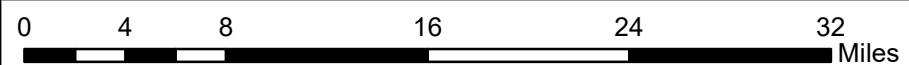
Scientific Name	Common Name	Federal Status	State Status	Other Statuses	Habitats	Potential To Occur
<i>Menodora spinescens</i> var. <i>mohavensis</i>	Mojave menodora	None	None	1B.2	Rocky hillsides, canyons, and Andesite gravel within Mojavean desert scrub, 700-1405 m	Moderate probability of occurrence. Suitable habitat on site, nearest occurrence is 18.5 km ENE by air. Species not found on site during surveys.
<i>Mentzelia tridentata</i>	creamy blazing star	None	None	1B.3	Mojavean desert scrub, creosote bush scrub, 545-1100 m	Moderate probability of occurrence. Suitable habitat on site, nearest occurrence is 18.5 km ENE by air. Species not found on site during surveys.
<i>Pediomelum castoreum</i>	Beaver Dam breadroot	None	None	1B.2	Sandy soils, washes, and roadcuts in Joshua tree woodland and Mojavean desert scrub, 640-1485 m	Moderate probability of occurrence. Suitable habitat on site, nearest occurrence is 18.5 km ENE by air. Species not found on site during surveys.
<i>Phacelia parishii</i>	Parish's phacelia	None	None	1B.1	Alkaline flats and slopes or clay soils within Mojavean desert scrub and playas, 540-875 m	Low to no probability of occurrence. No alkaline habitat or clay soils on site outside of distribution of the species. Species not found on site during surveys.
<i>Plagiobothrys parishii</i>	Parish's popcornflower	None	None	1B.1	Alkaline soils within mesic sites in Great Basin scrub and Joshua tree woodland, 750-1400 m	Low to no probability of occurrence. No alkaline habitat or clay soils on site outside of distribution of the species. Species not found on site during surveys.

Scientific Name	Common Name	Federal Status	State Status	Other Statuses	Habitats	Potential To Occur
<i>Puccinellia parishii</i>	Parish's alkali grass	None	None	1B.1	Alkali springs and seeps in deserts. 700-1000 m.	Low to no probability of occurrence. No alkaline habitat or clay soils on site outside of distribution of the species. Species not found on site during surveys.
<i>Puccinellia simplex</i>	California alkali grass	None	None	1B.2	Meadows and seeps, chenopod scrub, valley and foothill grasslands, vernal pools, 1-915 m	Low to no probability of occurrence. No suitable habitat on site.. Species not found on site during surveys.
<i>Rosa woodsii</i> var. <i>glabrata</i>	Cushenbury rose	None	None	1B.1	Mojavean desert scrub, springs, 1095-1220 m	occurrence. Appropriate habitat on site, nearest occurrence is >30 km E by air. Species not found on site during surveys.
<i>Saltugilia latimeri</i>	Latimer's woodland-gilia	None	None	1B.2	Rocky or sandy substrate in washes or limestone within chaparral, Mojavean desert scrub, and pinyon and juniper woodland, 120-2200 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>Sidalcea neomexicana</i>	salt spring checkerbloom	None	None	2B.2	Alkali springs and marshes within chaparral, coastal scrub, lower montane coniferous forest, Mojavean desert scrub, 3-2380 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>Sidalcea pedata</i>	bird-foot checkerbloom	Endangered	Endangered	1B.1	Moist meadows in open woodland (yellow pine), 1520-2500 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.

Scientific Name	Common Name	Federal Status	State Status	Other Statuses	Habitats	Potential To Occur
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, <i>Aplodontia rufa</i> ssp. <i>phaea</i> is ranked G5T2. The G-rank refers to the whole species range i.e., <i>Aplodontia rufa</i> . The T-rank refers only to the global condition of ssp. <i>phaea</i> . 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)						



Date: 8/6/2019



**Figure 1 - Regional Overview
Site Vicinity**

Service Layer Credits: Esri, HERE, Garmin, (c) OpenStreetMap contributors
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Esri, HERE, Garmin, © OpenStreetMap contributors, and the GIS user community

