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Progress & Preservation

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October 1, 2020

Greg Epperson
63777 Singletree Lane
Joshua Tree, CA 92252

RE: Biological Resources Assessment, Jurisdictional Waters Delineation
Tentative Parcel Map No. 20249 Lot Split
Unincorporated Area of Joshua Tree, San Bernardino County, CA

Dear Mr. Epperson:

Jericho Systems, Inc. (Jericho) is pleased to provide this biological resources assessment (BRA) and jurisdictional delineation (JD) for Tentative Parcel Map No. 20249 Lot Split (Project).

This report addresses potential project-related effects 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 biological resources known to occur locally (within a 3-mile radius of the Project site boundaries) including the State- and federally-listed as threatened desert tortoise (*Gopherus agassizii*) [DT] and western burrowing owl (*Athene cunicularia hypugaea*) [BUOW] which is a State and federal Species of Special Concern (SSC).

This report also addresses resources protected under the 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.

PROJECT LOCATION

The approximately 5-acre Project site is located at 63777 Singletree Lane in Joshua Tree, identified as Assessor Parcel Number (APN): 0589-213-18 and is bounded by Singletree Lane on the north and rural large lot residential on the west and east, and vacant property on the south. The Project site can be found on the *Joshua Tree South* U.S. Geological Survey 7.5-minute series topographic map in Section 8, Township 1 South and Range 7 East (Figures 1-3).

PROJECT UNDERSTANDING

A single-family residential use exists on the portion of the property adjacent to Singletree Lane. The Project is to create a tentative parcel map (TPM) 20249 to subdivide 5 gross acres into two, 2.5 acre parcels on the property which is currently zoned Joshua Tree/rural living (JT/RL) in the Joshua Tree community of the incorporated area of San Bernardino. The County, per their letter dated August 18, 2020, is requiring the following to process the application: *General Biological Resources Assessment and Endangered Species Report – focusing on Desert Tortoise –Medium Population.*

ENVIRONMENTAL SETTING

The Project site occurs in southwestern portion of the in the County of San Bernardino within the Mojave Desert Ecoregion. The Mojave Desert Ecoregion is bounded by the Sierra Nevada Mountains to the west, the Great Basin Ecoregion to the north, the Apache Highlands Ecoregion and the Colorado Plateau Ecoregion to the east, the Sonoran Desert Ecoregion to the southeast and south, and the California South Coast Ecoregion to the southwest An Ecoregion is a regional area that has similar ecosystems in terms of type, quality, and quantity of environmental resources.

Currently, a total of 130 natural plant alliances have been documented within the Mojave Desert. Similarly, national databases (e.g., LandFire) describe nearly a hundred different ecological systems in the ecoregion. Creosote bush scrub, succulents, and yucca-blackbrush community types dominate the Mojave with dominant species including creosote bush (*Larrea tridentata*), white bursage (*Ambrosia dumosa*), four-winged salt bush (*Atriplex canescens*), Mojave yucca (*Yucca schidigera*), blackbrush (*Coleogyne ramossissima*) and Joshua tree (*Yucca brevifolia*). Upper elevation community types occur as 'sky islands' on mountains that rise to more than 11,000 feet in elevation. These areas contain some of the ecoregion's most isolated communities and species and harbor high levels of endemism.

Hydrologically, the Project site is located within the Southern Mojave hydrologic area (18100100), within the Quail Wash watershed (HUC 10 and 12) and Warren Valley Groundwater Basin.

The climate and environment of the Joshua Tree area is typical of southern California "high desert" country, so-called because of its higher elevation than the Colorado Desert to the southeast. The climate is marked by extremes in temperature and aridity, with summer highs reaching well over 100ºF and winter lows dipping to 39. Average annual precipitation 8 inches.

The immediate vicinity of the Project area consists of low-density rural residential development an unpaved roadways. Site elevation averages 3,400 feet (1,036 meters).

METHODS

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

Sensitive Biological Resources

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 *Joshua Tree South* USGS 7.5 minute series quadrangle to determine which species and/or habitats would be expected to occur on 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

On August 14, 2020, Jericho Biologists Shay Lawrey and Christian Nordal conducted a field survey of the Project site and survey buffer of 300 feet with binoculars since the survey buffer area was private property. Both surveyors are qualified biologist with advanced degrees in Biology and several years of experience surveying for the sensitive species known to in California. The surveyors conducted the survey by walking transects spaced approximately 30 feet apart, which provided 100 percent visual coverage of the ground surface (Figure 4). Weather conditions were sunny with clear skies. Survey hours of spanned from 6:30 a.m. to 9:00 a.m. with temperatures ranging from 79 degrees Fahrenheit (° F) to 86° F and no wind.

The surveyors focused on the sensitive species known to occur locally, including burrowing owl (BUOW), Mohave Ground Squirrel (MGS), and desert tortoise (DT) and the habitat elements specifically required by these species. The site survey included a review of reported occurrences of the BUOW and DT within 3-mile radius of the Project facility areas (CNDDB 2020, Figure 4). They examined natural and non-natural substrates for burrows to determine size, shape, and aspect. They looked for scat, feathers, cast pellets, prey remains, white wash and carcasses. The site was also assessed for soil type and level of friability as well as habitat type and habitat structure.

The desert tortoise survey was 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 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). 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 facility areas, the 300-foot survey buffer around perimeter of the Project site with binoculars.

Wildlife species were detected during field surveys by sight, calls, tracks, scat, or other signs. In addition to species observed, expected wildlife usage of the site was determined according to known habitat preferences of regional wildlife species and knowledge of their relative distributions in the area.

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.

Regarding jurisdictional waters, the surveyors looked for indicators of active surface flow and corresponding 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. Suspected jurisdictional areas were checked for the presence of definable channels, soils, and hydrology.

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

Habitat

Soils on site are sandy, with a diverse habitat consisting of creosote bush (*Larrea tridentata*) /Joshua tree scrub (*Larrea tridentate* shrubland alliance/*Yucca brevifolia* woodland alliance) (Sawyer, Keeler-Wolf, 2018). Dominant species include Joshua tree, creosote bush, silver cholla (*Cylindropuntia echinocarpa*), pencil cholla (*Cylindropuntia ramosissima*), sticky lessingia (*Lessingia glandulifera*), rubber rabbitbrush (*Ericameria nauseosa*), hedgehog cactus (*Echinocereus engelmannii*), and beavertail pricklypear (*Opuntia basilaris* var. *basilaris*)

Wildlife

No amphibian species were observed or otherwise detected within the Project site and none are expected to occur. Reptile species observed included the Great Basin Collared Lizard (*Crotaphytus bicinctores*), Western Zebra-tailed Lizard (*Callisaurus draconoides rhodostictus*), Desert Spiny Lizard (*Sceloporus magister*), Great Basin Fence Lizard (*Sceloporus occidentalis longpipes*), and western side-blotched lizard (*Uta stansburiana elegans*).

Avian species observed in the site consisted of resident species common to the area including Gambel's quail, red-tailed hawk, mourning dove, Costa's hummingbirds, Anna's hummingbird, American kestrel, Say's phoebe, verdin, bushtit, cactus wren and house finch.

Mammal species observed or otherwise detected on site were Desert Black-tailed Jackrabbit (*Lepus californicus deserticola*), desert cottontail (*Sylvilagus audubonii arizonae*), White-tailed Antelope Squirrel (*Ammospermophilus leucurus leucurus*), Merriam's Kangaroo Rat (*Dipodomys merriami merriami*). The only active burrows onsite were small mammal burrows such as kangaroo rat burrows, no active cottontail rabbit or jackrabbit burrows were observed on site.

