

GENERAL BIOLOGICAL RESOURCES ASSESSMENT

**TENTATIVE PARCEL MAP NO. 19923
SAN BERNARDINO COUNTY, CALIFORNIA
(Township 4 North, Range 5 West, Section 25)
(APN 0405-382-06)**

Prepared for:

**Cubit Engineering
16490 Walnut Street, Unit B-3
Hesperia, California 92345**

Prepared by:

**RCA Associates, Inc.
15555 Main Street, #D4-235
Hesperia, California 92345
(760) 596-0017**

**Principal Investigators:
Randall Arnold, Senior Biologist
Blake Curran, Environmental Biologist
Parker Smith, Project Manager**



Project: #2018-69

July 3, 2018

TITLE PAGE

Date Report Written: July 3, 2018

Date Field Work Completed: June 29, 2018

Report Title: General Biological Resources Assessment

Assessor's Parcel Number: 0405-382-06

Prepared for: Cubit Engineering
16490 Walnut Street, Unit B-3
Hesperia, California 92345

Principal Investigators: Randall C. Arnold, Jr., Senior Biologist
Parker L. Smith, Biological Field Technician
Blake Curran, Environmental Biologist

Contact Information: Randall C. Arnold, Jr.
RCA Associates, Inc.
15555 Main Street, #D4-235
Hesperia, California 92345
(760) 596-0017
rarnold@rcaassociatesllc.com
www.rcaassociatesllc.com

Table of Contents

Section

1.0	INTRODUCTION AND SUMMARY	1
2.0	EXISTING CONDITIONS.....	2
3.0	METHODOLOGIES	4
4.0	LITERATURE SEARCH	6
5.0	RESULTS	8
5.1	General Biological Resources	8
5.2	Federal and State Listed Species.....	9
5.3	Wildlife Species of Special Concern.....	9
5.4	Jurisdictional Waters and Riparian Habitat.....	12
6.0	IMPACTS AND MITIGATION MEASURES	13
6.1	General Biological Resources	13
6.2	Federal and State Listed and Species of Special Concern	13
7.0	CONCLUSIONS AND RECOMMENDATIONS	14
8.0	BIBLIOGRAPHY	15
	CERTIFICATION	17

Appendix A – Tables and Figures

1.0 INTRODUCTION AND SUMMARY

Biological surveys were conducted on a parcel that is approximately 5-acre located north of El Centro and east of Seine Avenue in the Oak Hills, San Bernardino County, California (Township 4 North, Range 5 West, Section 25, USGS Hesperia, California Quadrangle, 1956) (Figures 1, 2, 3, and 4). Focused surveys were also performed for the desert tortoise and burrowing owl. A habitat assessment was performed for the Mohave ground squirrel. The property supports a juniper community consisting of California junipers (*Juniperus californica*), Joshua trees (*Yucca brevifolia*), rubberbrush (*Ericameria nauseosa*), Nevada jointfir (*Ephedra nevadensis*), and brome grasses (*Bromus sp.*) (Figure 3). The site appears to have been recently disturbed with the brush being cleared and thus destroying habitat. The proponent is proposing to use the parcel for the purpose of a parcel split.

As part of the environmental process, California Department of Fish and Wildlife (CDFW) and U.S. Fish and Wildlife Service (USFWS) data sources were reviewed. Following the data review, surveys were performed on the site on June 28, 2018, during which the biological resources on the site and in the surrounding areas were documented by biologists from RCA Associates, Inc. As part of the surveys, the property and adjoining areas were evaluated for the presence of native habitats which may support populations of sensitive wildlife species. The property was also evaluated for the presence of sensitive habitats including wetlands, vernal pools, riparian habitats, and jurisdictional areas.

Focused surveys were performed for both desert tortoise and burrowing owl and a habitat assessment was performed for the Mohave ground squirrel. Based on data from USFWS, CDFW, and a search of the California Natural Diversity Database (CNDDDB, 2018), Mohave ground squirrel (*Xerospermophilus mohavensis*) have been documented within approximately three miles northeast of the property. Scientific nomenclature for this report is based on the following references: Hickman (1993), Munz (1974), Stebbins (2003), Sibley (2000) and Whitaker (1980).

2.0 EXISTING CONDITIONS

The property is approximately 5-acre in size and is located north of El Centro and east of Seine Avenue in the Oak Hills, San Bernardino County, California (Township 4 North, Range 5 West, Section 25, USGS Hesperia, California Quadrangle, 1956). The site does show signs of being heavily disturbed in the recent past, with junipers and Joshua trees still on the landscape. The site is bordered on the north, east, and west by undeveloped land while residential houses border the site to the south. Half of the parcel has been enclosed with a chain-link fence.

California junipers (*Juniperus californica*), California buckwheat (*Eriogonum fasciculatum*), Joshua trees (*Yucca brevifolia*), rubberbrush (*Ericameria nauseosa*), and Nevada jointfir (*Ephedra nevadensis*) are the dominant perennials and the dominant annuals include brome grasses (*Bromus sp.*), annual bursage (*Ambrosia acanthicarpa*), and schismus (*Schismus barbatus*). Section 5.0 provides a more detailed discussion of the various plant species observed during the surveys. There are approximately forty (40) Joshua trees (*Yucca brevifolia*) on the property.

The site is expected to support a variety of wildlife species on the site; however, only a few species were observed during the field investigations. Mammals observed on the site or which are expected to inhabit the site include jackrabbits (*Lepus californicus*), antelope ground squirrel (*Ammospermophilus leucurus*), desert cottontails (*Sylvilagus auduboni*), and California ground squirrel (*Otospermophilus beecheyi*). Coyotes (*Canis latrans*), which are very common in the region, also utilize the site during hunting activities.

Birds observed included ravens (*Corvus corax*), house finch (*Carpodacus mexicanus*), rock pigeon (*Columba livia*), mourning dove (*Zenaida macroura*), northern mockingbird (*Mimus polyglottos*), sage sparrow (*Amphispiza bellii*), and white-crowned sparrow (*Zonotrichia leucophrys*). Section 5.0 provides a more detailed discussion of the various species observed during the surveys.

Reptiles observed during the survey include desert spiny lizard (*Sceloporus magister*), side-blotched lizard (*Uta stansburiana*), and western whiptail lizard (*Cnemidophorus tigris*). Table 2 provides a compendium of wildlife species.

In addition, no sensitive habitats (e.g., sensitive species critical habitats, etc.) have been documented in the immediate area according to the CNDDDB (2018) and none were observed during the field investigations.