Cove Burrow Pit

Legend

 All Parcels

Exeter St

Cove Rd

Cove Rd

Moreno Rd

Holmes Rd

Bluebird Ln

Cove Rd

Date: 8/6/2019

0 0.05 0.1 0.2 0.3 0.4 Miles

Imagery Date: 8/6/2017

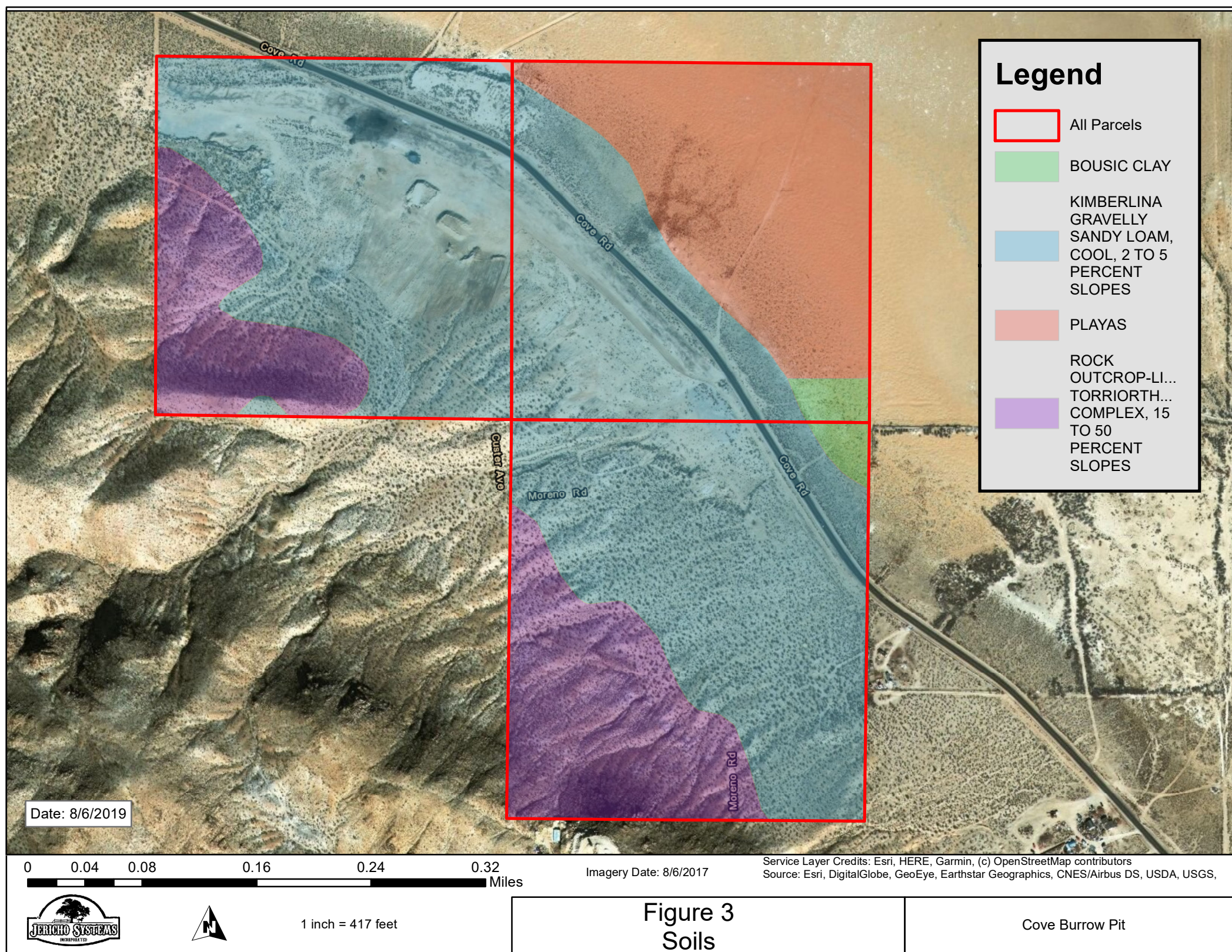
Service Layer Credits: Esri, HERE, Garmin, (c) OpenStreetMap contributors
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS,