Special Status Species and Habitats

According to the database queries, 20 sensitive species (16 vertebrates and 14 plant species) have been documented in the *Joshua Tree South* USGS quadrangle. Table 1, located at the end of the document, represents a compiled list of results from the IPaC, CNDDB and CNPSEI databases of species which have been documented within 3 miles of the Project areas and/or have the potential to occur based potentially suitable habitat adjacent to, or within, the Project facility areas. 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. Figure 5 shows the sensitive species found within a 2-mile radius of the site.

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 CNDDB 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.

No State- and/or federally listed threatened or endangered species, USFWS-designated Critical Habitats, or other sensitive species were observed on site during the field surveys. However, there is some marginally suitable habitat in the undisturbed areas adjacent the site for sensitive species identified in the literature review (Table 1). These species include.

- Desert tortoise (DT)
- burrowing owl (BUOW)

Desert Tortoise – State and Federal threatened

The DT is a State- and federally listed threatened species 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 USFWS desert tortoise Critical Habitat overlay, the Project site is not within any USFWS designated desert tortoise Critical Habitat. DT are documented to occur locally, specifically within Joshua Tree National Park located 0.5 mile east/southeast of the Project site. The surrounding habitat is very suitable for DT. 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 absent from the Project site and adjacent areas that were surveyed with binoculars.

Western burrowing owl - State and Federal Species of Special Concern

The western BUOW is one of 18 New World Burrowing Owl subspecies, and one of only two in North America. The western BUOW ranges from Texas to California and north to southern Canada. Individuals of resident populations in southern California, northern Mexico, and Florida breed and overwinter in an area without a significant migration (Haug et al. 1993). BUOW are found across American open landscapes, showing activity chiefly in the daytime. In California, preferred habitat is generally typified by short, sparse vegetation with few shrubs, level to gentle topography and well-drained soils. In addition, BUOW may occur in some agricultural areas, ruderal grassy fields, vacant lots and pastures, and flood control facilities if the surrounding vegetation structure is suitable and there are useable burrows and foraging habitat in proximity.

Unique among North American raptors, the BUOW requires underground burrows or other cavities for nesting during the breeding season and for roosting and cover, year-round. Burrows used by the owls are usually dug by other species termed host burrowers. In California, California ground squirrel (Spermophilus beecheyi) and round-tailed ground squirrel (Citellus tereticaudus) burrows are frequently used by BUOW but they may use dens or holes dug by other fossorial species and/or human made structures such as cement culverts and pipes. They are active during the day and night and are generally observed in the early morning hours or at twilight.

BUOW have a high fidelity to their birth territory and they often prefer nesting in areas of high burrow densities. Breeding pairs are easily located within the surrounding of their nests (usually 90 feet) due to their territorial behavior. BUOW breeding season begins February 1 and extends to August 31. Pair formation can begin in February. Peak of the BUOW breeding season, commonly accepted in California, occurs between April 15 and July 15. April to mid-May is when most burrowing owls are in the egg laying and incubation stages. BUOW egg incubation period is about 27-28 days Chick rearing typically occurs between May 15 and July 1. July 15 is typically considered the late nestling period when most owls are spending time above ground. The non-breeding season (September 1 to January 31). BUOW are semi-colonial and will sometimes share a burrow for incubation and chick rearing.

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 Fish and Game Code (CDFG Code #3513 & #3503.5).

> *Findings*: 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. No burrows of appropriate size, shape or aspect for BUOW exist on the Project site. Based on the survey results BUOW are absent from the Project site.

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 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 a 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.

> *Findings*: Most birds are protected by the MBTA and there is vegetation suitable for nesting birds on site.

Joshua Tree

Joshua trees are evergreen, tree-like *Yucca* species that typically grow from 5 to 15 meters (m)(16 to 50 feet (ft)) tall with older plants often exhibiting extensive branching. Joshua tree are limited to the Mojave Desert where they are found in a variety of habitats at elevations between 400 m and 2200 m. Joshua trees can tolerate temperatures between -13 F to 124 F and precipitation between 3.9 inches (in) to 10.6 in.

Joshua trees are capable of several forms of reproduction (sexual reproduction, asexual via rhizomes, branch sprouts, or basal sprouts) with sexual reproduction typically occurring during wetter years.

California Endangered Species Act

On October 21, 2019, the Fish and Game Commission (FGC) received a petition from the Center for Biological Diversity to list the western Joshua tree as endangered under CESA. The CDFW completed its initial evaluation on March 11, 2020 to list Joshua tree as a threatened species and determined that there is sufficient scientific information to indicate that the listing may be warranted. CDFW recommends the petition to be accepted and considered, but as of the date of this report, the listing has not been accepted.

San Bernardino County Desert Native Plant Protection Ordinance

The County of San Bernardino's Desert Native Plant Protection Ordinance is outlined in Section 88.01.060. Desert Native Plant Protection., Chapter 88.01. Plant Protection And Management, Division 8. Resource Management And Conservation, Title 8. Development Code, Code of Ordinances, San Bernardino County.

The ordinance identifies the following or any part of the following, except the fruit, shall not be removed except under a Tree or Plant Removal Permit in compliance with § 88.01.050 (Tree or Plant Removal Permits).

(1) The following desert native plants with stems two inches or greater in diameter or six feet or greater in height:
  (A) *Dalea spinosa* (smoketree).
  (B) All species of the genus *Prosopis* (mesquites).
(2) All species of the family Agavaceae (century plants, nolinas, yuccas).
(3) Creosote Rings, ten feet or greater in diameter.
(4) All Joshua trees.
(5) Any part of any of the following species, whether living or dead:
  (A) *Olneya tesota* (desert ironwood).
  (B) All species of the genus *Prosopis* (mesquites).
  (C) All species of the genus *Cercidium* (palos verdes).

(d) Compliance with Desert Native Plants Act. Removal actions of all plants protected or regulated by the Desert Native Plants Act (Food and Agricultural Code §§ 80001 et seq.) shall comply with the provisions of the Act before the issuance of a development permit or approval of a land use application.

> <u>*Findings*</u>: There are several Joshua trees on site (Figure 6). The Project is a proposed lot split and will not result in impacts to Joshua trees.

Jurisdictional Delineation

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." Discharges of dredged or fill material in Waters of the U.S (WoUS) are regulated pursuant to Sections 404 and 401 of the CWA. The congressional intent of Section 404 of the CWA as articulated in Section 10 is to "maintain and

restore the chemical, physical, and biological integrity of the nation's waters." Section 404 of the CWA gives the USACE and the U.S. Environmental Protection Agency (EPA) regulatory and permitting authority regarding discharge of dredged or fill material into "navigable waters." Permits issued by the USACE in California require certification by the State of California that the proposed discharge complies with the requirements of the California Porter-Cologne Water Quality Control Act. These certifications are issued by the State Water Resources Control Board or one of the nine RWQCBs.

Waters are defined broadly under the CWA to include all traditionally navigable waters, including those used or susceptible for use in interstate commerce, including all waters subject to the ebb and flow of the tide, interstate waters, territorial seas, impoundments and tributaries. Waters may also include wetlands and other waters that are not traditionally navigable such as wetlands that are adjacent to traditionally navigable waters. Wetlands are defined under federal regulations 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. Wetlands generally include swamps, marshes, bogs, and similar areas."

