

GENERAL BIOLOGICAL RESOURCES ASSESSMENT

**LANDPRO 7.5 MW SOLAR PROJECT
APN 0466-181-059, 060, 061, & 062**

SAN BERNARDINO COUNTY, CALIFORNIA
(USGS Wild Crossing, CA Quad.; Township 8 North, Range 4 West, Section 20)

Prepared for:

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EXECUTIVE SUMMARY

Sunlight Partners, LLC is proposing to construct a solar facility on a 75-acre site (approximate) in San Bernardino County (Township 8 North, Range 4 West, Section 20) (Figures 1, 2, and 3). The site has been utilized in the past for farming (i.e., alfalfa production) and currently supports a disturbed fallow field. Dominant vegetation included a variety of species typical of fallow agricultural fields such as saltbush (*Atriplex canescens*), wheelscale (*A. elegans*), Russian thistle (*Salsola tragus*), and brome grasses (*Bromus* sp.). No sensitive species were observed during general biological surveys conducted on April 9, 2012. Furthermore, the site is not expected to support populations of any sensitive species given the past disturbances which occurred over a several year period. No sensitive habitats (i.e., blue-line channels, wetlands, etc.) or wildlife movement corridors were noted on the property.

1.0 PROJECT AND PROPERTY DESCRIPTION

The property is located in the east ½ of the southwest ¼ of section 20, township 8 north, range 4 west, San Bernardino Base and Meridian (Figure 2). The site is approximately 75-acres in size and has been previously utilized for farming activities. Evaluation of aerial photos over the last several years indicates the site has been farmed for at least ten years which has resulted in the removal of most native vegetation. General biological surveys were conducted on the property on April 9, 2012 during which data on the existing biological conditions was recorded and the results of the survey are presented in this report. Currently, the site supports a variety of plants typical of fallow agricultural fields and disturbed grasslands. Dominant species included saltbush (*Atriplex canescens*), seepweed (*Sueda moquinii*), Russian thistle (*Salsola tragus*), and brome grasses (*Bromus* sp.). See Section 4.0 for a more detailed discussion of the biological resources.

The project would consist of a 7.5 MW high-efficiency solar facility as depicted in Figure 1. According to a background study prepared by Sunlight Partners (2011), “The solar arrays would consist of Polycrystalline Silicon modules that are approximately 77” by 39” with 2” profiles. The modules would be mounted on a single axis tracker system supported by steel piles about 4” by 8”, and the piles would be mounted at 20-foot intervals.” In addition, the panels would be about five to six feet off grade and the supporting piles would be placed at intervals of about 20-feet.

Elevations ranged from 2,390 to 2,410 feet (MSL) with a slight slope to the northeast (Figure 2). Soils consisted of disturbed sandy loam with a few gravels and small rocks present. The site is bordered on the west by an existing stable facility and on the south, north, and northeast by vacant lands. Single-family dwellings are also located to the east and southeast. The USGS Wild Crossing Quadrangle does not show any blue-line channels on the site, and no streams, desert washes or other water courses were observed during the April 9th field investigations. No wildlife corridors bisect the property, and no sensitive wildlife species were observed during the general biological surveys conducted on April 9, 2012. Weather conditions during the April 2012 survey consisted of winds of 0 to 5 mph, temperatures in the high 40’s (°F) to mid-50’s (°F) (AM) with 5 percent cloud coverage.

