

**HABITAT ASSESSMENT
&
FOCUSED BURROWING OWL SURVEY**

**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)

Owner/Applicant

**Sunlight Partners LLC
4215 East McDowell Road, Suite 212
Mesa, AZ 85205
(4800 924-5519**

Prepared by:

**RCA Associates, LLC
15555 Main Street, #D4-235
Hesperia, California 92345
Principal Investigator
Randall C. Arnold, Jr.
(760) 956-9212
Report prepared by: Randall Arnold
(760) 956-9212**

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EXECUTIVE SUMMARY

Sunlight Partners, LLC is proposing to construct a solar facility on a 75-acre site (approximately) 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 and disturbed grasslands, such as saltbush (*Atriplex canescens*), wheelscale (*A. elegans*), Russian thistle (*Salsola tragus*), and brome grasses (*Bromus* sp.).

The site supports suitable habitat for burrowing owls based on the Phase I survey (habitat assessment) conducted on the site on April 10, 2012; however, no owls or occupiable burrows were observed during the Phase II survey (burrow survey). Based on the results of the Phase I and Phase II surveys, a Phase III survey (i.e., census and mapping of owls) was deemed unnecessary as per the survey protocol guidelines established by The California Burrowing Owl Consortium. The following sections provide a discussion of the survey results.

Note: If burrowing owls are observed on the site in the future, the owls should not be removed, harassed, or in anyway disturbed regardless of the results of this survey. To do so may constitute a violation of State and County regulations. If owls are encountered during future development activities, all activities should cease and California Department of Fish and Game (CDFG) and San Bernardino County should be notified.

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; although, some re-vegetation has occurred. Burrowing owl surveys (Phase I and Phase II) surveys were conducted on the property on April 10, 2012 during which data on the existing biological conditions was recorded. 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*), wheelscale (*A. elegans*), 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 blueline channels on the site, and no streams, desert washes or other water courses were observed during the April 10th field investigations. No wildlife corridors bisect the property, and no owls or other sensitive wildlife species were observed during the surveys. Weather conditions during the April 2012 survey consisted of winds of 5 to 10 mph, temperatures in the high 50’s (°F) to high-80’s (°F) (AM) with clear skies.