US Army Corps of Engineers Regulated Activities

Pursuant to Section 404 of the CWA, the US Army Corps of Engineers (USACE) regulates the discharge (temporary or permanent) of dredged or fill material into Waters of the US (WoUS), including wetlands. A discharge of fill material includes, but is not limited to, grading, placing riprap for erosion control, pouring concrete, laying sod, and stockpiling excavated material into WoUS. Activities that generally do not involve a regulated discharge (if performed specifically in a manner to avoid discharges) include driving pilings, performing certain drainage channel maintenance activities, constructing temporary mining and farm/forest roads, and excavating without stockpiling.

The limit of USACE jurisdiction, excluding wetlands and tidal waters, is delineated using the Ordinary High Water Mark (OHWM), defined in CFR 328.3(e) as:

> *…that 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.*

On April 21, 2020, the United States Environmental Protection Agency (US EPA) and the USACE published, in the Federal Register, their final rule (2020 Rule) that revised the definition of "waters of the United States," narrowing the scope of waters subject to federal regulation under the Clean Water Act, particularly with respect to adjacent wetlands and ephemeral streams, and also abandons the "significant nexus text" in the 2015 Rule.

The 2020 Rule defines four categories of waters as jurisdictional:

1. *Waters which are traditionally thought of as "waters of the United States," those being the territorial seas and traditional navigable waters. 33 CFR 328.3(a).*
2. *Perennial and intermittent tributaries that contribute surface water flow to the territorial seas and navigable waters either directly or indirectly through other jurisdictional waters. 33 CFR 328.3(b).*
3. *Lakes, ponds, and impoundments that are standing bodies of water that contribute surface water flow in a typical year to a territorial sea or a traditional navigable water either directly or through another jurisdictional water. 33 CFR 328.3(c).*

4. *Wetlands that abut a territorial sea or traditional navigable water, or other jurisdictional water and that are inundated by flooding by a jurisdictional water in a typical year, are physically separated from a jurisdictional water by a natural berm, dune or similar feature or physically separated by an artificial structure so long as that artificial structure allows for a direct hydrologic surface connection between the wetlands and a jurisdictional water in a typical year. 33 CFR 328.3(c)*

The surface water flow is gauged in the "typical year" which is defined to mean "when precipitation and other climatic variables are within the normal periodic range (e.g. seasonally, annually) for the geographic area of the applicable aquatic resource based on a rolling thirty-year period." 33 CFR 328.3(c)(13). The "significant nexus test" with its reliance on whether a water has a significant nexus to another jurisdictional water has been abandoned in favor of this categorical approach.

The 2020 Rule excluded the following:

1. *Waters or water features that are not identified in paragraph (a)(1), (2), (3), or (4) of this section;*
2. *Groundwater, including groundwater drained through subsurface drainage systems;*
3. *Ephemeral features, including ephemeral streams, swales, gullies, rills, and pools;*
4. *Diffuse stormwater run-off and directional sheet flow over upland;*
5. *Ditches that are not waters identified in paragraph (a)(1) or (2) of this section, and those portions of ditches constructed in waters identified in paragraph (a)(4) of this section that do not satisfy the conditions of paragraph (c)(1) of this section;*
6. *Prior converted cropland;*
7. *Artificially irrigated areas, including fields flooded for agricultural production, that would revert to upland should application of irrigation water to that area cease;*
8. *Artificial lakes and ponds, including water storage reservoirs and farm, irrigation, stock watering, and log cleaning ponds, constructed or excavated in upland or in non-jurisdictional waters, so long as those artificial lakes and ponds are not impoundments of jurisdictional waters that meet the conditions of paragraph (c)(6) of this section;*
9. *Water-filled depressions constructed or excavated in upland or in non-jurisdictional waters incidental to mining or construction activity, and pits excavated in upland or in non-jurisdictional waters for the purpose of obtaining fill, sand, or gravel;*
10. *Stormwater control features constructed or excavated in upland or in non-jurisdictional waters to convey, treat, infiltrate, or store stormwater run-off;*
11. *Groundwater recharge, water reuse, and wastewater recycling structures, including detention, retention, and infiltration basins and ponds, constructed or excavated in upland or in non-jurisdictional waters; and*
12. *Wastewater treatment systems.*

"Ephemeral" is now defined as "surface water flowing or pooling only in direct response to precipitation (e.g. rain or snow fall)."

<u>*Findings*</u>: The Joshua Tree area is a closed system hyrdrologically and therefore has no significant nexus to a traditionally navigable water and therefore does not meet the definition of having federal waters of the U.S. where compliance with the CWA, Section 404, as administered through the USACE, would be required. The Regional Water Quality Control board also administers Section 401 of the CWA. If a Section 404 compliance is not required, then neither will the Section 401 compliance be required. No further investigation is required.

Activities Regulated by the State

A federal permit or license cannot be issued that may result in a discharge to WoUS unless certification under Section 401 of the CWA is granted or waived by EPA, the state, or the tribe where the discharge would originate (EPA 2010).

Pursuant to Section 401 of the CWA:

> *...any applicant for a federal permit for activities that involve a discharge to WoUS shall provide the federal permitting agency a certification from the state in which the discharge is proposed that states that the discharge will comply with the applicable provisions under the federal CWA.*

Therefore, before USACE will issue a Section 404 permit, applicants must apply for and receive a Section 401 water quality certification or waiver, as applicable. Under Section 401 of the CWA, all activities that are regulated at the federal level by USACE are also regulated at the state level.

Therefore, state jurisdiction usually includes all waters or tributaries to waters that are determined to be WoUS and, similar to WoUS, are typically delineated at the OHWM. State-regulated WoUS are overseen by the State Water Resources Control Board (SWRCB) and nine Regional Water Quality Control Boards (RWQCBs).

However, if waters are determined not to be WoUS, they may still be subject to state jurisdiction based on the Porter-Cologne Act, which are regulated by the SWRCB and the RWQCBs under California's Porter-Cologne Water Quality Control Act (Porter-Cologne). In April 2019, the SWRCB adopted a state wetlands definition and procedures for the discharge of dredged or fill material into waters of the State (collectively, the Procedures). The Procedures are expected to become effective in mid-2020. The Procedures establish a permit process for discharges to both wetland and non-wetland waters of the State. Under Porter-Cologne and the Procedures, "Waters of the State" are defined by the Porter-Cologne Act as "any surface water or groundwater, including saline waters, within the boundaries of the state." Under the Procedures, a water of the State is a wetland "if, under normal circumstances, (1) the area has continuous or recurrent saturation of the upper substrate caused by groundwater, or shallow surface water, or both, (2) the duration of such saturation is sufficient to cause anaerobic conditions in the upper substrate, and (3) the area's vegetation is dominated by hydrophytes or the area lacks vegetation." This definition varies from the federal definition in several respects, most notably that the state considers unvegetated features, such as mudflats or playas, to constitute wetlands.

California Fish and Game Code

Sections 1600 to 1616 of the California Fish and Game Code require any person, state, or local government agency or public utility (i.e., an entity) to notify the CDFW before beginning any activity that will divert the flow of or substantially modify a river, stream, or lake or result in the deposit of certain waste materials that may pass into a river, stream or lake. Following receipt of such a notification, CDFW determines whether the activity may affect fish and wildlife resources and, if it will, issues a "Lake and Streambed Alteration Agreement" to be entered into by the entity and CDFW and which authorizes the activity in question. CDFW defines the term "stream" as "a body of water that flows perennially or episodically and that is defined by the area in which water currently flows, or has flowed, over a given course during the historic regime [i.e., 'circa 1800 to the present'], and where the width of its course can reasonably be identified by physical or biological indicators." CDFW regulates rivers and streams to their

"maximum expression" on the landscape, often including the entire floodplain. *MESA Field Guide, Mapping Episodic Stream Activity* (2011).