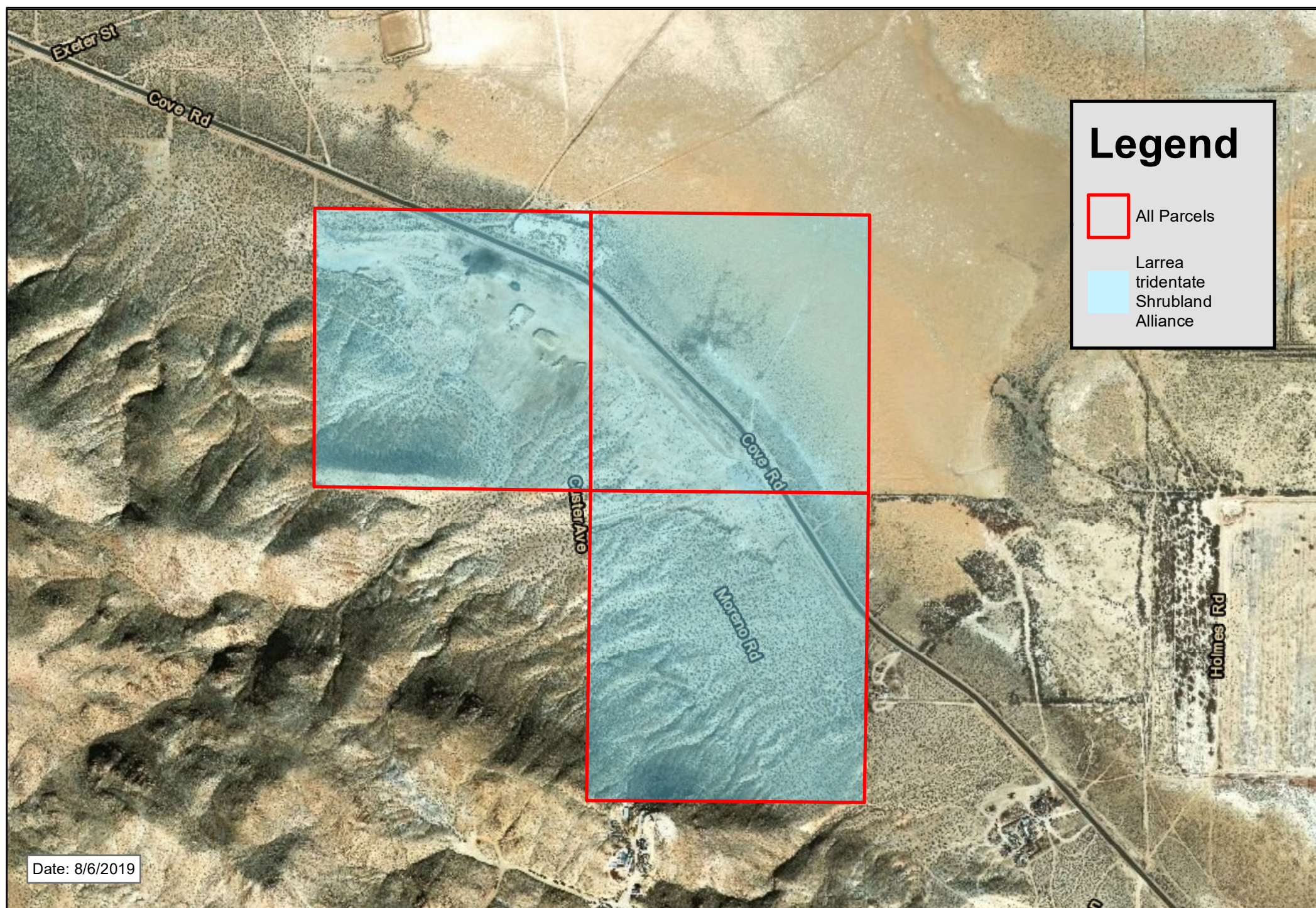


1 inch = 688 feet

Figure 2
Site Location

Cove Burrow Pit

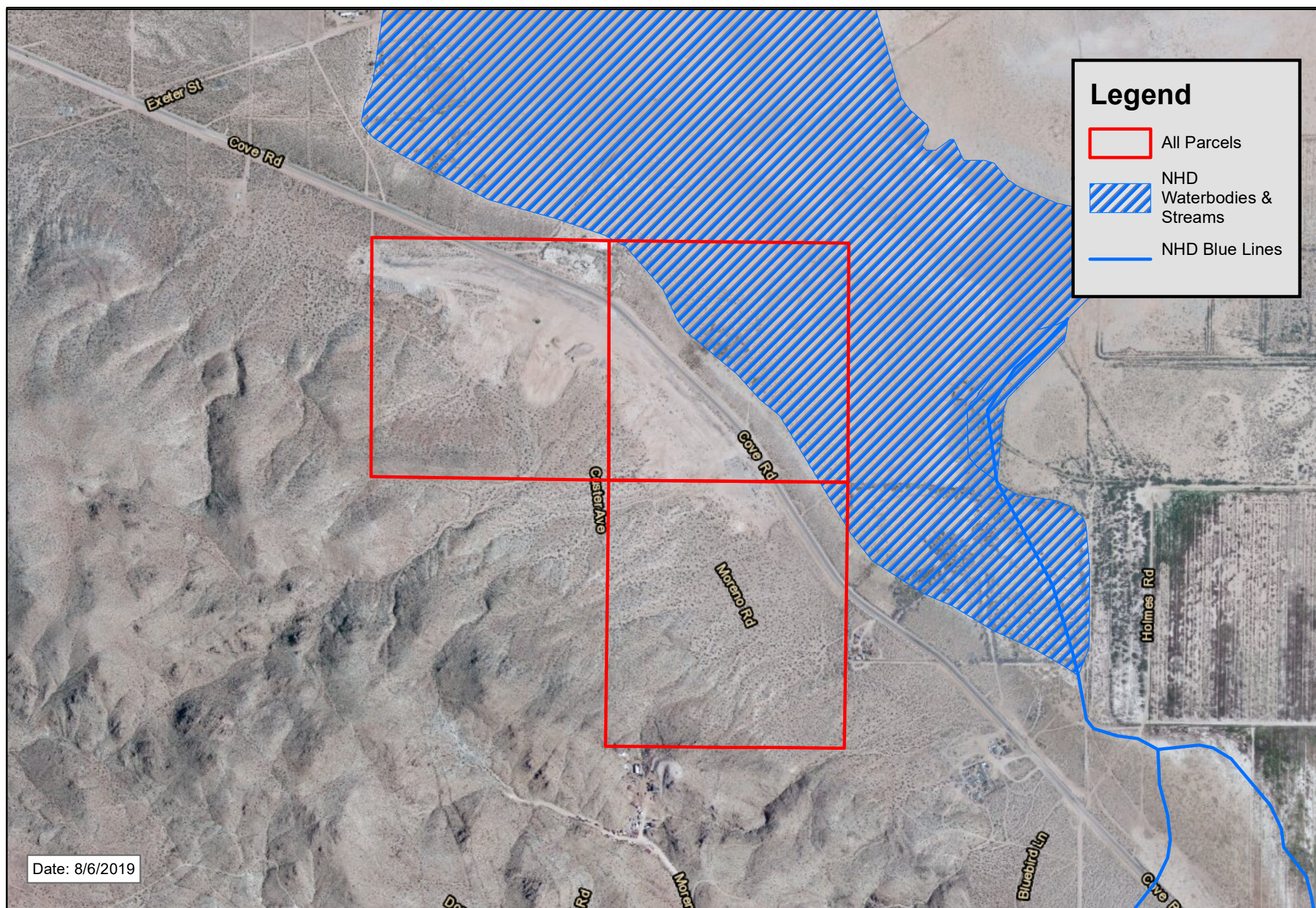




1 inch = 573 feet

Figure 4
Vegetation Alliances

Cove Burrow Pit



0 0.05 0.1 0.2 0.3 0.4
Miles

Imagery Date: 8/6/2017

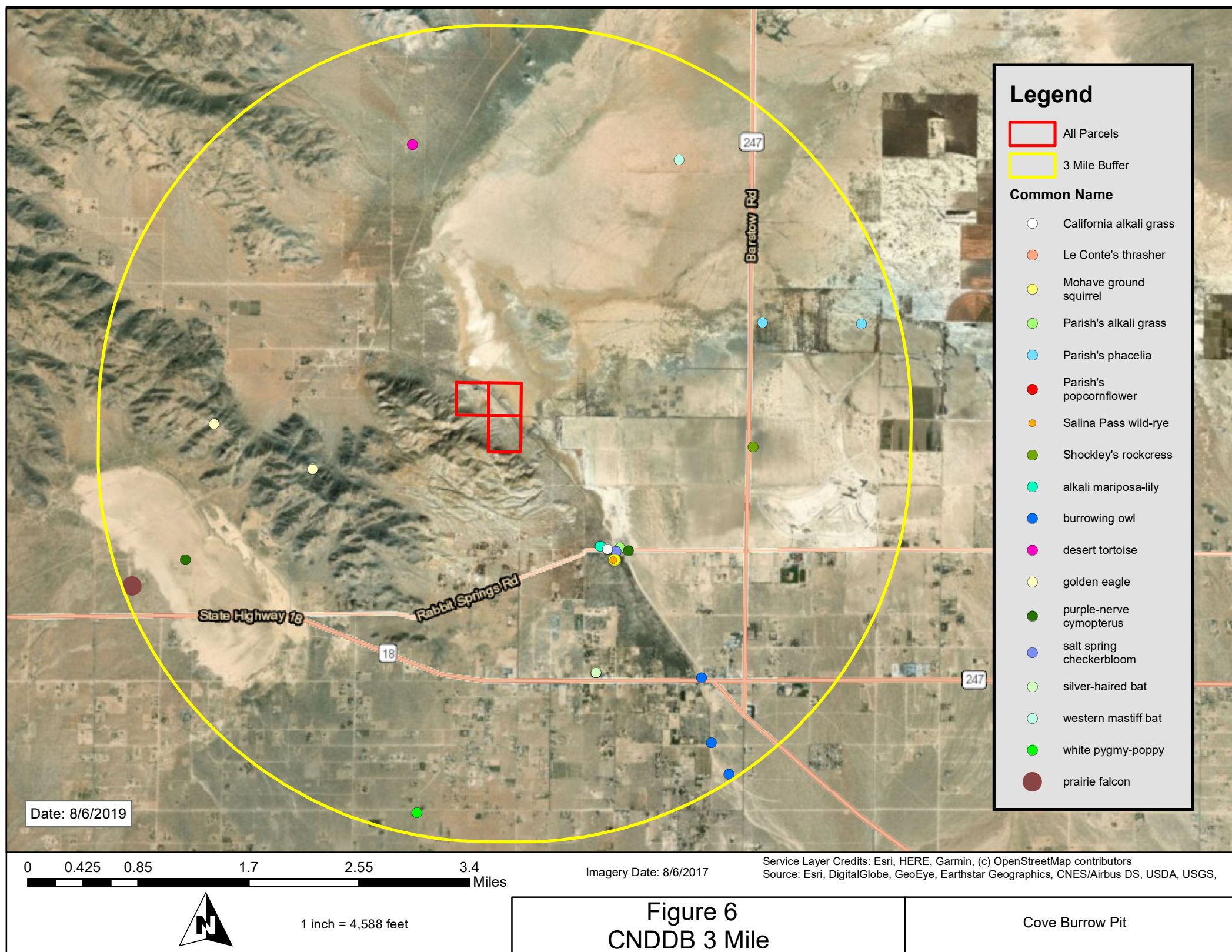
Service Layer Credits: Esri, HERE, Garmin, (c) OpenStreetMap contributors
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS,



1 inch = 667 feet

Figure 5
National Hydrography Dataset (NHD)
Streams and Waterbodies

Cove Burrow Pit



Cove Burrow Pit Site Photos – April 2019



Photo 1.
Typical view of
habitat
conditions near
Cove Rd.



Photo 2.
Typical view
of habitat
conditions in
survey buffer
near Cove Rd.



Photo 3.
Looking east
along northern
toe of slope
south of Cove
Rd.



Photo 4.
Looking
southeast
from south
side of Exeter
St.



Photo 5.
Aerial view
looking west
down north
side of Site
along
southern side
of Cove Rd.
and Exeter St.



Photo 6.
Looking
northeast from