3.0 METHODOLOGIES

General biological surveys were conducted on June 28, 2018, during which biologists from RCA Associates, Inc initially walked meandering transects throughout the property site. During the surveys, data was collected on the plant and animal species present on the site. All plants and animals detected during the surveys were recorded and are provided in Tables 1 & 2 (Appendix A). The property was also evaluated for the presence of habitats which might support sensitive species. Scientific nomenclature for this report is based on the following references: Hickman (1993), Munz (1974), Stebbins (2003), Sibley (2000), and Whitaker (1980). Following completion of the initial reconnaissance survey, protocol surveys were conducted for the desert tortoise and burrowing owl as per agency requirements, and a habitat assessment was performed for the Mohave ground squirrel. Weather conditions consisted of wind speeds of 0 to 5 mph, temperatures in the mid 80's (°F) (AM) with mostly clear skies. The applicable methodologies are summarized below.

General Plant and Animal Surveys: Meandering transects were walked throughout the site and in the surrounding area (i.e., the zone of influence) at a pace that allowed for careful documentation of the plant and animal present on the site. All plants observed were identified in the field and wildlife was identified through visual observations and/or by vocalizations. Tables 1 and 2 (Appendix A) provides a comprehensive compendium of the various plant and animal; species observed during the field investigations.

Desert Tortoise: A habitat assessment was conducted, June 28, 2018, on the site for the desert tortoises and a survey was also performed for the presence of any potential tortoise burrows by biologists from RCA Associates, Inc. Ten-meter, parallel belt transects were walked in a north-south direction until the entire property had been checked for any tortoise sign (burrows, tracks, scats, etc.). Surveys in the zone of influence (ZOI) were also conducted in the area north, east, south, and west of the site. Comprehensive field investigations were conducted throughout the site during the biological surveys and no tortoise sign was identified on the site or zone of influence.

During the various biological survey, all transects were walked at a pace that allowed careful observations along the transect routes and in the immediate vicinity. Field notes were recorded

regarding native plant assemblages, wildlife sign, and human effects in order to determine the presence or absence of suitable tortoise foraging habitat. If tortoises are found to inhabit the site in the future, a Section 10(a) incidental take permit from the USFWS and a Section 2081 permit from CDFW will be required to mitigate for impacts to the species.

Burrowing Owl: A habitat assessment (Phase 1) was conducted for the burrowing owl in conjunction with the general biological surveys to determine if the site supports suitable habitat for the species, June 28, 2018. Following completion of the habitat assessment, it was determined that the site does not support suitable habitat for the burrowing owl. Therefore, a focused survey (Phase II) does not need to be conducted for burrowing owls for the absence of occupiable (i.e., suitable) burrows which could potentially be utilized by owls. As part of the burrow survey, transects were walked throughout the site during which any suitable burrows were evaluated for owls and owl sign. Burrowing owls typically utilize burrows which have been excavated by other animals (squirrels, coyotes, foxes, dogs, etc.) since owls rarely dig their own burrows. CDFW protocol also requires surveys be conducted in the surrounding area out to a distance of about 500 feet; therefore, the zone of influence (ZOI) surveys were performed in the area surrounding the site. If present on a site, CDFW typically requires the owls to be passively relocated during the non-breeding season.

Mohave Ground Squirrel: A habitat assessment was performed for the Mohave ground squirrel as per CDFW protocol including an analysis of the on-site habitat, evaluation of local populations, and assessment of connectivity with habitats in the surrounding area which might support populations of the Mohave ground squirrel. If a site supports suitable habitat for the Mohave ground squirrel, CDFW will require payment of a mitigation fee for the acquisition of mitigation lands to compensate for impacts to the species. In lieu of payment of mitigation fees, the proponent may choose to conduct a live-trapping survey to definitively determine the presence/absence following consultations with CDFW.

4.0 LITERATURE SEARCH

As part of the environmental process, a search of the California Natural Diversity Database (CNDDDB) search was performed. Based on this review, it was determined that fourteen special status species have been documented within the Hesperia quad of the property. The following tables provide data on each special status species which has been documented in the area.

Table 4-1: Federal and State Listed Species and State Species of Special Concern.

E = Endangered; T = Threatened; SSC = Species of special concern; CNPS = California Native Plant Society; CNDDDB = California Natural Diversity Data Base

Name	Listing Status	Habitat Requirements	Presence/Absence
Desert tortoise (<i>Gopherus agassizii</i>)	Fed: T State: T	Desert scrub	The site is located within the known distribution of the species. Focused surveys conducted on site did not identify any tortoises.
Burrowing owl (<i>Athene cunicularia</i>)	Fed: None State: None	Grasslands and desert habitats	The site does support suitable habitat for the species; however, no owl observed during field surveys.
Mohave ground squirrel (<i>Xerospermophilus mohavensis</i>)	Fed: None State: T	Desert scrub	The site supports suitable habitat for the species. Species has been identified in the area; therefore, species may inhabit the site.
Cooper's hawk (<i>Accipiter cooperii</i>)	Fed: None State: None	Woodland	The site does support suitable habitat for the species; however, no hawk observed during field surveys.
Pallid bat (<i>Antrozous pallidus</i>)	Fed: None State: None	Deserts, grasslands, shrublands, woodlands and forests.	The site does support suitable habitat for the species; however, no bat observed during field surveys.
Long-eared owl (<i>Asio otus</i>)	Fed: None State: None	Riparian bottomlands grown to tall willows and cottonwoods	The site does not support suitable habitat for the species.
Coast horned lizard (<i>Phrynosoma blainvillii</i>)	Fed: None State: None	Desert scrub Sandy washes	The site does support suitable habitat for the species; however, no coast horned lizard observed during field surveys.
Yellow warbler (<i>Setophaga petechia</i>)	Fed: None State: None	Dense riparian vegetation.	The site does not support suitable habitat for the species.
Short-joint beavertail (<i>Opuntia basilaris</i> var. <i>brachyclada</i>)	Fed: None State: None	Desert scrub Joshua tree woodland	The site does support suitable habitat for the species; however, no beavertail observed during field surveys.

Booth's evening-primrose (<i>Eremothera boothii ssp. boothii</i>)	Fed: None State: None	Joshua tree woodland, pinyon and juniper woodland	The site does support suitable habitat for the species; however, no primrose observed during field surveys.
White-pygmy-poppy (<i>Canbya candida</i>)	Fed: None State: None	Joshua tree woodland, Mojavean desert scrub, pinyon and juniper woodland	The site does support suitable habitat for the species; however, no poppy observed during field surveys.
Mohave tui chub (<i>Siphateles bicolor mohavensis</i>)	Fed: E State: E	Endemic to the Mojave River basin, adapted to alkaline, mineralized waters	The site does not support suitable habitat for the species.
Le Conte's thrasher (<i>Toxostoma lecontei</i>)	Fed: None State: None	Desert scrub	Site does support suitable habitat for the species; however, no thrashers observed during field surveys.
Gray vireo (<i>Vireo vicinior</i>)	Fed: None State: None	Endemic to the Mojave River basin, adapted to alkaline, mineralized waters	The site does not support suitable habitat for the species.