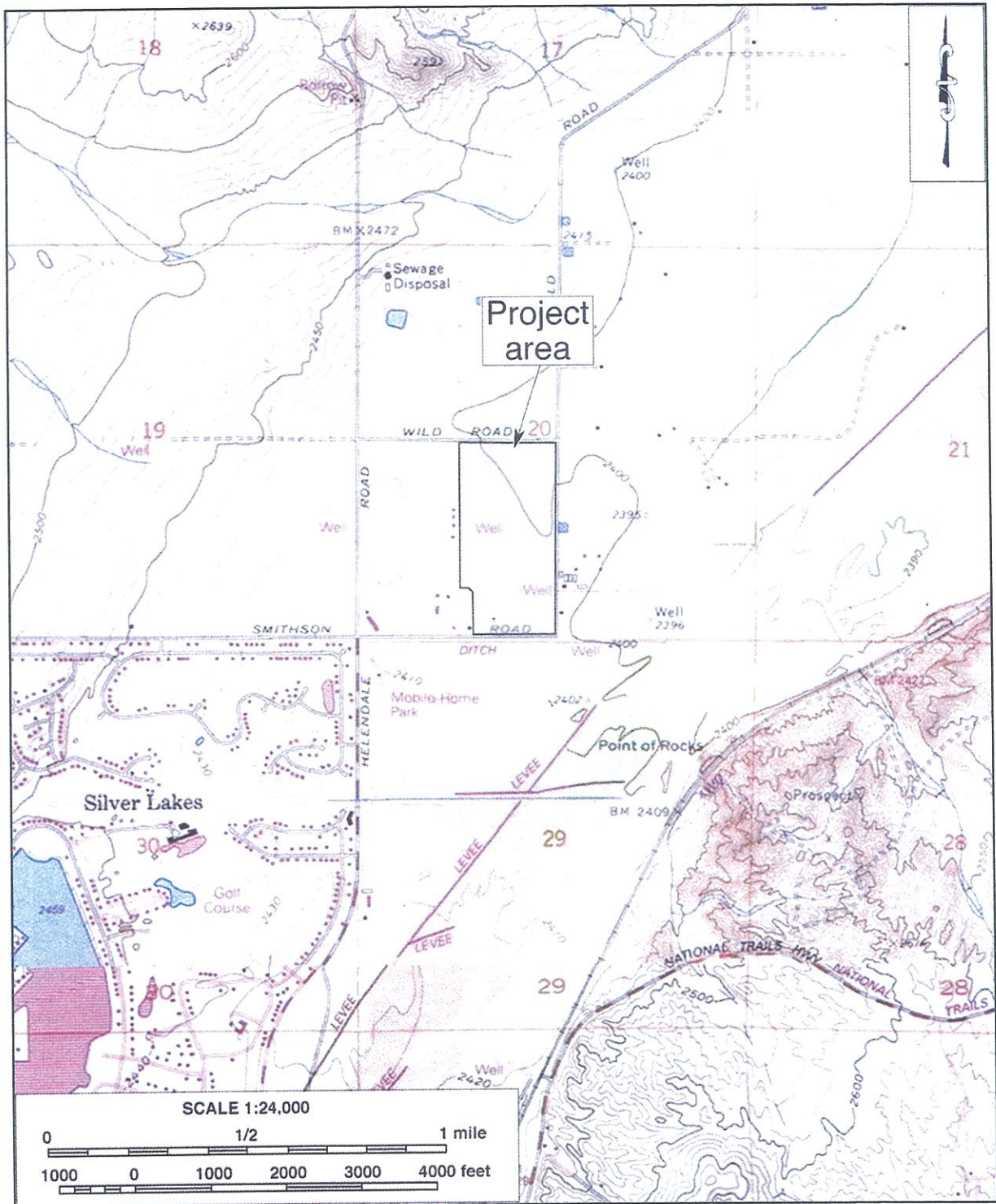


FIGURE 2

USGS Wild Crossing, CA Quad., 1973
 (LandPro 8161, APN 0466-181-059, 060, 061 & 062)