eastern
summit over
Cove Rd.

Regulatory Framework

Federal Endangered Species Act (ESA)

The U.S. Fish and Wildlife Service (USFWS) administers the federal ESA of 1973. The ESA provides a legal mechanism for listing species as either threatened or endangered, and a process of protection for those species listed. Section 9 of the ESA prohibits "take" of threatened or endangered species. The term "take" means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in such conduct. "Take" can include adverse modification of habitats used by a threatened or endangered species during any portion of its life history. Under the regulations of the ESA, the USFWS may authorize "take" when it is incidental to, but not the purpose of, an otherwise lawful act. Take authorization can be obtained under Section 7 or Section 10 of the act.

California Endangered Species Act (CESA)

The CDFW, formerly Fish and Game, administers the State CESA. The State of California considers an endangered species one whose prospects of survival and reproduction are in immediate jeopardy. A threatened species is one present in such small numbers throughout its range that it is likely to become an endangered species soon, in the absence of special protection or management. And a rare species is one present in such small numbers throughout its range that it may become endangered if its present environment worsens. Rare species applies to California native plants. Further, all raptors and their nests are protected under Section 3503.5 of the California Fish and Game Code (FGC). Species that are California fully protected include those protected by special legislation for various reasons, such as the California condor. Species of Special Concern (SSC) is an informal designation used by CDFW for some declining wildlife species that are not proposed for listing as threatened or endangered. This designation does not provide legal protection but signifies that these species are recognized as sensitive by CDFW.