5.0 RESULTS

5.1 General Biological Resources

The site supports a juniper community which covers most of the property (Figure 5). Species present on the site included junipers (*Juniperus californica*), annual bursage (*Ambrosia acanthicarpa*), Nevada jointfir (*Ephedra nevadensis*), rabbitbrush (*Ericameria nauseosa*) Joshua tree (*Yucca brevifolia*), and brome grasses (*Bromus sp.*). Table 1 provides a compendium of all plants occurring on the site and/or in the immediate surrounding area.

Birds observed included ravens (*Corvus corax*), house finch (*Carpodacus mexicanus*), rock pigeon (*Columba livia*), mourning dove (*Zenaida macroura*), sage sparrow (*Amphispiza bellii*), white-crowned sparrow (*Zonotrichia leucophrys*), Costa's hummingbird (*Calypte costae*) and Say's phoebe (*Sayornis saya*).

California ground squirrels (*Spermophilus beecheyi*), black-tailed jackrabbit (*Calypte costae*), desert cottontail (*Sylvilagus auduboni*), and Antelope ground squirrels (*Ammospermophilus leucurus*) were observed on the site, however; coyotes are known to occur in the area and may traverse the site during hunting activities. Merriam's kangaroo rats (*Dipodomys merriamii*) may also occur on the site given their wide-spread distribution in the Mojave Desert. Tables 1 and 2 (Appendix A) provides a compendium of the various plant and animal species identified during the field investigations and those common to the area. No distinct wildlife corridors were identified on the site or in the immediate area.

Reptiles common in the region which is expected to inhabit the site include desert spiny lizard (*Sceloporus magister*), side-blotched lizard (*Uta stansburiana*), western whiptail lizard (*Cnemidophorus tigris*), and Mohave rattlesnake (*Crotalus cerastes*). Table 2 provides a compendium of wildlife species observed during the various surveys and those likely to occur in the area.

No sensitive habitats (e.g., wetlands, vernal pools, critical habitats for sensitive species, etc.) were observed on the site during the field investigations

5.2 Federal and State Listed Species

Desert Tortoise: The site is located within documented tortoise habitat according to CNDDDB with the nearest documented sighting about 10 miles northeast of the property (CNDDDB, 2018). The property supports very marginal habitat for the desert tortoise based on the location of the site in a developed area of the unincorporated Oak Hills. No tortoises or tortoise sign (burrows, scats, etc.) were observed anywhere within the property boundaries during the June 28, 2018, surveys. The species is not expected to move onto the site in the near future based on the absence of any sign, absence of any recent observations in the immediate area, and the presence of busy roadways and developments in the immediate area which may act as barriers to migration of tortoises. The protocol survey results are valid for one year as per CDFW and USFWS requirements.

Mohave Ground Squirrel: The site does occur within the known distribution of the Mohave Ground Squirrels, and the nearest documented observation is about 3-miles to the northeast of the property. There is no recent observation of Mojave ground squirrel within the area. It is the opinion of RCA Associates, Inc that the habitat is not prime Mohave ground squirrel habitat and is very unlikely to support populations of the species based on the following criteria

1. Small size (5-acres)
2. No recent documented observations in the general region.
3. No connectivity with habitat which may support the species.

5.3 Wildlife Species of Special Concern

Burrowing Owl: The site is located within documented burrowing owl habitat according to CNDDDB with the nearest documented sighting about 1.5 miles northeast of the property (CNDDDB, 2018). No owls or owl sign (whitewash, etc.) were seen on the property during the survey, and no suitable (i.e., “occupiable”) burrows were observed. The probability of owls moving onto the site in the future is low based on the results of the field investigations and the absence of any suitable burrows that the species could utilize.

Yellow warbler: Yellow warbler have been documented in the region (Occurrence #29, Hesperia, California Quad, 2018), with the most recent observation (1953) about one miles west of the property (CNDDDB, 2018). Yellow warbler would not occur on the site, for the habitat that the

warbler would use is not present. The use of the site by warblers may be very infrequent given the low population levels in the region as well as the lack of any recent sightings according to the CNDDDB.

Short-joint beavertail: Beavertail cactus are readily identifiable and if present on the site, would have been observed during the extensive field investigations conducted throughout the site. Short-joint beavertail has been observed in the region (Occurrence #13, Hesperia, California Quad, 2018), with the most recent documented sighting (1991) in the region was approximately five miles to the south (CNDDDB, 2018). However, no cacti were observed and the species is not expected to occur on the site in the near future.

Coast horned lizard: Coast horned lizard has been documented in the region (Occurrence # 217, Hesperia, California Quad, 2018), with the most recent observation (1980) about five miles northeast of the property (CNDDDB, 2018). The use of the site by coast horned lizards may be very infrequent given the low population levels in the region as well as the lack of any recent sightings according to the CNDDDB.

Cooper's hawk: Cooper's hawk has not been observed in the area recently (Occurrence #4, Hesperia, California Quad, 2018), with the last documented observation (1952) about two miles southeast of the property (CNDDDB, 2018). The species could utilize the site for hunting; although, the species is expected to infrequently use the site for hunting.

Pallid bat: Pallid bat has been documented in the region (Occurrence #429, Hesperia, California Quad, 2018), with the most recent documented observations (2016) about seven miles northeast of the property (CNDDDB, 2018). The pallid bat would not occur on the site, for the habitat that the bat would use is not present.

Long-eared owl: Long-eared owl has been documented in the region (Occurrence #17, Hesperia, California Quad, 2018), with the most recent documented observations (1948) about 0.5 miles northwest of the property (CNDDDB, 2018). The species could utilize the site for hunting; although,

the species is expected to infrequently use the site for hunting due to its proximity to a major roadway.

White pygmy-poppy: White pygmy-poppy are readily identifiable and if present on the site, would have been observed during the extensive field investigations conducted throughout the site. White pygmy-poppy has been observed in the region (Occurrence #5, Hesperia, California Quad, 2018), with the most recent documented observation (1958) in the region was approximately three miles to the north (CNDDDB, 2018). The species is not expected to occur on the site in the near future.