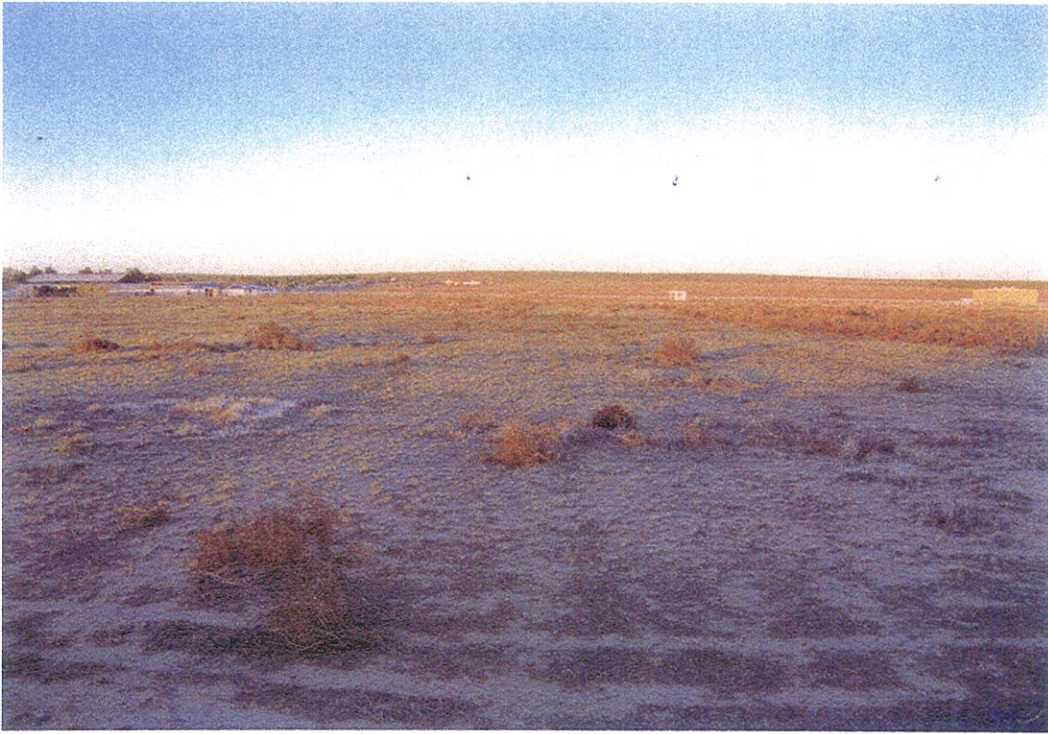


CENTER OF SITE LOOKING EAST

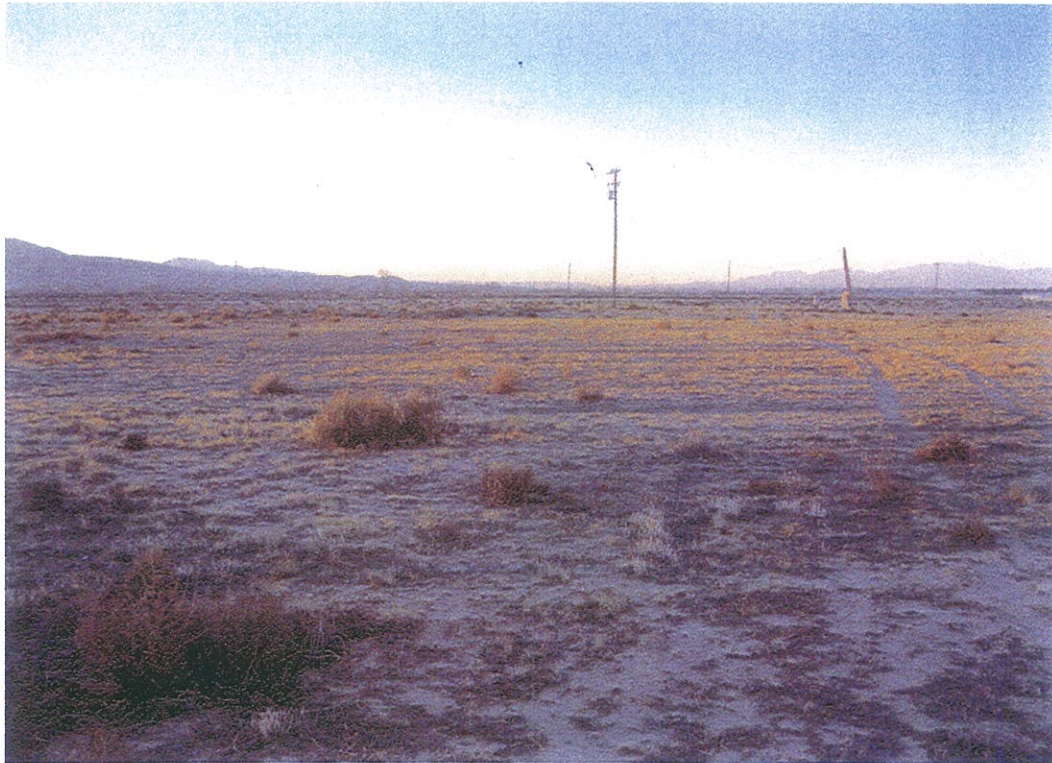


CENTER OF SITE LOOKING NORTH

FIGURE 3
Photographs of Site
(LandPro 8162, APN 0466-181-059, 060, 061 & 062)



CENTER OF SITE LOOKING WEST



CENTER OF SITE LOOKING SOUTH

FIGURE 3, cont.
Photographs of Site
(LandPro 8162, APN 0466-181-059, 060, 061 & 062)

2.0 LITERATURE/RECORD REVIEW - SPECIES OF SPECIAL CONCERN

As part of the environmental process, California Department of Fish and Game (CDFG) and U.S. Fish and Wildlife Service (USFWS) data sources were reviewed to determine if any listed and/or sensitive species have been documented in the area surrounding the site. The Federal Endangered Species Act provides protection for species of fish, wildlife, and plants that are listed by the US Government as threatened or endangered in the U.S., and the Act outlines procedures for Federal agencies to follow when evaluating projects which may jeopardize any listed species. In addition, The California Endangered Species Act (CESA) provides protection to those species which are deemed to be threatened with a significant decline or extinction within California, and the CESA provides CDFG with the responsibility of evaluating projects which may effect sensitive species.

Based on a literature review, including a search of USFWS and CDFG data bases, and a search of the California Natural Diversity Database (CNDDDB), it was determined that there are two sensitive wildlife species and one sensitive plant species that have been documented in the surrounding region within approximately five miles of the site (CNDDDB, 2012). These species include desert tortoise (*Gopherus agassizii*), Mohave ground squirrel (*Spermophilus mohavensis*), and Mojave monkeyflower (*Mimulus mohavensis*). Scientific nomenclature for this report is based on the following references: Hickman (1993), Munz (1974), Stebbins (2003), Sibley (2000) and Whitaker (1980). Table 1 (Appendix A) provides a detailed summary of the sensitive species listed above.