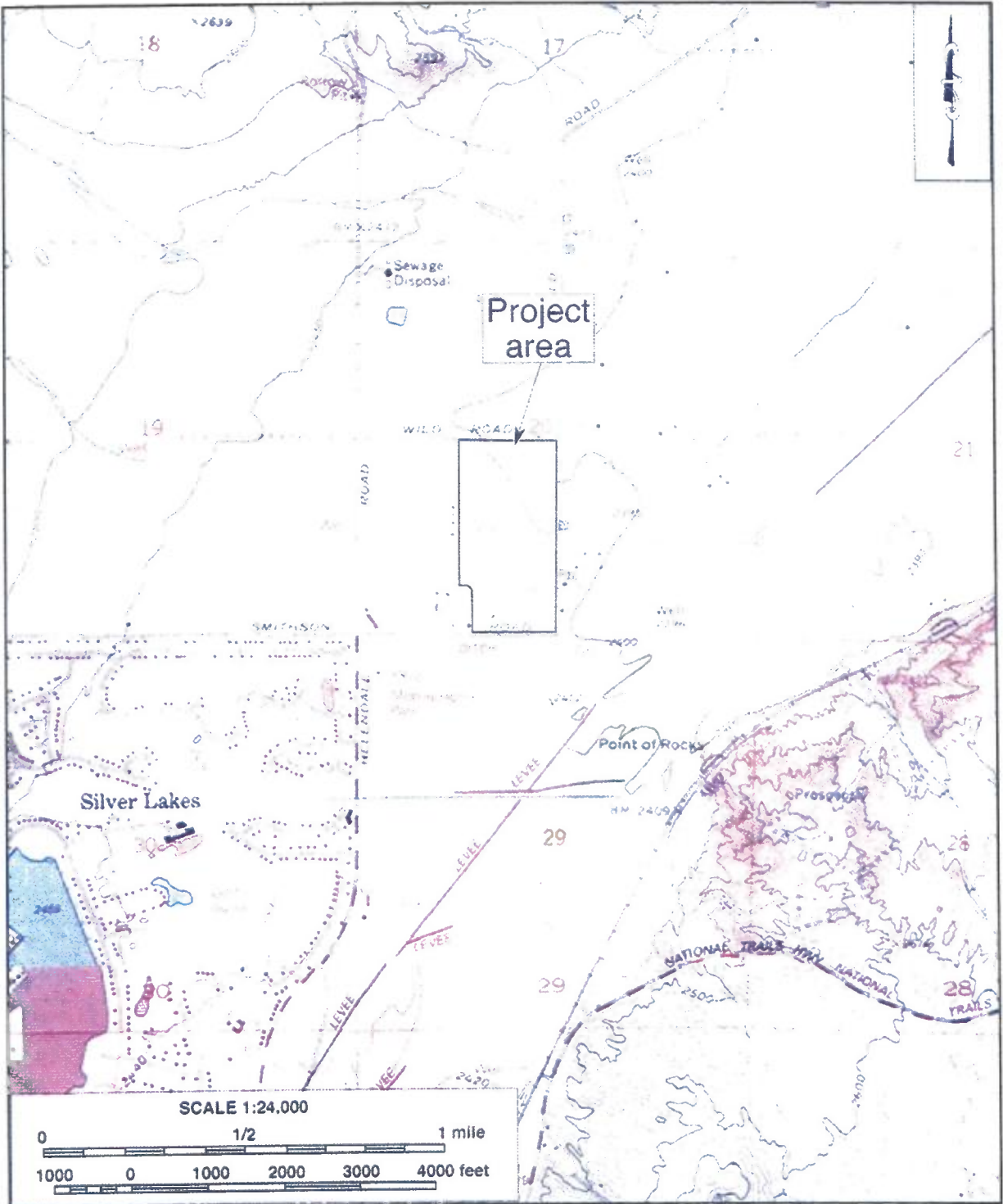


FIGURE 2

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

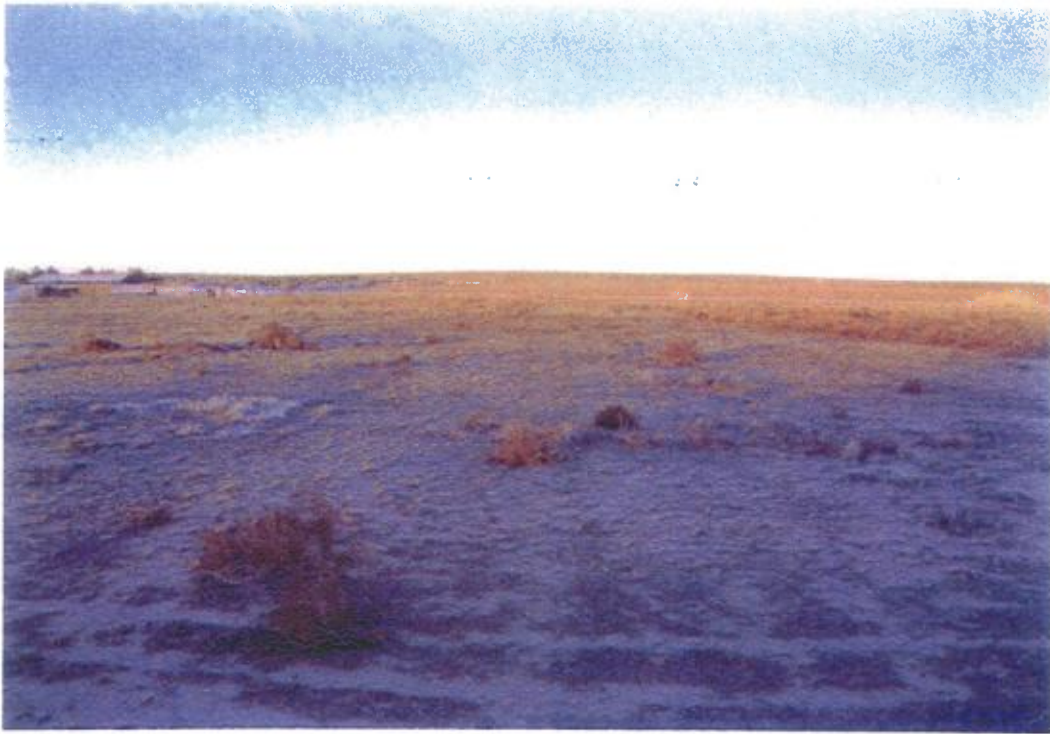


CENTER OF SITE LOOKING EAST



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 - BURROWING OWL

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 prior to initiation of field surveys to determine if burrowing owls have been documented on the site or in the immediate area surrounding the property. Based on the literature review and evaluation of the CNDDDB database for the area, it was determined that the site is located within the general distribution of the burrowing owl. However, populations of owls have not been identified in the immediate surrounding area within 5-miles of the site according to CNDDDB (2012). The absence of any documented owl colonies in the immediate area is probably a function of low regional population levels, as well as the limited number of biological surveys which have been conducted in the area for other projects. The nearest owl colonies are about 12-miles north of the site (CNDDDB, 2012). One colony was observed in 1989 in Section 32, Township 11 North, Range 4 West (Occurrence #520), and a second colony was identified in 2006 (Occurrence #871) in Section 33, Township 11 North, Range 4 West (CNDDDB, 2012).