Booth's evening-primrose: Booth's evening-primrose are readily identifiable and if present on the site, would have been observed during the extensive field investigations conducted throughout the site. Booth's evening-primrose has been observed in the region (Occurrence #3, Hesperia, California Quad, 2018), with the most recent documented observation (1989) in the region was approximately eight miles to the northeast (CNDDDB, 2018). The species is not expected to occur on the site in the near future.

Mojave tui chub: Mojave tui chub have been observed within the Hesperia quad only in the northeast corner in the Mojave River basin (CNDDDB, 2018). The most recent observation (1967) about eight miles to the northeast of the property region (Occurrence #18, Hesperia, California Quad, 2018). Mojave tui chub would not occur on the site, for the habitat that the chub would use is not present.

Le Conte's thrasher: Le Conte's thrashers have been documented in the region (Occurrence #17, Hesperia, California Quad, 2018), with the most recent observation in 1917 about three miles north of the property (CNDDDB, 2018). Thrashers could potentially occur on the site; although, the use of the site by thrashers may be very infrequent given the low population levels in the region as well as the lack of any recent sightings according to the CNDDDB.

Grey vireo: Grey vireo has been documented in the region (Occurrence #24, Hesperia, California Quad, 2018), with the most recent documented observations (1949) about four miles northeast of

the property (CNDDDB, 2018). Grey vireo could potentially occur on the site; although, the use of the site by vireo may be very infrequent given the low population levels in the region as well as the lack of any recent sightings according to the CNDDDB.

5.4 Jurisdictional Waters and Riparian Habitat

No riparian vegetation (e.g., cottonwoods, willows, etc.) exist on the site or in the adjacent habitats.

6.0 IMPACTS AND MITIGATION MEASURES

6.1 General Biological Resources

Future development of the site will impact the general biological resources present on the site, and most of the vegetation will likely be removed during future construction activities. Wildlife will also be impacted by development activities and those species with limited mobility (i.e., small mammals and reptiles) will experience increases in mortality during the construction phase. However, more mobile species (i.e., birds, large mammals) will be displaced into adjacent areas and will likely experience minimal impacts. Therefore, loss of about 5-acres of disturbed desert vegetation is not expected to have a significant cumulative impact on the overall biological resources in the region given the presence of similar habitat throughout the surrounding desert region. No sensitive habitats (e.g., wetlands, vernal pools, critical habitats for sensitive species, etc.) were observed on the site during the field investigations.

6.2 Federal and State Listed and Species of Special Concern

No federal or State-listed species were observed on the site during the field investigations including the Mohave ground squirrel and desert tortoise. In addition, there are no documented observations of these species either on the site or in the immediate area. The site is not expected to support populations of the desert tortoise based on the absence of any tortoise sign (e.g., burrows, scats, tracks, etc.), and although suitable habitat is present on site, the probability of the species inhabiting the site is very low. As per CDFW protocol, the burrowing owl survey results are valid for only 30 days; therefore, CDFW may require a 30-day pre-construction survey be performed prior to any clearing/grading activities to determine if owls have moved on to the site since the June 28, 2018, surveys.

7.0 CONCLUSIONS AND RECOMMENDATIONS

Future development activities are expected to result in the removal of vegetation from the 5-acre parcel; however, cumulative impacts to the general biological resources (plants and animals) in the surrounding area are expected to be negligible. This assumption is based on the presence of habitat on the site which is very common throughout the Mojave Desert. In addition, future development activities are not expected to have any impact on any State or Federal listed or State special status plant or animal species. As discussed above, the site does not support any desert tortoises. In addition, burrowing owls do not inhabit the site and are not expected to be impacted given the absence of any suitable burrows. The following mitigation measures are recommended:

1. Pre-construction surveys for burrowing owls, desert tortoise, and nesting birds protected under the Migratory Bird Treaty Act and Section 3503 of the California Fish and Wildlife Code shall be conducted prior to the commencement of Project-related ground disturbance. Appropriate survey methods and timeframes shall be established, to ensure that chances of detecting the target species are maximized. In the event that listed species, such as the desert tortoise, are encountered, authorization from the USFWS and CDFW must be obtained. If nesting birds are detected, avoidance measures shall be implemented to ensure that nests are not disturbed until after young have fledged. Pre-construction surveys shall encompass all areas within the potential footprint of disturbance for the project, as well as a reasonable buffer around these areas.
2. Joshua Tree Protected Plant Plan should be prepared for the site and should be submitted under separate cover and contract.

If any sensitive species are observed on the property during future activities, CDFW and USFWS (as applicable) should be contacted to discuss specific mitigation measures which may be required for the individual species. CDFW and USFWS are the only agencies which can grant authorization for the “take” of any sensitive species and can approve the implementation of any applicable mitigation measures.

8.0 BIBLIOGRAPHY

- Baldwin, Bruce G, et. al.
2002. The Jepson Desert Manual. Vascular Plants of Southeastern California. University of California Press, Berkeley, CA.
- Bureau of Land Management
January 2005. Final Environmental Impact Report and Statement for the West Mojave Plan. Vol. 1A.
- California Burrowing Owl Consortium
1993. Burrowing Owl Survey Protocol and Mitigation Guidelines
- California Department of Fish and Game
1990. California Wildlife: Volume 1 (Amphibians and Reptiles), Volume II (Birds), and Volume III (Mammals).
- California Department of Fish and Game
2003. Mohave Ground Squirrel Survey Guidelines.
- California Department of Fish and Game
2014. Rarefind 3 Natural Diversity Database. Habitat and Data Analysis Branch. Sacramento, CA.
- California Department of Fish and Game
March 7, 2013. Staff Report on Burrowing Owl Mitigation. 34 pp.
- California Native Plant Society
2001. Inventory of Rare and Endangered Plants of California (sixth edition). Rare Plant Scientific Advisory Committee, David P. Tibor, Convening Editor. California Native Plant Society. Sacramento, CA x + 388 pp.
- Ehrlich, P., Dobkin., Wheye, D.
Birder's Handbook. A Field Guide to the Natural History of North American Birds. Simon & Schuster Building Rockefeller Center 1230 Avenue of the Americas. New York, New York 10020.
- Hickman, James C.
The Jepson Manual Higher Plants of California. University of California Press. Berkeley, CA. 3rd Edition. 1996.
- Jaeger, Edmund C.
1969. Desert Wild Flowers. Stanford University Press, Stanford, California. 321 pp.