Migratory Bird Treaty Act (MBTA)

Nesting birds are protected under the federal Migratory Bird Treaty Act (MBTA) of 1918 (16 U.S.C 703-711). The MBTA provides protection for nesting birds that are both residents and migrants whether or not they are considered sensitive by resource agencies. The MBTA prohibits take of nearly all native birds. The MBTA makes it unlawful to take, possess, buy, sell, purchase, or barter any migratory bird listed under 50 CFR 10, including feathers or other parts, nests, eggs, or products, except as allowed by implementing regulations (50 CFR 21). The direct injury or death of a migratory bird, due to construction activities or other construction-related disturbance that causes nest abandonment, nestling abandonment, or forced fledging would be considered take under federal law. The USFWS, in coordination with the CDFW administers the MBTA. CDFW's authoritative nexus to MBTA is provided in FGC Sections 3503.5 which protects all birds of prey and their nests and FGC Section 3800 which protects all non-game birds that occur naturally in the State.

Clean Water Act (CWA)

The CWA is the principal federal law that governs pollution in the nation's lakes, rivers, and coastal waters. Originally enacted in 1972 as a series of amendments to the Federal Water Pollution Control Act of 1948, the Act was last amended in 1987. The overriding purpose of the CWA is to "restore and maintain the chemical, physical and biological integrity of the nation's waters." The statute employs a variety of regulatory and non-regulatory tools to eliminate the discharge of pollutants into the nation's waters and achieve water quality that is both "swimmable and fishable".

Under Section 404 of the CWA, the Corps has primary federal responsibility for administering regulations that concern the discharge of dredged or fill material into WoUS (including wetlands). 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).

The limit of the Corps jurisdiction for non-tidal waters (including non-tidal perennial and intermittent watercourses and tributaries to such watercourses) in the absence of adjacent wetlands is defined by the ordinary high-water mark (OHWM). The OHWM is defined as: “The line on the shore established by the fluctuations of water and indicated by physical characteristics such as a clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas” (Section 404 of the CWA; 33 CFR 328). Wetlands are defined as: “Those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions” (Section 404 of the CWA; 33 CFR 328).

Porter-Cologne Water Quality Control Act (Porter-Cologne)

The Porter-Cologne Water Quality Control Act (Porter-Cologne) is the principal State law that governs water protection efforts in California. Porter-Cologne establishes the State Water Resources Control Board (SWRCB) and each of the nine Regional Water Quality Control Boards (RWQCBs) as the principal state agencies for coordinating and controlling water quality in California. The RWQCB’s regulatory jurisdiction is pursuant to Section 401 of the Federal CWA. The RWQCB typically regulates discharges of dredged or fill material into WoUS. However, they also have regulatory authority over waste discharges into Waters of the State, which may be isolated, under Porter-Cologne. In the absence of a nexus with the Corps, the RWQCB requires the submittal of a Waste Discharge Requirement (WDR) application, which must include a copy of the Project Storm Water Pollution Prevention Plan (SWPPP) and a copy of the Project Water Quality Management Plan (WQMP), otherwise called a Standard Urban Stormwater Management Plan (SUSMP). The RWQCB’s role is to ensure that disturbances in the stream channel do not cause water quality degradation.

California Fish and Game Code (FGC)

Sections 1600 to 1616 of the California FGC require any person, state, or local government agency or public utility to notify the CDFW before beginning any activity that will substantially modify a river, stream, or lake. If it is determined that the activity could substantially adversely impact an existing fish and wildlife resource, then a Lake or Streambed Alteration Agreement is required.

Like the Corps and RWQCB, the CDFW also regulates discharges of dredged or fill material. The regulatory jurisdiction of CDFW is much broader however, than Corps or RWQCB jurisdictions. CDFW regulates **all** activities that alter streams and lakes and their associated habitats. The CDFW, through provisions of the FGC Sections 1601-1603 is empowered to issue agreements for any alteration of a river, stream, or lake where fish or wildlife resources may be adversely affected. Streams (and rivers) are defined by the presence of a channel bed and banks and at least an intermittent flow of water. The CDFW typically extends the limits of their jurisdiction laterally beyond the channel banks for streams that support riparian vegetation. In these situations, the outer edge of the riparian vegetation is generally used as the lateral

extent of the stream and CDFW jurisdiction. CDFW regulates wetland areas only to the extent that those wetlands are a part of a river, stream, or lake as defined by CDFW.