> *Findings*: Stormflows sheetflow across the site in from the east toward the west. A small rock outcropping kicks a portion of the sheet flows to the north for an approximate 200-foot stretch. There are no banks in this area and the flows return to sheet flow after the 200-foot stretch. There are no streambeds or Waters of the State onsite that are subject to the FGC or Porter Cologne Act.. No further investigation is required.

CONCLUSIONS AND RECOMMENDATIONS

The proposed Project will not affect State or federally listed endangered, threatened species because none are present on site. In addition, the proposed Project will not adversely affect Critical Habitat as none exists in the Project area.

Vegetation on site has the potential to support nesting birds and migratory birds protected under the MBTA. To avoid impacts to nesting birds (common and special status) during the nesting season, the following recommendation is made:

> Bird nesting season generally extends from February 1 through September 15 in southern California and specifically, April 15 through August 31 for migratory passerine birds. To avoid impacts to nesting birds (common and special status) during the nesting season, a qualified Avian Biologist will conduct pre-construction Nesting Bird Surveys (NBS) within three days prior to project-related disturbance to nestable vegetation 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 as necessary 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 qualified biologist has determined the young birds have successfully fledged and the nest is inactive.

Joshua trees occur onsite. Upon final design and construction layout, potential impacts can be determined. At this time, no impacts are identified because the Project is a lot split.

Should future development impacts to Joshua trees be unavoidable, a relocation plan shall be prepared and approved by the County of San Bernardino and possibly the CDFW.

Should you have any questions or require further information, please contact me at (909) 915-5900 or shay@jericho-systems.com should you have any questions or require further information.

Sincerely,

Shay Lawrey, President

Attachments:

A. Photos
B. Figures
C. Table 1: Sensitive Species Potential to Occur

P1.

P2

P3

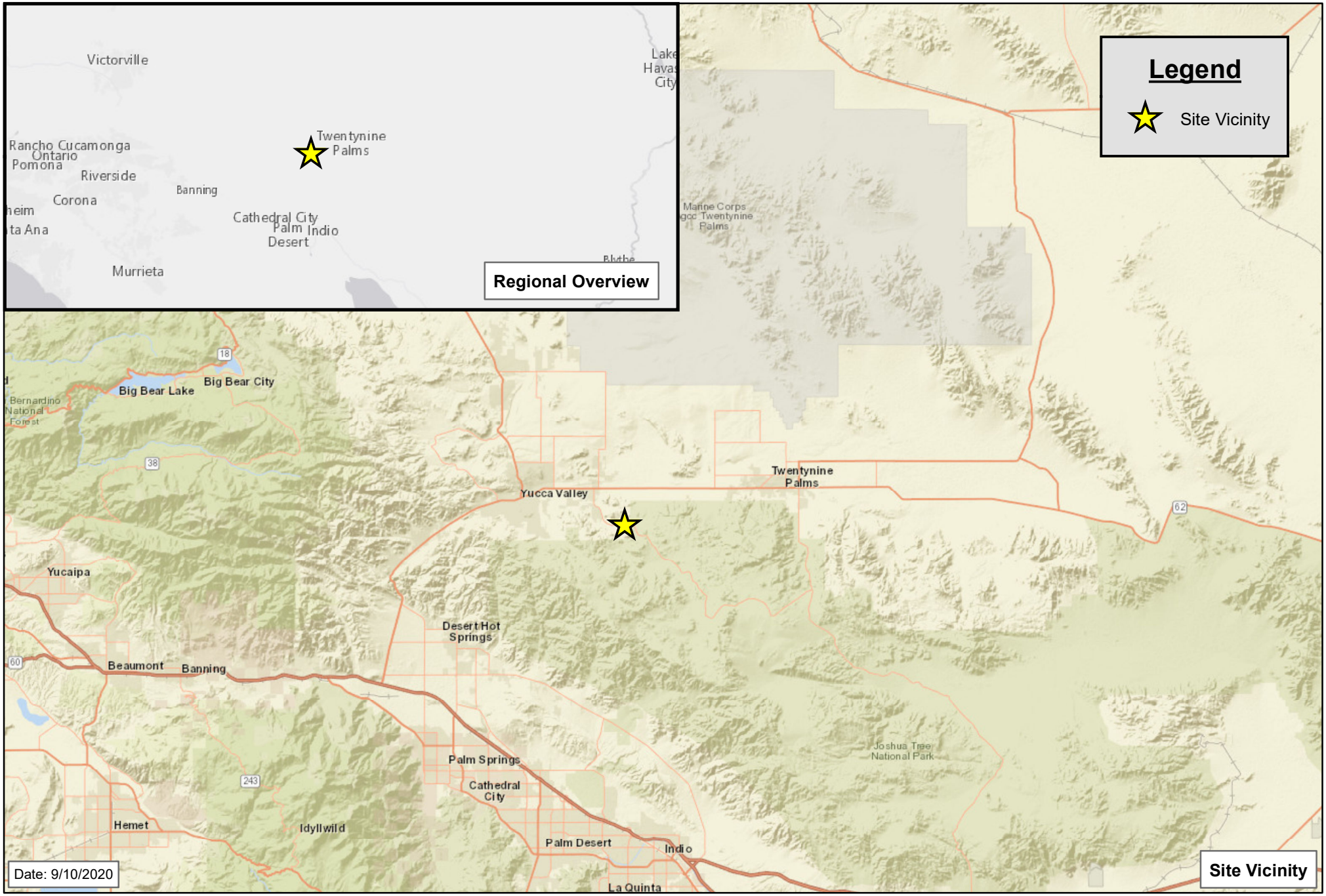
P4

P5

P6

P7

P8



Service Layer Credits: Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community

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Figure 1 - Regional Overview Site Vicinity