- Kays, R. W. & Wilson, D. E.
Mammals of North America. Princeton University Press, Princeton, New Jersey. 2002.
- Munz, Philip A.
1974. A Flora of Southern California. University of California Press, Berkeley, California. 1086 pp.
- Tugel, Arlene J., Woodruff, George A.
Soil Conservation Service, 1978. Soil Survey of San Bernardino County California, Mojave River Area.
- Sibley, David Allen.
National Audubon Society. The Sibley guide to Birds. Alfred A Knopf, Inc. 2000.
- Stebbins, Robert C.
A Field Guide to Western Reptiles and Amphibians. Houghton Mifflin Company. 2003.
- U.S. Fish and Wildlife Service
2010 Desert Tortoise Survey Protocol.
- Whitaker, John O.
The Audubon Society Field Guide to North American Mammals. Alfred A Knopf, Inc. 1980.

CERTIFICATION

I hereby certify that the statements furnished above and in the attached exhibits, presents the data and information required for this biological evaluation, and that the facts, statements, and information presented are true and correct to the best of my knowledge and belief. Fieldwork conducted for this assessment was performed by Randall Arnold and other biologists under his direction. I certify that I have not signed a non-disclosure or consultant confidentiality agreement with the project applicant or applicant's representative and that I have no financial interest in the project.

Date: 07/03/2018 Signed: *Blake Curran*
Blake Curran

Field Work Performed By: Randall Arnold
Senior Biologist

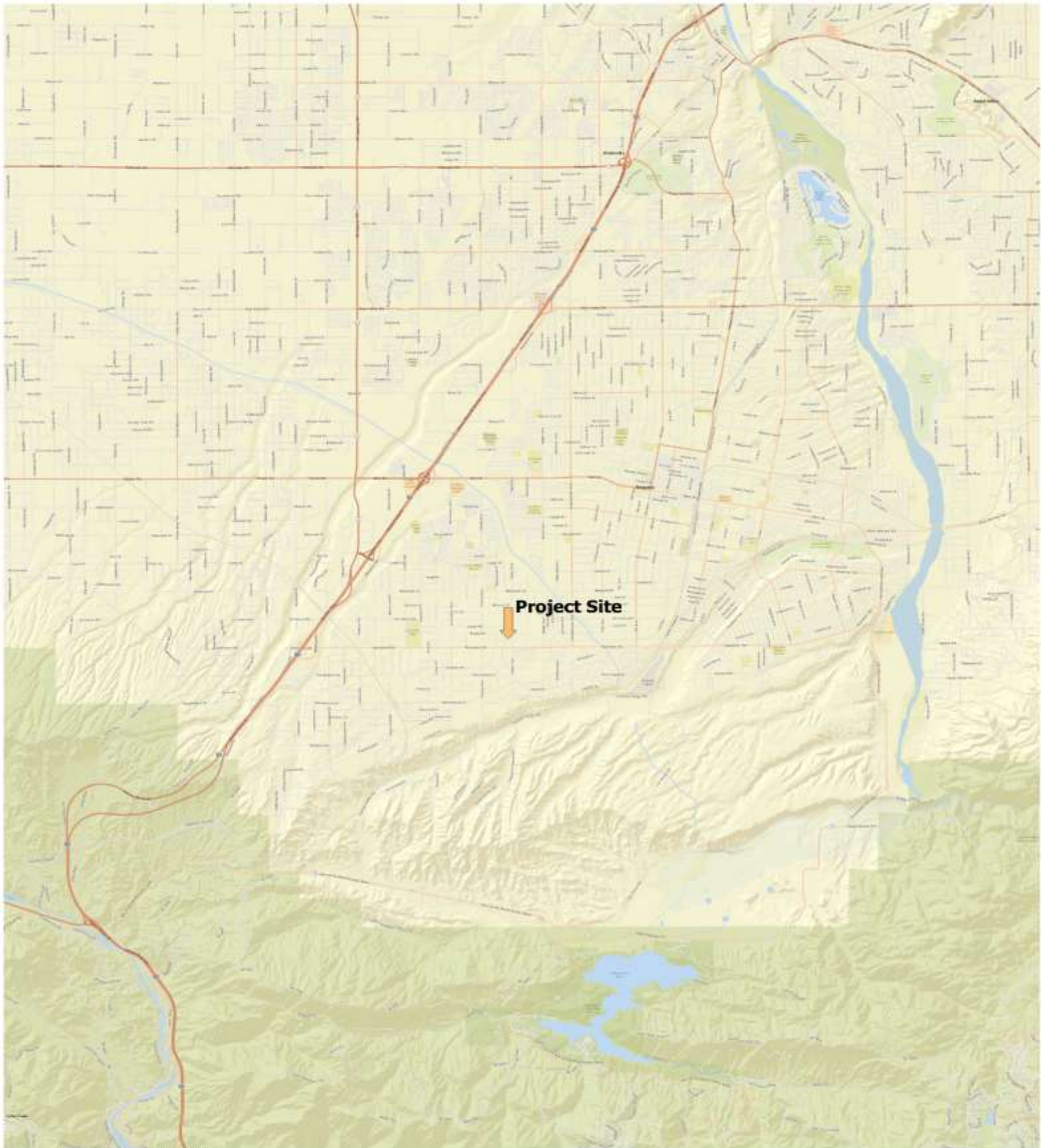
Field Work Performed By: Parker Smith
Field Biological Technician