Following the data review, general biological surveys were performed on the site on April 9, 2012 during which the biological resources on the site and in the surrounding areas were documented by Randall C. Arnold, Jr. (biologist from RCA Associates, LLC) from 0700 to 1130 hours. As part of the surveys, the project site and the adjoining lands were evaluated for the presence of native habitats which could potentially support populations of sensitive species; however, no focused surveys were conducted for any sensitive species known to occur in the surrounding region.

3.0 METHODOLOGIES

General Vegetation and Wildlife

General biological surveys were conducted on April 9, 2012 during which Randall C. Arnold, Jr. from RCA Associates, LLC walked meandering transects (i.e., “transects of opportunity”) throughout the site from 0700 to 1130 hours. During the general surveys, data was collected on the plant species present on the site and in the immediate surrounding area and the wildlife which was observed. Few annual plants were in bloom at the time of the field investigations; although, most of the annuals typical of the area were identifiable, as were the various perennials. Those plants which could not be identified in the field were collected and take back to the lab for identification. Birds which use the site and adjacent areas were identified by visual observations and sound; whereas, mammals occurring were identified by scats, tracks, burrows, or direct observations. All plants and animals detected during the field investigations were recorded and are provided in compendium Tables 2 & 3 (Appendix A). The site was also evaluated for the presence of any sensitive habitats (e.g., wetlands, streams, etc.) and any native habitats which could potentially support sensitive species.