Greg Epperson

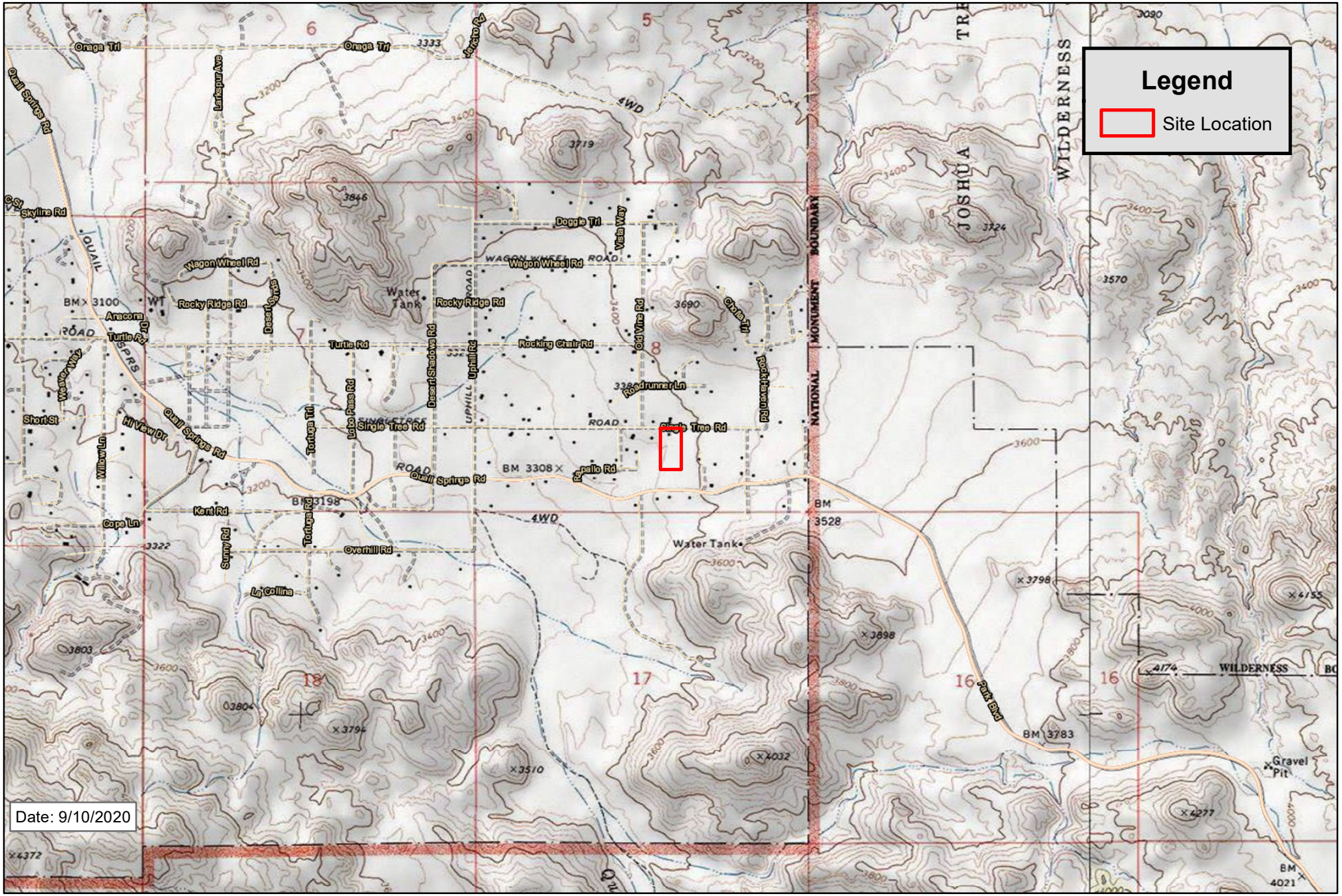

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Figure 2
Site Location

Greg Epperson

0 0.025 0.05 0.1 0.15 0.2 Miles

1 inch = 333 feet

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, AeroGRID, IGN, and the GIS User Community

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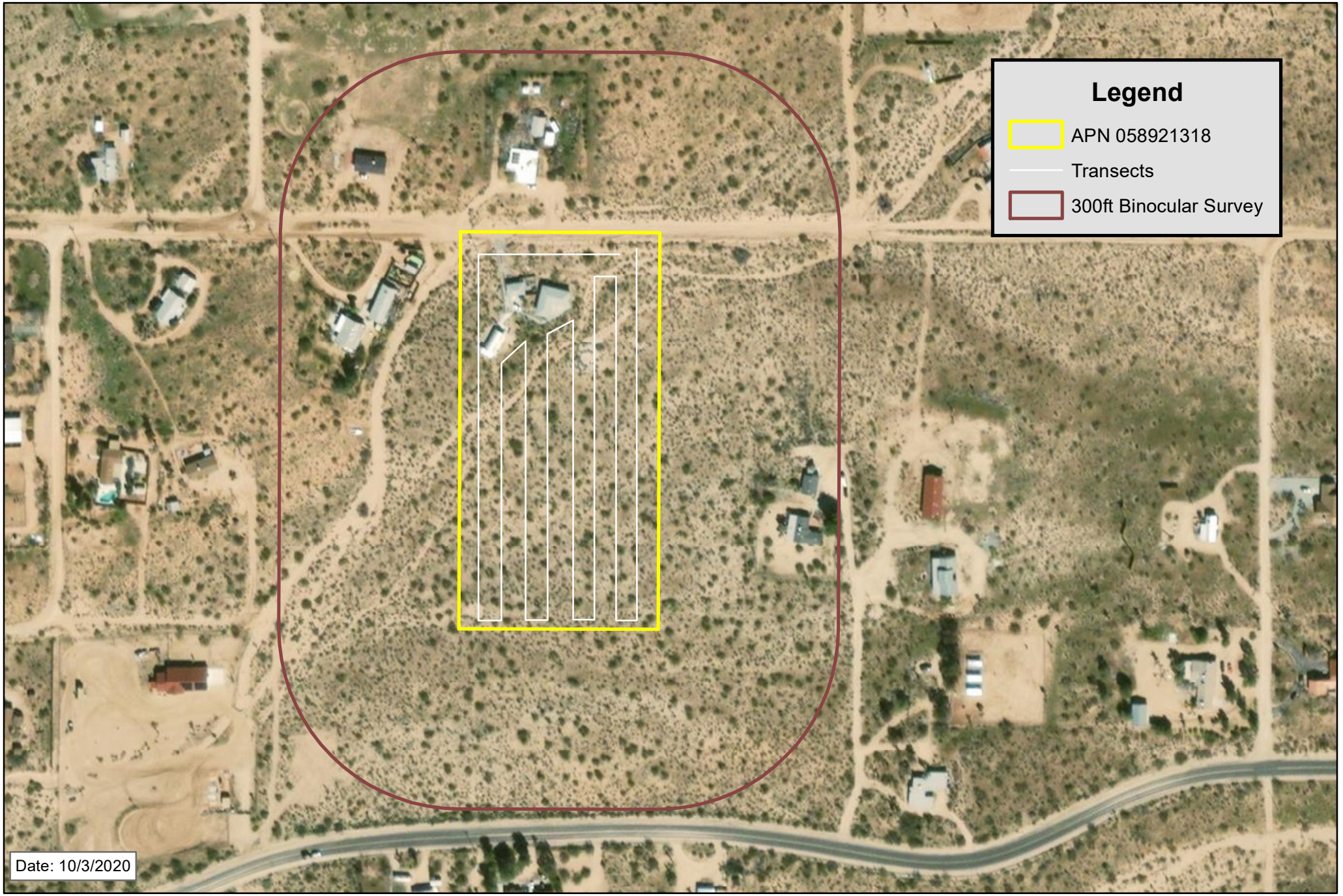
Progress & Preservation