Field Work Performed By: Blake Curran
Environmental Biologist

Appendix A
Tables and Figures

Figure 1

Regional Vicinity Map

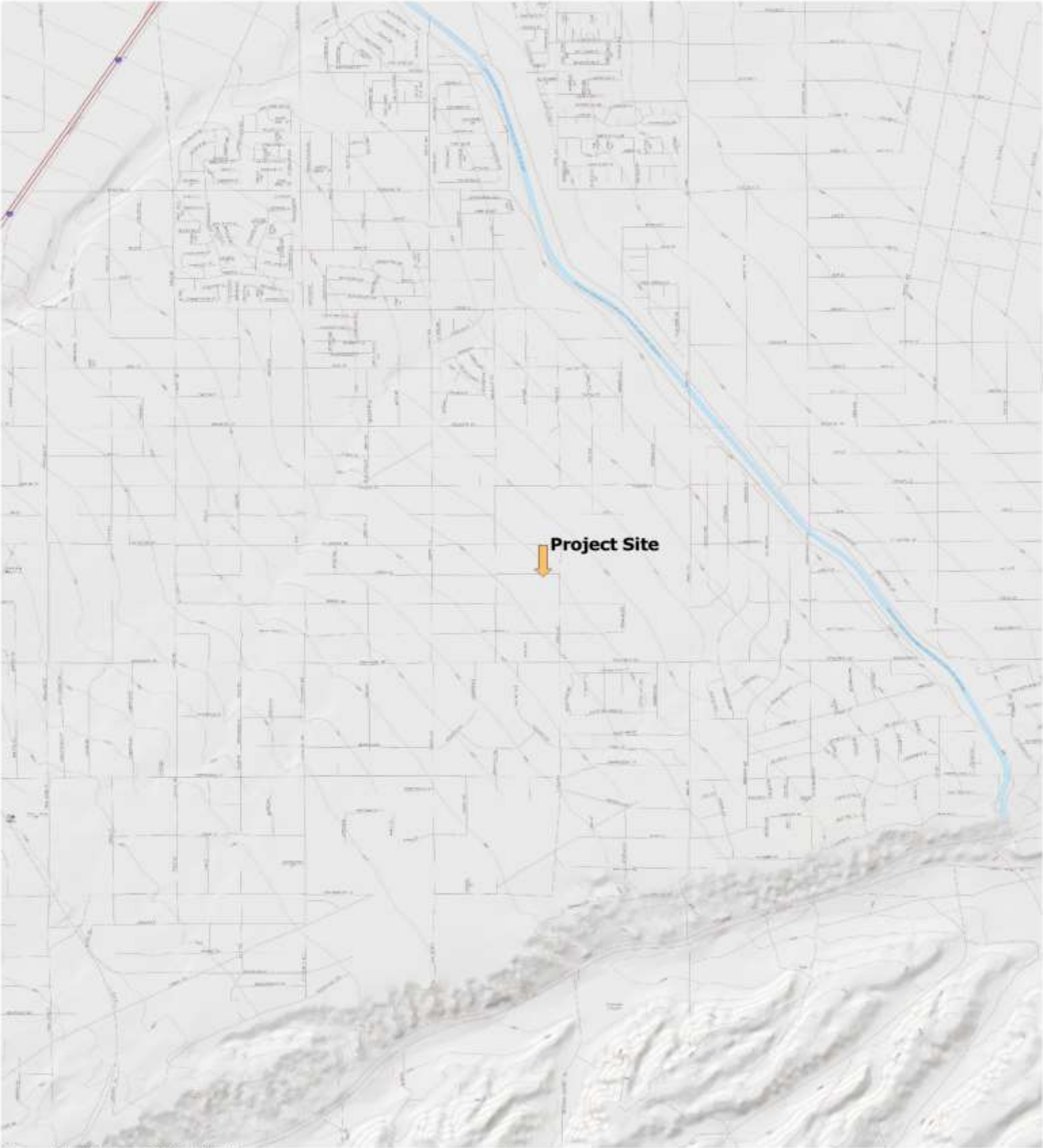


Sources: Google Imagery 2018, ESRI



Figure 2

Topographic Map



Sources: Google Imagery 2018, USGS Topo

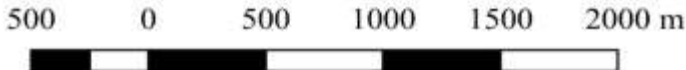
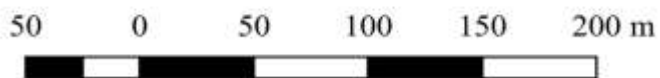


Figure 3

Local Vicinity Map



Sources: Google Imagery 2018



Legend

--- Property Border



Figure 4

Site Plan

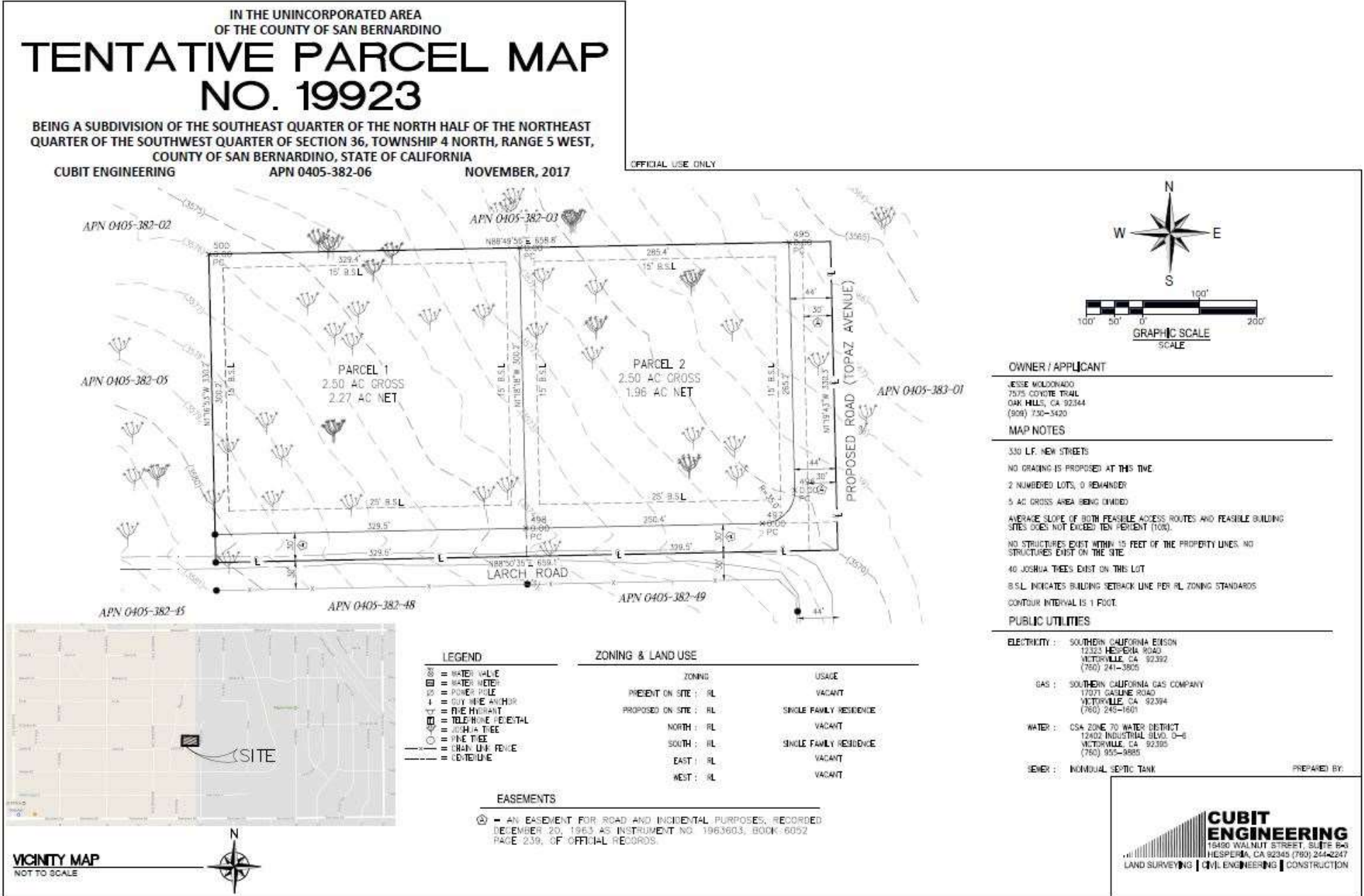


Figure 5

Site Photographs



CENTER OF SITE LOOKING NORTH



CENTER OF SITE LOOKING EAST

Figure 5 Cont.