4.0 GENERAL BIOLOGICAL SURVEY RESULTS

The property has been previously utilized for several years for farming and currently supports a fallow agricultural field (Figures 3 and 4). Dominant perennials included saltbush (*Atriplex canescens*), wheelscale (*A. elegans*), bush seepweed (*Sueda moquini*), yellow-green matchweed (*Gutierrezia sarothrae*), and grasses (*Bromus* sp.) which were somewhat uniformly distributed throughout the site. Annuals identified included Russian thistle (*Salsola tragus*), fiddleneck (*Amsinckia tessellata*), and erodium (*Erodium cicutarium*), and alfalfa (*Medicago sativa*) (Figure 3) (Appendix A, Table 1). Figure 4 depicts the general biological resources present on the site and in the surrounding area.

Ravens (*Corvus corax*), mourning doves (*Zenaidura macroura*), and song sparrows (*Melospiza melodia*) were the only wildlife observed during the field investigations. Desert cottontails (*Sylvilagus auduboni*) and jackrabbits (*Lepus californica*) are also common in the area and may occur on the site. Likewise, coyotes (*Canis latrans*), which is the most common carnivore in the desert, occasionally traverses the site during hunting activities as indicated by the presence of scats and tracks. Other common species which have been observed in the general area during other recent surveys performed by RCA Associates, LLC, included California ground squirrels (*Spermophilus beecheyi*), side-blotched lizards (*Uta stansburiana*), western whiptail lizards (*Cnemidophorus tigris*), and desert spiny lizards (*Sceloporus magister*) (Appendix A, Table 2). These species are expected to inhabit the site and/or adjacent areas. No distinct wildlife corridors were identified on the site or in the immediate surrounding area, and no breeding activities were observed among any of the wildlife observed.



FIGURE 4
Biological Resources Map
(LandPro 8162, APN 0466-181-059, 060, 061 & 062)

5.0 IMPACTS AND RECOMMENDATIONS

General Biological Resources

Future construction of the proposed solar facility would result in the removal of most, if not all, of the vegetation present on the property. Wildlife species will be displaced into adjacent areas; however, few species inhabit the property based on the limited amount of vegetation present. Wildlife such as small mammals and reptiles may experience increased mortality due to their limited mobility; whereas, birds will be able to disperse over larger areas. Birds would likely experience only a slight increase in mortality assuming adjacent areas are not at carrying capacity at the time of displacement. Therefore, cumulative impacts are not expected to be significant given the limited amount of habitat available for wildlife and the existing vegetation. No recommendations regarding the general biological resources are proposed at this time.

Sensitive Wildlife Species

No sensitive species were observed during the general biological surveys; furthermore, the site is not expected to support populations of the desert tortoise and Mohave ground squirrel. (Note: No focused/protocol surveys were performed as part of the general surveys.) As noted above, farming activities have occurred on the property for several years and does not support native communities typically associated with the tortoise and Mohave ground squirrel (i.e., creosote bush habitat/desert scrub). In addition, the Mojave monkeyflower typically occurs in creosote bush and Joshua tree woodland communities, which are absent from the site. Although no burrowing owls (State species of special concern) were noted on the site or documented in the immediate area (CNDDDB, 2012), pre-construction surveys (i.e., 30-day surveys) for the owl may be required by CDFG to definitively determine the presence/absence of this relatively mobile species.