Figure 3
Site Location

Greg Epperson



0 0.015 0.03 0.06 0.09 0.12 Miles

1 inch = 208 feet

Imagery Date: 2/18/2019

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

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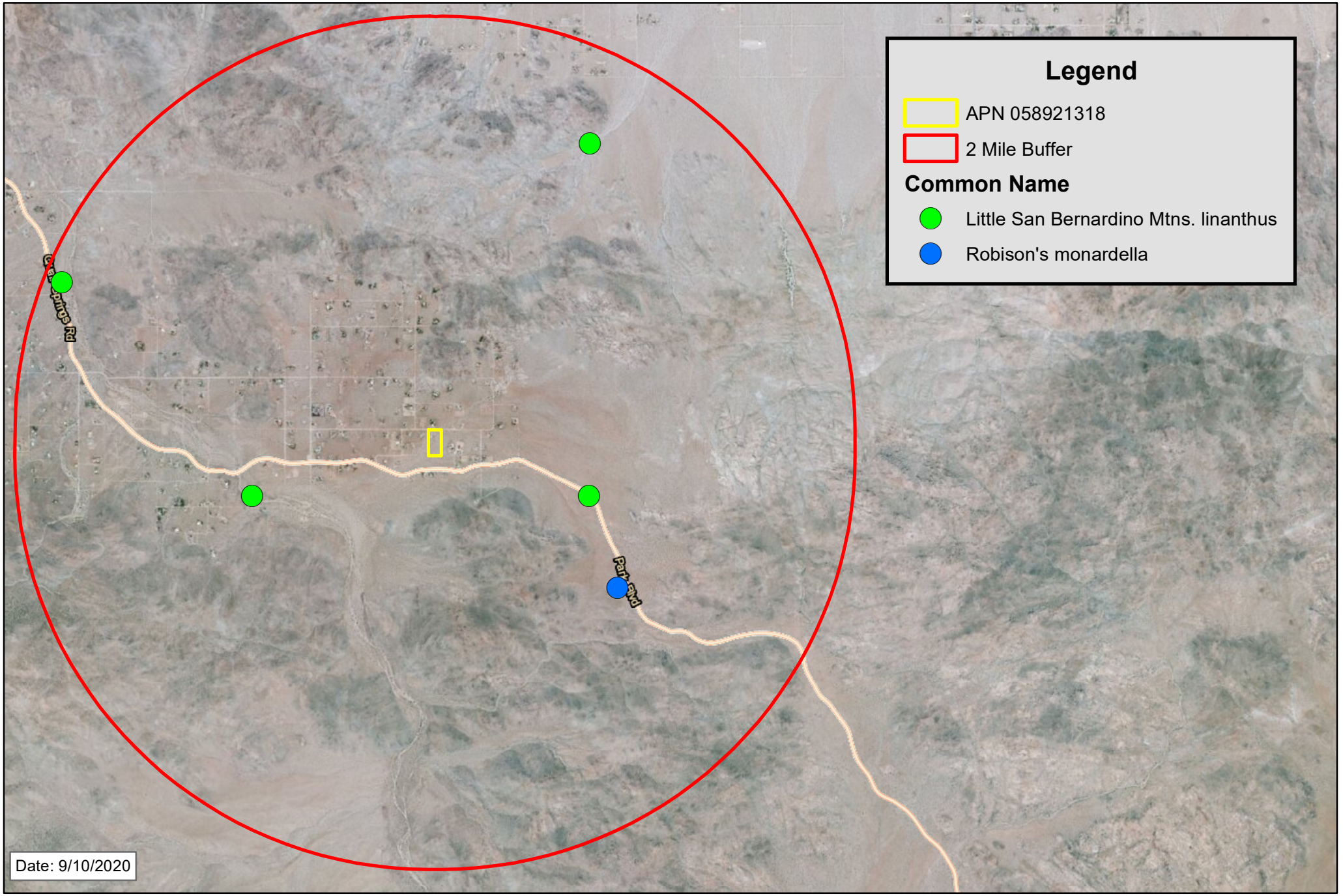
Figure 4
Survey Area

Greg Epperson



0 0.25 0.5 1 1.5 2 Miles

1 inch = 3,196 feet

Imagery Date: 2/18/2019

Service Layer Credits: Esri, HERE, Garmin, (c) OpenStreetMap contributors
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

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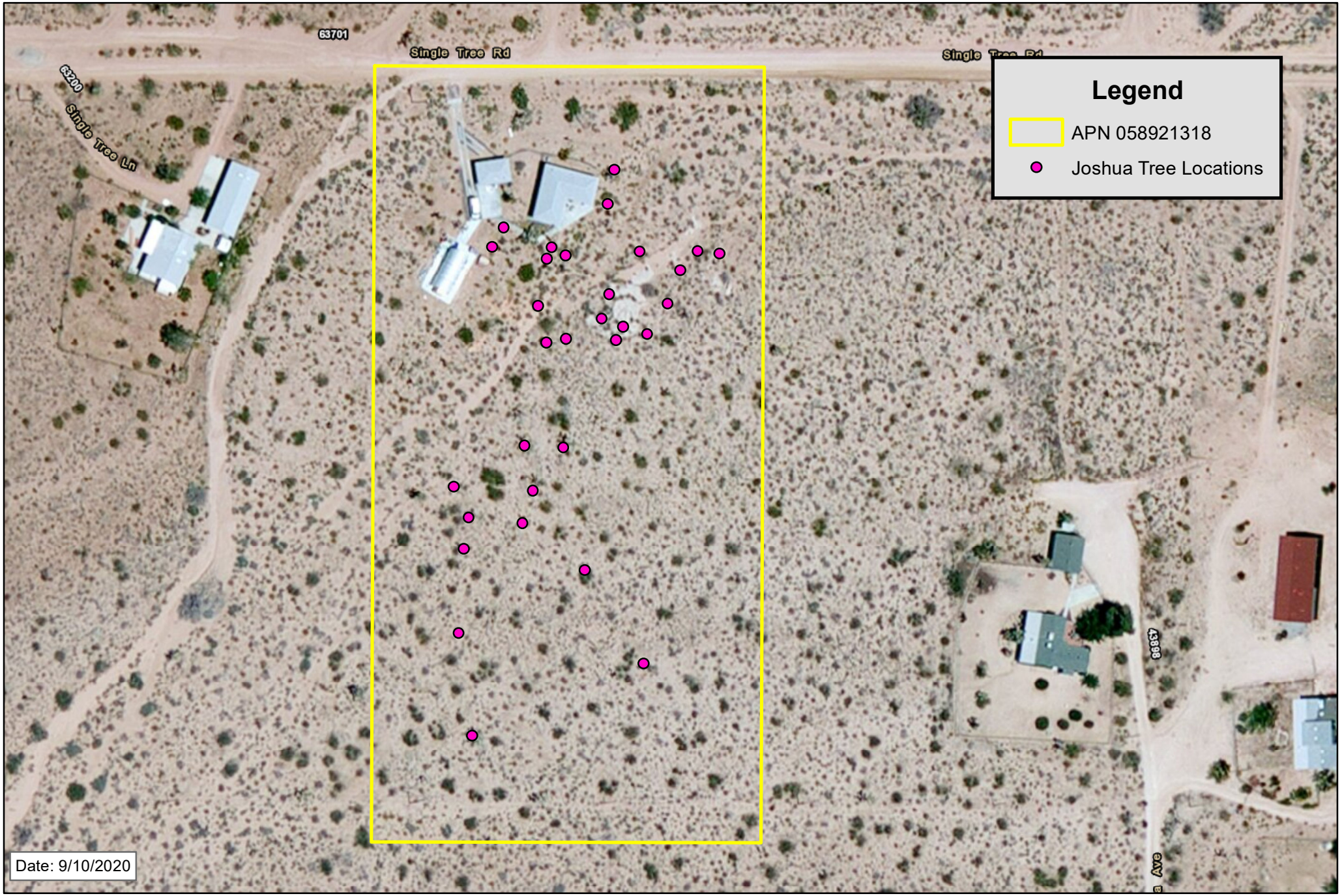
Figure 5
CNDDB

Greg Epperson



0 0.0075 0.015 0.03 0.045 0.06 Miles

1 inch = 107 feet

Imagery Date: 2/18/2019

Service Layer Credits: Esri, HERE, Garmin, (c) OpenStreetMap contributors
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