The burrowing owl is a year-long resident of open, dry grassland and desert habitats. The species was formerly common throughout central and southern California; however, the species has seen a significant reduction over the last few decades due to development activities; farming activities, predation by dogs and cats, and habitat destruction (Zeiner 1990). Conversions of grassland and desert habitats to agricultural fields and residential developments have contributed to the greatest amount of habitat destruction in recent decades. The reduction in population levels was noted as early as the 1940s. Burrowing owls primarily prey upon insects; although, small mammals, lizards, birds, and carrion make up a portion of the owl's diet (Zeiner 1990). Burrowing owls typically utilize abandoned rodent burrows for roosting and nesting.

3.0 METHODOLOGY

A Phase I survey was conducted for burrowing owls by Randall Arnold on April 10, 2012 to determine if suitable habitat was present on the site. Burrowing owls are typically found in a wide variety of habitats including disturbed grassland and agricultural areas; therefore, a Phase II survey was conducted to determine if any owls or occupiable burrows were currently present on the site. As required by survey protocol, 30 meter, parallel belt transects were walked in a north-south direction until the property had been checked for owls and/or owl sign (burrows, tracks, scats, etc.). The survey protocol also requires that zone of influence (ZOI) surveys be conducted in the surrounding area out to a distance of 500-feet; however, no ZOI surveys were performed due to the presence of existing private property and posted areas. 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 affects in order to determine the presence or absence of suitable owl habitat. Surveys were performed on the site from about 0630 to about 1230 hours.

Phase I and Phase II surveys combined with identification of the habitat on the site and in the surrounding area will provide data on the potential presence or absence of burrowing owls. Temperatures during the April survey were in the high 50's to high 80's (°F), wind speeds of about 5 to 10 mph, and clear skies. No precipitation was recorded during the survey.

Limitations:

The results of this report do not constitute authorization for the "take" of burrowing owls or any other listed or sensitive wildlife species. The authorization to impact the burrowing owl can only be granted by CDFG. If owls are observed during future project activities, project activities should cease immediately and CDFG and San Bernardino County should be contacted to discuss mitigation measures which may be required for the 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 and disturbed grassland (Figures 3 and 4). Dominant perennials included saltbush (*Atriplex canescens*), wheelscale (*A. elegans*), bush seepweed (*Sueda moquinii*), 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*), 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 (*Zenaida 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.