6.0 PROPOSED MITIGATION MEASURES

The proposed project is not expected to have any significant cumulative impacts on the general biological resources occurring on the property or in the surrounding region. Furthermore, the project is not expected to have any impact on any sensitive plant or wildlife species based on the absence of any suitable habitat on the site and due to past disturbance which have occurred. Therefore, no mitigation measures are recommended at the present time. However, if any sensitive species are identified during future development activities, all on-site activities should cease and CDFG and USFWS (as applicable) should be contacted to discuss specific mitigation measures which may be required for the individual species. CDFG and USFWS are the only agencies which can grant authorization for the “take” of any sensitive species.

7.0 BIBLIOGRAPHY

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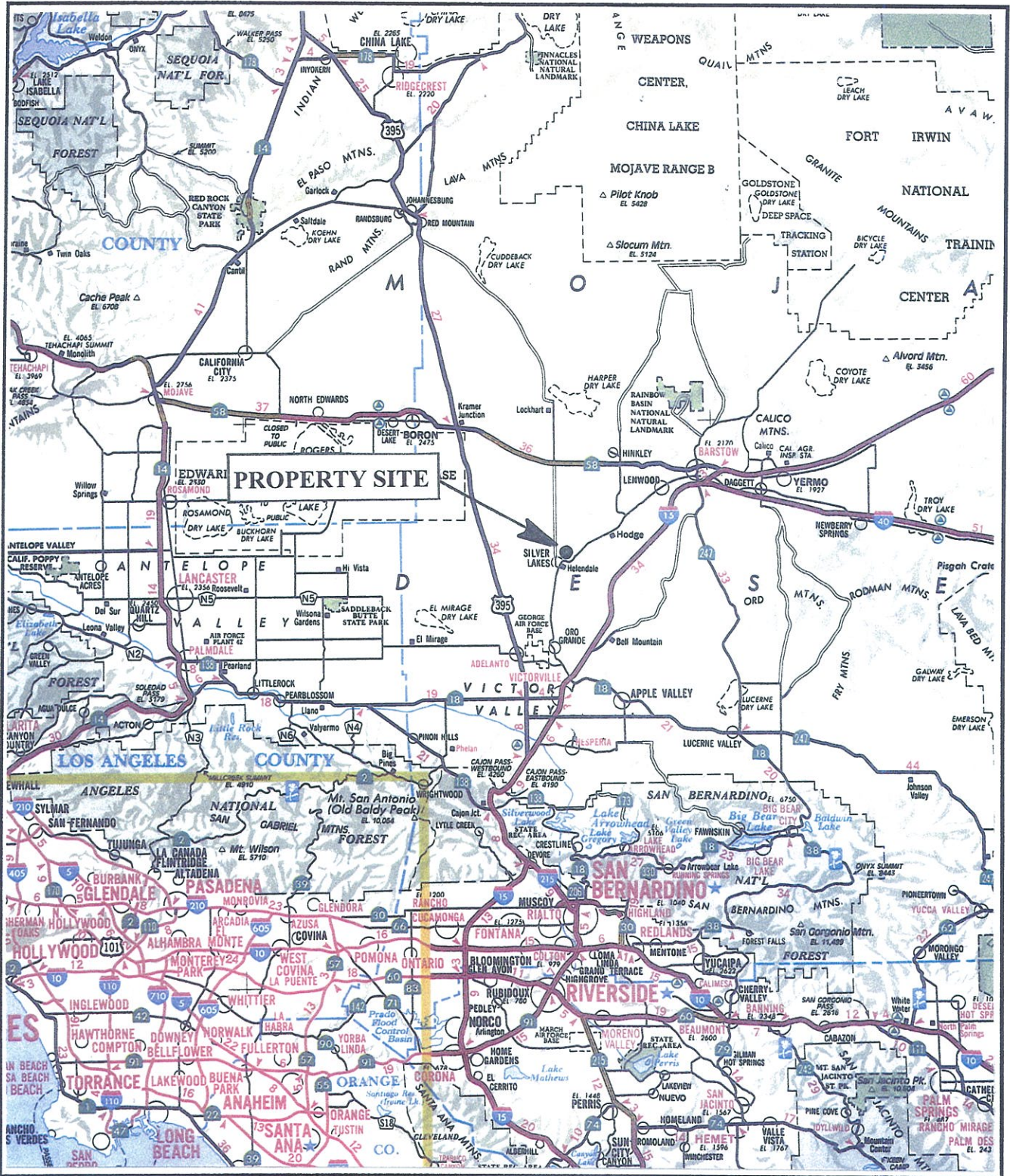
TABLES