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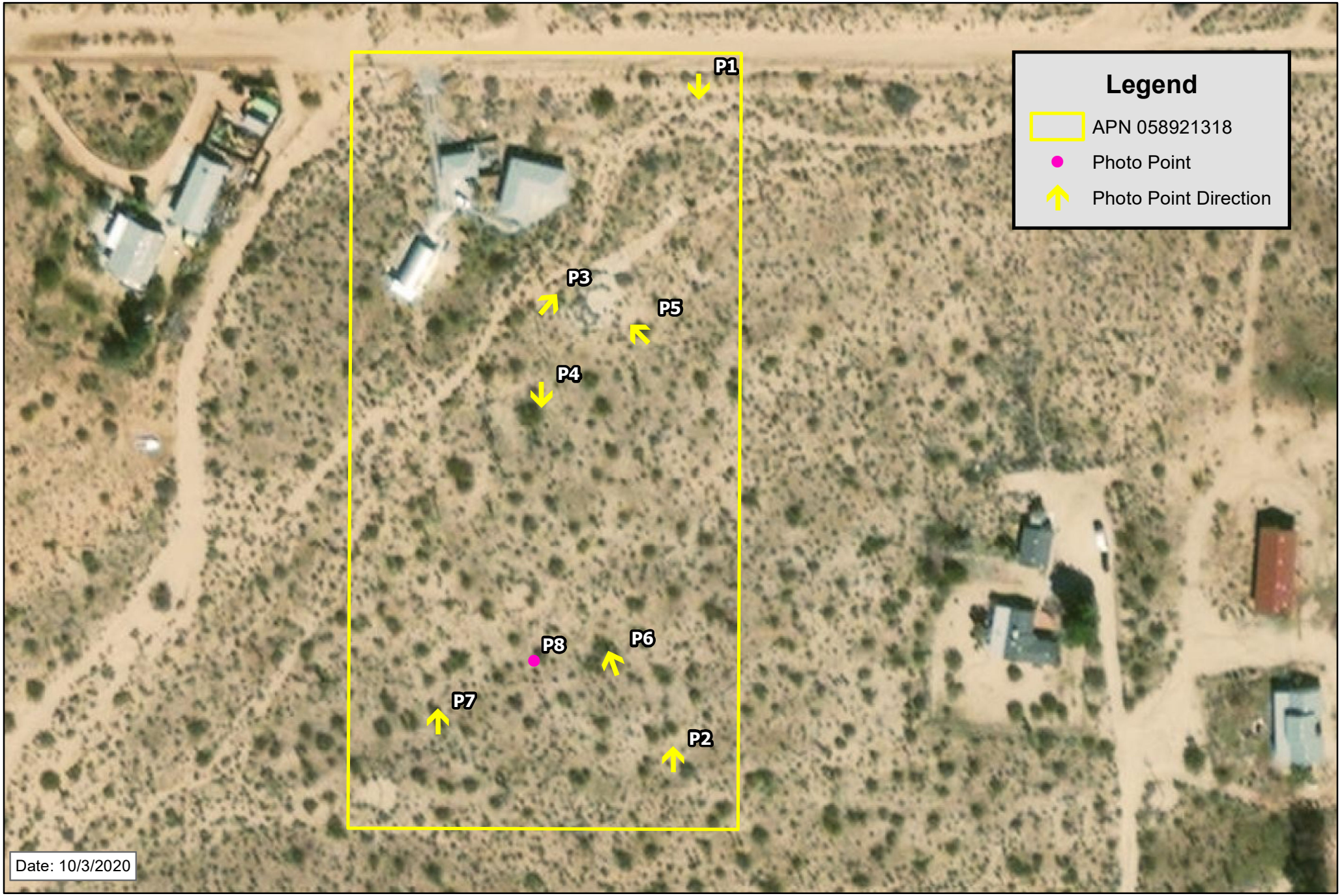
Figure 6
Joshua Tree Locations

Greg Epperson



0 0.0075 0.015 0.03 0.045 0.06 Miles

1 inch = 107 feet

Imagery Date: 2/18/2019

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

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Figure 7 Photo Map	Greg Epperson

Table 1
Sensitive Species Potential to Occur

Scientific Name	Common Name	Fed List	CA List	Rare Plant Rank	Other Status	Ecology	Species Potential to Occur
Plants							
Astragalus bernardinus	San Bernardino milk-vetch	None	None	1B.2	BLM_S-Sensitive | USFS_S-Sensitive	On West And Southwest-Facing Slopes.	There are no slopes on site. Occurrence potential is low.
Astragalus tricarinatus	triple-ribbed milk-vetch	Endangered	None	1B.2		On west and southwest-facing slopes.	There are no slopes on site. Occurrence potential is low.
Boechera dispar	pinyon rockcress	None	None	2B.3		Rocky areas in desert and mountains with Pinyon juniper habitat.	The habitat type required by this species does not exist on site. Occurrence potential is low.
Calochortus striatus	alkali mariposa-lily	None	None	1B.2	BLM_S USFS_S	Open sandy slopes with well developed soil crusts, and sandy benches along margin of wash. Associates: *Sporobolus airoides, Baccharis sergiloides, Acacia greggii, Rhus trilobata, Yucca brevifolia, Lycium cooperi, Atriplex canescens*, etc.	The habitat type required by this species does not exist on site. Occurrence potential is low.
Cymopterus multinervatus	purple-nerve cymopterus	None	None	2B.2		Found on gravelly slopes, often on rocky outcrops and along ridges	The habitat type required by this species does not exist on site. Occurrence potential is low.
Erigeron parishii	Parish's daisy	Threatened	None	1B.1		Associated with *Encelia actonii, Nnolina parryi, Quercus cornelius-mulleri, Stipa speciosa,* and *Pinus monophylla* snags.	The habitat type required by this species does not exist on site. Occurrence potential is low.
Grusonia parishii	Parish's club-cholla	None	None	2B.2		Sandy, rocky. Joshua tree woodland, Mojavean desert scrub, Sonoran desert scrub	The habitat type required by this species exist on site. Occurrence potential is high. Species was not found during survey.
Jaffueliobryum raui	Rau's jaffueliobryum moss	None	None	2B.3		On temporarily moist, sunny outcrop on granitic hills with desert scrub.	
Linanthus maculatus ssp. *maculatus*	Little San Bernardino Mtns. linanthus	None	None	1B.2	BLM_S	Open, sandy wash.	The habitat type required by this species does not