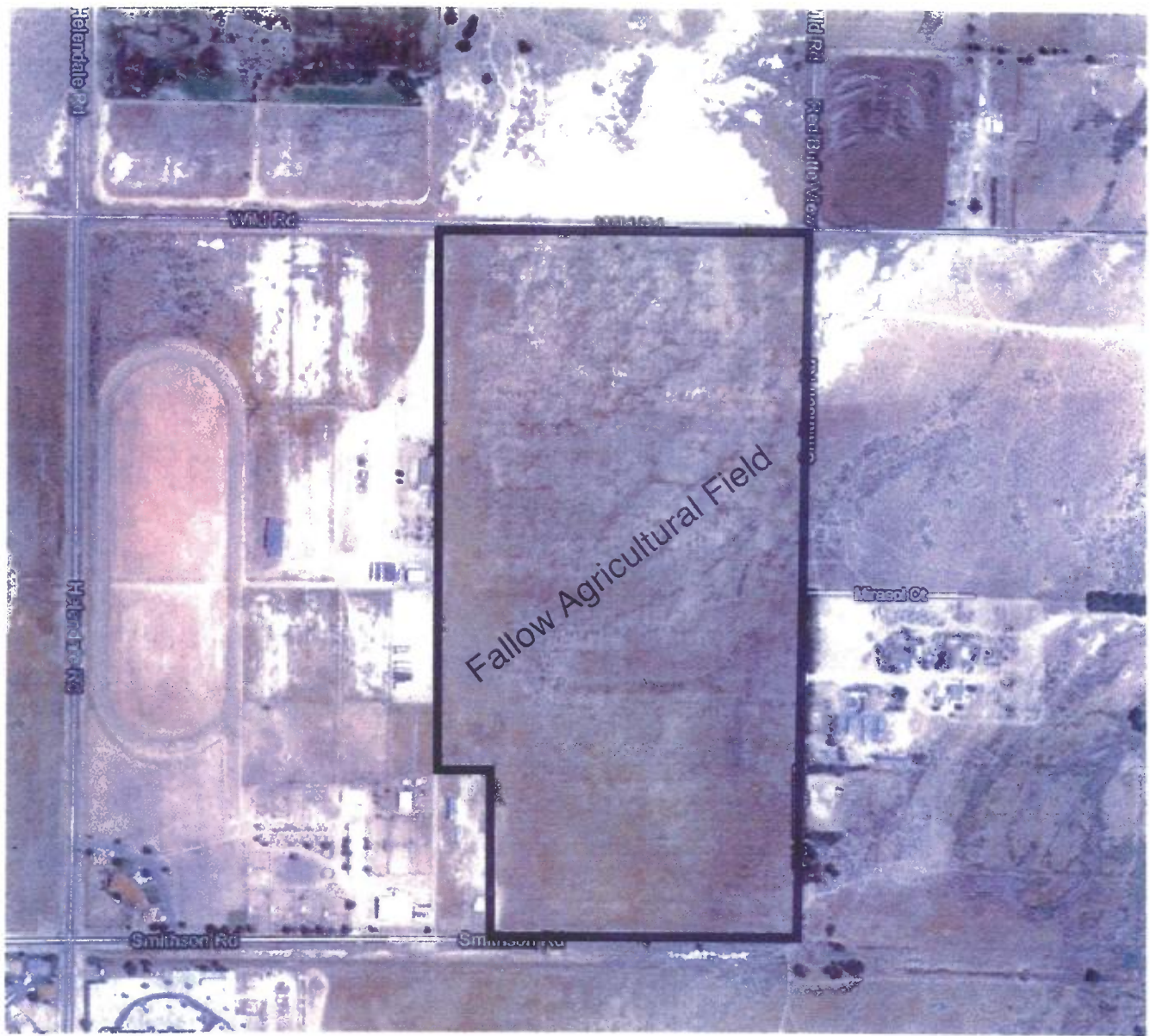


FIGURE 4
Biological Resources Map
(LandPro 8162, APN 0466-181-059, 060, 061 & 062)

5.0 RESULTS – BURROWING OWL

The site supports suitable habitat for burrowing owls based on the results of the Phase I surveys. However, the Phase II survey did not identify any owls or occupiable burrows on the site which limits the possibility of the species utilizing the site in the near future. Based on the absence of any occupiable burrows or owl sign, no Phase III surveys (i.e., owl surveys, census, and mapping) are deemed necessary as per the survey protocol outlined in the “Burrowing Owl Survey Protocol and Mitigation Guidelines” (The California Burrowing Owl Consortium, April 1993).

6.0 IMPACTS AND RECOMMENDATIONS

Construction of the proposed solar project is not expected to have any direct or indirect impacts on burrowing owls or occupied habitat based on the results of the Phase I and Phase II surveys conducted on April 10, 2012. No additional investigations are recommended at this time; however, CDFG and the County will require the proponent to conduct a pre-construction survey 30-days prior to the start of construction activities. The pre-construction survey will be required to determine if any owls have moved onto the site since the April 2012 surveys.

7.0 PROPOSED MITIGATION MEASURES

The site does not support any burrowing owls at the present time nor were any occupiable burrows observed. The possibility of owls occurring on the site in the near future is relatively low based on the absence of suitable burrows. However, if owls or any other sensitive species are observed on the site during future construction activities, CDFG and the County should be contacted to discuss mitigations which may be required. CDFG is the only agency which can grant authorization for the “take” of any sensitive species, including the burrowing owl.