CENTER OF SITE LOOKING SOUTH



CENTER OF SITE LOOKING WEST

Table 1 - Plants observed on the site and known to occur in the immediate surrounding area.

Common Name	Scientific Name	Location
Joshua tree	<i>Yucca brevifolia</i>	On site and Surrounding Area
Brome grass	<i>Bromus sp.</i>	“
Juniper	<i>Juniperus californica</i>	“
Annual Bursage	<i>Ambrosia acanthicarpa</i>	“
Flat Topped Buckwheat	<i>Eriogonum deflexum</i>	“
Buckwheat	<i>Eriogonum fasciculatum</i>	“
Mustard	<i>Descurainia pinnata</i>	“
Schismus	<i>Schismus barbatus</i>	“
Rabbitbrush	<i>Chrysothamnus nauseosus</i>	“
Paperbag plant	<i>Salazaria mexicana</i>	“
Ephedra	<i>Ephedra nevadensis</i>	“
Yellow-green matchweed	<i>Gutierrezia sarothrae</i>	Surrounding Area
Lycium	<i>Lycium cooperi</i>	“
Anderson's thornbush	<i>Lycium andersonii</i>	“
Burrobush	<i>Ambrosia dumosa</i>	“
Fiddleneck	<i>Amsinckia tessellata</i>	“
Cholla	<i>Opuntia echinocarpa</i>	“
Winterfat	<i>Krascheninnikovia lanata</i>	“
Filaree	<i>Erodium cicutarium</i>	“
Gilia	<i>Gilia sp.</i>	Surrounding area

Note: The above list is not intended to be a comprehensive list of every plant which may occur on the site or in the zone of influence.

Table 2 - Wildlife observed on the site during the field investigations.

Common Name	Scientific Name	Location
Common raven	<i>Corvus corax</i>	On-site and in the surrounding area.
California ground squirrel	<i>Spermophilus beecheyi</i>	“
Song sparrow	<i>Melospiza melodia</i>	“
California scrub jay	<i>Aphelocoma californica</i>	“
House sparrow	<i>Passer domesticus</i>	“
House finch	<i>Carpodacus mexicanus</i>	“
Northern mockingbird	<i>Mimus polyglottus</i>	“
Mourning dove	<i>Zenaida macroura</i>	“
Gambel’s quail	<i>Callipepla californicus</i>	“
Turkey vulture	<i>Cathartes aura</i>	On site and surrounding area
Red-tailed Hawk	<i>Buteo jamaicensis</i>	“
Cactus wren	<i>Campylorhynchus brunneicapillus</i>	“
Western whiptail lizard	<i>Cnemidophorus tigris</i>	“
Side-blotched lizard	<i>Uta stansburiana</i>	“
Desert spiny lizard	<i>Sceloporus magister</i>	“
Antelope ground squirrel	<i>Ammospermophilus leucurus</i>	“
Desert cottontail	<i>Sylvilagus auduboni</i>	“
Jackrabbit	<i>Lepus Californicus</i>	“
Coyotes	<i>Canis latrans</i>	“

Note: The above Table is not a comprehensive list of every animal species which may occur in the area, but is a list of those common species which were identified on the site or which have been observed in the region by biologists from RCA Associates, Inc.

REGULATORY CONTEXT

The following provides a summary of federal and state regulatory jurisdiction over biological and wetland resources. Although most of these regulations do not directly apply to the site, given the general lack of sensitive resource, they provide important background information.

Federal Endangered Species Act

The USFWS has jurisdiction over federally listed threatened and endangered plant and animal species. The federal Endangered Species Act (ESA) and its implementing regulations prohibit the take of any fish or wildlife species that is federally listed as threatened or endangered without prior approval pursuant to either Section 7 or Section 10 of the ESA. ESA defines “take” as “harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct.” Federal regulation 50CFR17.3 defines the term “harass” as an intentional or negligent act that creates the likelihood of injuring wildlife by annoying it to such an extent as to significantly disrupt normal behavior patterns such as breeding, feeding, or sheltering (50CFR17.3). Furthermore, federal regulation 50CFR17.3 defines “harm” as an act that either kills or injures a listed species. By definition, “harm” includes habitat modification or degradation that actually kills or injures a listed species by significantly impairing essential behavior patterns such as breeding, spawning, rearing, migrating, feeding, or sheltering (50CFR217.12).

Section 10(a) of the ESA establishes a process for obtaining an incidental take permit that authorizes nonfederal entities to incidentally take federally listed wildlife or fish. Incidental take is defined by ESA as take that is “incidental to, and not the purpose of, the carrying out of another wise lawful activity.” Preparation of a habitat conservation plan, generally referred to as an HCP, is required for all Section 10(a) permit applications. The USFWS and National Oceanic and Atmospheric Administration’s National Marine Fisheries Service (NOAA Fisheries Service) have joint authority under the ESA for administering the incidental take program. NOAA Fisheries Service has jurisdiction over anadromous fish species and USFWS has jurisdiction over all other fish and wildlife species.

Section 7 of the ESA requires all federal agencies to ensure that any action they authorize, fund, or carry out is not likely to jeopardize the continued existence of any species listed under the ESA, or result in the destruction or adverse modification of its habitat. Federal agencies are also required

to minimize impacts to all listed species resulting from their actions, including issuance or permits or funding. Section 7 requires consideration of the indirect effects of a project, effects on federally listed plants, and effects on critical habitat (ESA requires that the USFWS identify critical habitat to the maximum extent that it is prudent and determinable when a species is listed as threatened or endangered). This consultation results in a Biological Opinion prepared by the USFWS stating whether implementation of the HCP will result in jeopardy to any HCP Covered Species or will adversely modify critical habitat and the measures necessary to avoid or minimize effects to listed species.