Scientific Name	Common Name	Fed List	CA List	Rare Plant Rank	Other Status	Ecology	Species Potential to Occur
							exist on site. Occurrence potential is low.
Matelea parvifolia	spear-leaf matelea	None	None	2B.3	USFS_S	Dry rocky slopes, desert scrub, mountains, mesas and canyons.	The habitat type required by this species exist on site. Occurrence potential is low to moderate. Species not found during survey
Monardella robisonii	Robison's monardella	None	None	1B.3	BLM_S	Among boulders on rocky slopes. Associated with *Pinus monophylla, Quercus cornelius-mulleri, Nolina parryi, Ahnatherum speciosum, Juniperus californica*, and *Sphaeralcea ambigua.*	The habitat type required by this species does not exist on site. Occurrence potential is low.
Muhlenbergia appressa	appressed muhly	None	None	2B.2		grows in sandy drainages, canyon bottoms, rocky road cuts, and sandy slopes, at elevations of 20-1750 m. Its range extends from Arizona to Baja California, Mexico. It grows in gramma grasslands, oak-juniper woodlands, and chaparral associations.	The habitat type required by this species does not exist on site. Occurrence potential is low.
Saltugilia latimeri	Latimer's woodland-gilia	None	None	1B.2	BLM_S | SB_USDA| USFS_S	Growing on sandy benches along bouldery narrow canyon. Associated with *Ericameria cuneata, Eriogonum heermannii, Pinus monophylla, Quercus cornelius-mulleri, Q. X munzii, Nolina parryi, Yucca schidigera, Epilobium canum*, etc.	The habitat type required by this species does not exist on site. Occurrence potential is low.
Sphaeralcea rusbyi var. *eremicola*	Rusby's desert-mallow	None	None	1B.2	BLM_S | SB_USDA| USFS_S	Open pediment with *Hilaria rigida, Ambrosia salsola, Yucca brevifolia, Coleogyne ramosissima, Ephedra nevadensis, Atriplex canescens,* and *Eriogonum inflatum.*	Some habitat elements associated with this species exist on site. Occurrence potential is moderate. Species was not observed during survey
Reptiles							
Anniella stebbinsi	Southern California legless lizard	None	None		CDFW_SSC -Species of Special Concern | USFS_S	Coastal dune, valley- foothill, chaparral and coastal scrub. Populations are most dense along the coast indicating that sandy habitats are preferred	The habitat type required by this species does not exist on site. Occurrence potential is low.

Scientific Name	Common Name	Fed List	CA List	Rare Plant Rank	Other Status	Ecology	Species Potential to Occur
Gopherus agassizii	desert tortoise	Threatened	Threatened			Mojave desert scrub and Joshua tree woodland in rural residential area. Disturbance noted from well-traveled dirt road.	The habitat type required by this species exist on site. Occurrence potential is high. Species was not found during survey.
Birds							
Aquila chrysaetos	golden eagle	None	Fully Protected		BLM_S| USFWS_BCC-Birds of Conservation Concern	"50% of this site is open water with some marsh vegetation on the edges of the ponds. Other vegetation types include 35% broad-leaved evergreen and needle-leaved evergreen woodland, and 15% Joshua tree woodland."	The habitat type required by this species does not exist on site. Occurrence potential is low.
Falco mexicanus	prairie falcon	None	None		CDFW_WL-Watch List | USFWS_BCC-Birds of Conservation Concern	Occur in wide-open habitats of the West, including sagebrush, desert, prairie, agricultural fields, and alpine meadows up to about 11,000 feet elevation. They nest on ledges on sheer rocky cliffs.	The habitat type required by this species does not exist on site. Occurrence potential is low.
Toxostoma bendirei	Bendire's thrasher	None	None		BLM_S CDFWSSCI IUCN_VU-Vulnerable NABCI_RWL-Red Watch List USFWS_BCC-Birds of Conservation Concern	Vegetation within a 50 m radius includes *Yucca brevifolia, Y. Schidigera, Opuntia, hymenoclea Salsola, tetradymia, Ephedera, hilaria, Prunus fasciculata*, and *Lycium andersonii.*	The habitat type required by this species exist on site. Occurrence potential is high. Species was not found during survey.
Vireo bellii pusillus	least Bell's vireo	Endangered	Endangered		IUCN_NT-Near Threatened NABCI_YWL-Yellow Watch List	Dense shrubby or scrubby habitat, including brushy fields, early successional growth, riverine scrub, coastal chaparral, scrub oak, mottes (isolated patches) of shrubs and trees in prairies, saltcedar stands, and mesquite bosques. Especially in arid regions, Bell's Vireos are found along streams or in dry arroyos and gulches. Even when large trees such as cottonwoods and willows are present,	The habitat type required by this species does not exist on site. Occurrence potential is low.

Scientific Name	Common Name	Fed List	CA List	Rare Plant Rank	Other Status	Ecology	Species Potential to Occur
						the vireos tend to stay more in the low vegetation. They avoid open desert scrub, grasslands, and cultivated areas.	
Mammals							
Antrozous pallidus	pallid bat	None	None		BLM_S | CDFWSSC| USFS_S WBWG_H-High Priority	Habitat consists of Mojavean desert scrub, with large rock boulders.	The habitat type required by this species exist on site. Occurrence potential is high.
Antrozous pallidus	pallid bat	None	None		BLM_S CDFWSSC USFS_S WBWG_H-High Priority	Occur in semi-arid and arid landscapes. They are found primarily in grasslands, shrub-steppe, and desert environments with rocky outcrops, but also dry open oak or ponderosa forest, and open farmland.	The habitat type required by this species exist on site. Occurrence potential is high.
Chaetodipus fallax pallidus	pallid San Diego pocket mouse	None	None		CDFWSSC	Chaparral and grasslands to scrub forests and deserts. This area includes a vast range of elevations, extending from sea level along the Pacific coast to around 1400 m in the mountains of southwest California and Baja California. Rarely found in cities, the major habitat requirement for *C. fallax* is the presence of low growing vegetation or rocky outcroppings, as well as sandy soil in which they dig burrows.	The habitat type required by this species exist on site. Occurrence potential is high.
Eumops perotis californicus	western mastiff bat	None	None		BLM_S CDFWSSC USFS_S WBWG_H-High Priority	Habitat consists of Mojavean desert scrub, within an area of large boulders.	The habitat type required by this species exist on site. Occurrence potential is high.
Lasiurus cinereus	hoary bat	None	None		WBWG_M-Medium Priority	The hoary bat is a forest species, typically roosting beneath clusters of leaves during spring, summer and fall. Winter hibernation sites are poorly known, but may include hollow trees and abandoned	The habitat type required by this species does not exist on site. Occurrence potential is low.

Scientific Name	Common Name	Fed List	CA List	Rare Plant Rank	Other Status	Ecology	Species Potential to Occur
						buildings. This species typically roosts solitarily throughout the year. Hoary bats forage along woodland openings and edge, as well as along riparian corridors.	
Myotis thysanodes	fringed myotis	None	None		BLM_S | USFS_S | WBWG_H-High Priority	Pinyon & juniper woodland habitat.	The habitat type required by this species does not exist on site. Occurrence potential is low.
Nyctinomops femorosaccus	pocketed free-tailed bat	None	None		CDFWSSC- | WBWG_M-Medium Priority	Pinyon & juniper woodland habitat.	The habitat type required by this species does not exist on site. Occurrence potential is low.
Nyctinomops macrotis	big free-tailed bat	None	None		CDFWSSC- | WBWG_M-Medium Priority	Roost mainly in crevices and rocks in cliff situations, although there is some documentation of roosts in buildings, caves, and tree cavities.	The habitat type required by this species does not exist on site. Occurrence potential is low.
Ovis canadensis nelsoni	desert bighorn sheep	None	Fully Protected		BLM_S | USFS_S-	Steep desert terrain and cliffs	The habitat type required by this species does not exist on site. Occurrence potential is low.
Taxidea taxus	American badger	None	None		CDFWSSC	Prefer to live in dry, open grasslands, fields, and pastures. They are found from high alpine meadows to sea level. Badgers occur in open habitats including semi-desert, sagebrush, grassland, meadows, and grassy bald spots on high ridge tops.	The habitat type required by this species does not exist on site. Occurrence potential is low.

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: "It is unlawful to take, possess or destroy any birds in the orders Falconiformes or Strigiformes or to take, possess or destroy the nest or eggs of any such bird."

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)