8.0 REFERENCES

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TABLES

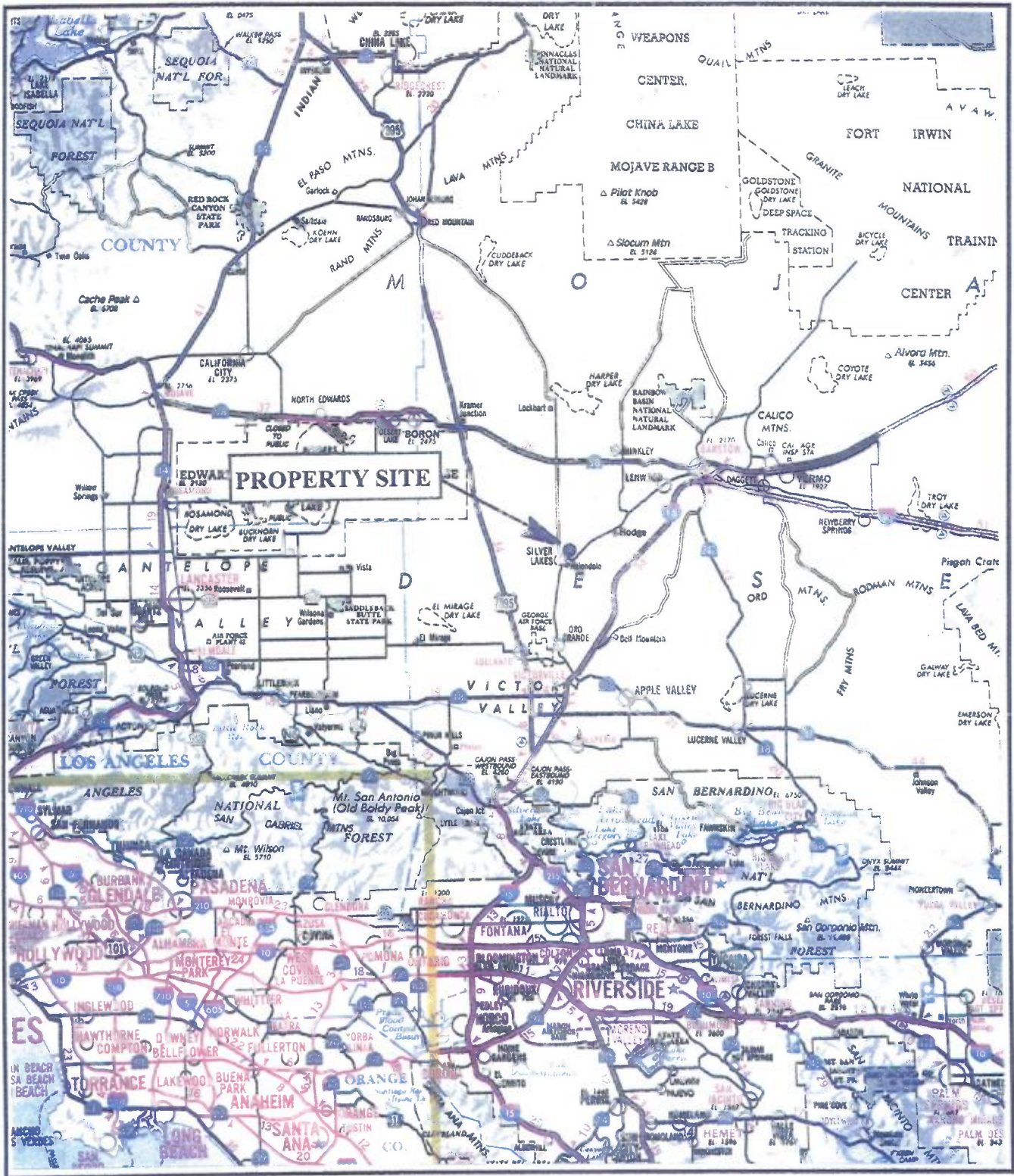
Burrowing Owl Occurrences

Burrowing Owl occurrences within the surrounding region based on California Diversity Data Base (2012). (SC = Species of special concern)

Name	Listing Status	Habitat Requirements	Presence/Absence	Comments
Burrowing owl (<i>Athene cunicularia</i>)	CDFG: SC	Various: desert scrub, agricultural lands, disturbed areas	Site support suitable habitat.	<p>A. Occurrence #520; 12-miles to north.</p> <p>B. Occurrence #871; 12-miles to north.</p>