**(Note: See Appendix A for CNDDDB Table
&
Flora and Fauna Compendium Tables)**

FIGURES

Vicinity Map

**Site Photographs depicting existing site
conditions and surrounding area.**



VICINITY MAP

(LandPro 8161, APN 0466-181-059, 060, 061 & 062)
 (Source: ACSC Map Source, 2012)





Photographs of Site
(LandPro 8162, APN 0466-181-059, 060, 061 & 062)

Appendix A
CNDDDB Sensitive Species List
&
Flora and Fauna Compendium Tables

Table 1 - Federal and State Listed Species and State Species of Special Concern Occurring Within Five Miles of the Site.

(Fed; E = Endangered; SSC = Species of special concern; CNDDDB = California Natural Diversity Data Base
CNPS: California Native Plant Society)

Name	Listing Status	Habitat Requirements	Presence/Absence	Comments
Desert tortoise (<i>Gopherus agassizii</i>)	Fed: T State: T	Desert scrub	Site does not support suitable habitat for the species. No tortoises or tortoise sign were observed during general surveys.	Site is located within the known distribution of the species (Occ. #1, CNDDDB, 2012).
Mohave ground squirrel (<i>Spermophilus mohavensis</i>)	Fed: None State: T	Desert scrub	Site supports suitable habitat for the species.	Nearest obs. 0.1 miles west of site (Occ. #18, CNDDDB, 2012).
Mojave monkeyflower (<i>Mimulus mohavensis</i>)	Fed: SC State: S CNPS: List 1B.2	Creosote bush and Joshua tree woodlands communities.	Site does not support suitable habitat.	Nearest obs. 3-miles south of site (Occ. #22, CNDDDB, 2012)

Table 2 - Plants observed on the site and know to occur in the immediate surrounding area.

Common Name	Scientific Name	Location
Yellow-green matchweed	<i>Gutierrezia sarothrae</i>	On-site
Fiddleneck	<i>Amsinckia tessellata</i>	“
Brome grasses	<i>Bromus sp.</i>	“
Saltbush	<i>Atriplex canescens</i>	“
Wheelscale	<i>A. elegans</i>	“
Bush seepweed	<i>Sueda moquinii</i>	“
Russian thistle	<i>Salsola tragus</i>	“
Erodium	<i>Erodium cicutarium</i>	“
Alfalfa	<i>Medigo sativa</i>	“

Table 3 - Wildlife observed on the site and those species expected to occur in surrounding area.


Common Name	Scientific Name	Location
Common raven	<i>Corvus corax</i>	On-site and in the surrounding area.
Song sparrow	<i>Melospiza melodia</i>	“
Mourning dove	<i>Zenaida macroura</i>	“
Side-blotched lizard	<i>Uta stansburiana</i>	May occur on-site.
Western whiptail lizard	<i>Cnemidophorus tigris</i>	“
Desert spiny lizard	<i>Sceloporus magister</i>	“
Desert cottontail rabbit	<i>Sylvilagus auduboni</i>	“
Coyotes	<i>Canis latrans</i>	“
California ground squirrel	<i>Spermophilus beecheyi</i>	“

Note: The above Tables are not comprehensive lists of every plant or animal species which may occur in the area, but are a list of those common species which were identified on the site during the one-day survey or which are common in the region.

Appendix B
Certification

CERTIFICATION

I hereby certify that the statements furnished above and in the attached exhibits, present 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 me or under my direct supervision. 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: 4/11/2012 Signed: 
Report Author

Field Work Performed By: Randall Arnold
Senior Biologist