Although federally listed animals are legally protected from harm no matter where they occur, the Section 9 of the ESA provides protection for endangered plants by prohibiting the malicious destruction on federal land and other “take” that violates State law. Protection for plants not living on federal lands is provided by the California Endangered Species Act.

California Endangered Species Act

CDFW has jurisdiction over species listed as threatened or endangered under Section 2080 of the California Fish and Wildlife Code. Section 2080 prohibits the take of a species listed by CDFW as threatened or endangered. The state definition of take is similar to the federal definition, except that Section 2080 does not prohibit indirect harm to listed species by way of habitat modification. To qualify as take under the state ESA, an action must have direct, demonstrable detrimental effect on individuals of the species. Impacts on habitat that may ultimately result in effects on individuals are not considered take under the state ESA but can be considered take under the federal ESA.

Proponents of a project affecting a state-listed species must consult with CDFW and enter into a management agreement and take permit under Section 2081. The state ESA consultation process is similar to the federal process. California ESA does not require preparation of a state biological assessment; the federal biological assessment and the CEQA analysis or any other relevant information can provide the basis for consultation. California ESA requires that CDFW coordinate consultation for joint federally listed and state-listed species to the extent possible; generally, the state opinion for the listed species is brief and references provisions under the federal opinion.

Clean Water Act, Section 404

The COE and the U.S. Environmental Protection Agency regulate the placement of dredged or fill material into “Waters of the United States” under Section 404 of the Clean Water Act. Waters of the United States include lakes, rivers, streams, and their tributaries, and wetlands. Wetlands are defined for regulatory purposes as “areas inundated or saturated by surface or groundwater 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” (33 Code of Federal Regulations [CFR] 328.3, 40 CFR 230.3).

The COE may issue either individual permits on a case-by-case basis or general permits on a program level. General permits are pre-authorized and are issued to cover similar activities that are expected to cause only minimal adverse environmental effects. Nationwide permits (NWP’s) are general permits issued to cover particular fill activities. All NWP’s have general conditions that must be met for the permits to apply to a particular project, as well as specific conditions that apply to each NWP.

Clean Water Act, Section 401

Section 401 of the Clean Water Act requires water quality certification and authorization of placement of dredged or fills material in wetlands and Other Waters of the United States. In accordance with Section 401 of the Clean Water Act, criteria for allowable discharges into surface waters have been developed by the State Water Resources Control Board, Division of Water Quality. As such, proponents of any new project which may impair water quality as a result of the project are required to create a post construction storm water management plan to insure offsite water quality is not degraded. The resulting requirements are used as criteria in granting National Pollution Discharge Elimination System (NPDES) permits or waivers, which are obtained through the Central Valley Regional Water Quality Control Board (RWQCB). Any activity or facility that will discharge waste (such as soils from construction) into surface waters, or from which waste may be discharged, must obtain an NPDES permit or waiver from the RWQCB. The RWQCB evaluates an NPDES permit application to determine whether the proposed discharge is consistent with the adopted water quality objectives of the basin plan.

California Fish and Wildlife Code, Sections 1600-1616

Under the California Fish and Wildlife Code, Sections 1600-1616 CDFW regulates projects that divert, obstruct, or change the natural flow or bed, channel, or bank of any river, stream, or lake. Proponents of such projects must notify CDFW and enter into streambed alteration agreement with them.

Section 1602 of the California Fish and Wildlife Code requires a state or local government agency, public utility, or private entity to notify CDFW before it begins a construction project that will: (1) divert, obstruct, or change the natural flow or the bed, bank, channel, or bank of any river, stream, or lake; (2) use materials from a streambed; or (3) result in the disposal or deposition of debris, waste, or other material containing crumbled, flaked, or ground pavement where it can pass into any river, stream, or lake. Once the notification is filed and determined to be complete, CDFW issues a streambed alteration agreement that contains conditions for construction and operations of the proposed project.

California Fish and Wildlife Code, Section 3503.5

Under the California Fish and Wildlife Code, Section 3503.5, it is unlawful to take, possess, or destroy any birds in the orders Falconiformes (hawks, eagles, and falcons) or Strigiformes (owls). Take would include the disturbance of an active nest resulting in the abandonment or loss of young.

Migratory Bird Treaty Act

The federal Migratory Bird Treaty Act (MBTA) prohibits the taking, hunting, killing, selling, purchasing, etc. of migratory birds, parts of migratory birds, or their eggs and nests. As used in the MBTA, the term “take” is defined as “to pursue, hunt, shoot, capture, collect, kill, or attempt to pursue, hunt, shoot, capture, collect, or kill, unless the context otherwise requires.” Most bird species native to North America are covered by this act.

Sensitive Natural Communities

The California Office of Planning and Research and the Office of Permit Assistance (1986) define project effects that substantially diminish habitat for fish, wildlife, or plants, or that disrupt or divide the physical arrangement of an established community as significant impacts under CEQA. This definition applies to certain natural communities because of their scarcity and ecological

values and because the remaining occurrences are vulnerable to elimination. For this study, the term “sensitive natural community” includes those communities that, if eliminated or substantially degraded, would sustain a significant adverse impact as defined under CEQA. Sensitive natural communities are important ecologically because their degradation and destruction could threaten populations of dependent plant and wildlife species and significantly reduce the regional distribution and viability of the community. If the number and extent of sensitive natural communities continue to diminish, the status of rare, threatened, or endangered species could become more precarious, and populations of common species (i.e., not special status species) could become less viable. Loss of sensitive natural communities also can eliminate or reduce important ecosystem functions, such as water filtration by wetlands and bank stabilization by riparian woodlands for example.

Protected Plants

The California Desert Native Plant Act was passed in 1981 to protect non-listed California desert native plants from unlawful harvesting on both public and privately-owned lands. Harvest, transport, sale, or possession of specific native desert plants is prohibited unless a person has a valid permit. The following plants are under the protection of the California Desert Native Plants Act:

- Dalea spinosa (smoketree)
- All species of the genus Prosopis (mesquites)
- All species of the family Agavaceae (century plants, nolinias, yuccas)
- All species of Cactus
- Creosote Rings, ten feet in diameter or greater
- All Joshua Trees

The project site contains many types of native desert plants which are protected under the County of San Bernardino Development Code Desert Native Plant Protection Ordinance. The project would be required to comply with the County of San Bernardino Desert Native Plant Protection Ordinance. The removal of any trees listed under Section 88.01.060 would be required to comply with Section 88.01.050, which requires the project applicant to apply for a Tree or Plant Removal Permit prior to removal from the project site.