FIGURES

Vicinity Map

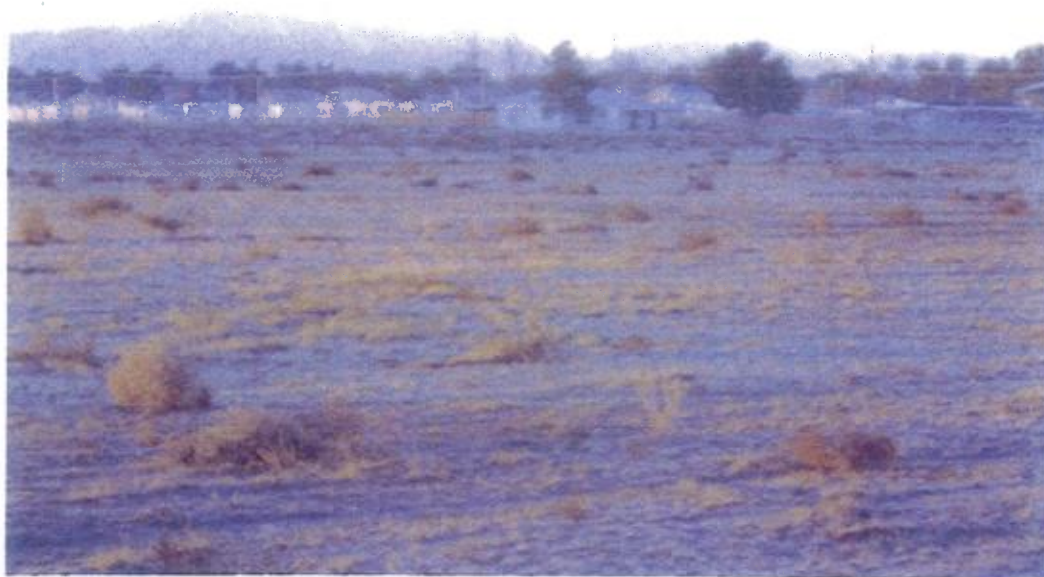
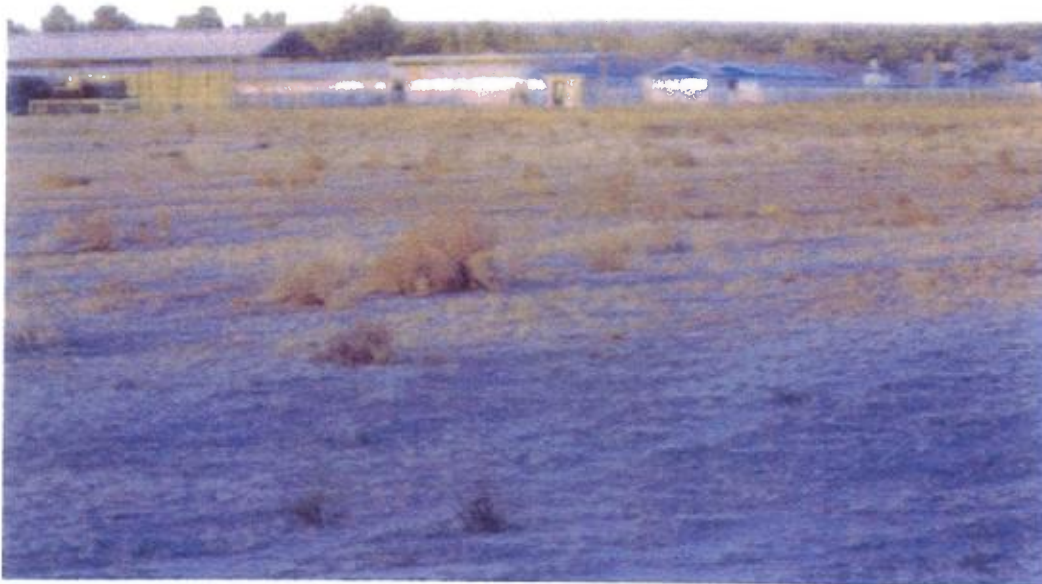


VICINITY MAP

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



SITE PHOTOGRAPHS



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

APPENDIX A

Flora and Fauna Compendia

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

<u>Common Name</u>	<u>Scientific Name</u>	<u>Location</u>
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>Medicago sativa</i>	"

Table 2 - Wildlife observed on the site and those species expected to occur in surrounding area.

<u>Common Name</u>	<u>Scientific Name</u>	<u>Location</u>
Common raven	<i>Corvus corax</i>	On-site
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>	"

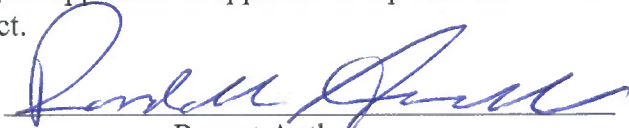
Note: The above Tables are not comprehensive lists of every plant or animal species which may occur in the area, but are a list of those common species which were identified on the site during the one-day survey or which are common in the region.

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: 7-2-2012

Signed:



Report Author

Field Work Performed By:

Randall Arnold

Senior Biologist