



# **SNOWLINE SCHOOL DISTRICT WHITE ROAD SOLAR PV PROJECT**

## **FOCUSED SURVEYS FOR BURROWING OWL**

**PHELAN AREA OF UNINCORPORATED SAN BERNARDINO COUNTY,  
CALIFORNIA  
USGS 7.5' BALDY MESA, CA QUADRANGLE  
TOWNSHIP 4 NORTH, RANGE 6 WEST, SOUTHEAST ¼ OF SECTION 23  
APN 3065-561-07**

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## 1.0 EXECUTIVE SUMMARY

AMEC Environment & Infrastructure, Inc. (AMEC) conducted a general biological resources assessment at the site of a proposed photovoltaic (PV) solar project site located approximately 5.8 miles east of Phelan (a census-designated place or CDP), south of Phelan Road on the west side of White Road, in unincorporated San Bernardino County, California. Potential habitat for burrowing owl (*Athene cunicularia*) is present. AMEC performed a habitat assessment and completed California Department of Fish and Wildlife (CDFW) protocol focused surveys for burrowing owl (*Athene cunicularia*) on and adjacent to the project site. No burrowing owls or their sign were detected on the project site or within the 500 foot survey buffer around the subject property. Two special status wildlife species were observed on the project site: Coast horned lizard (*Phrynosoma blainvillii*) and prairie falcon (*Falco mexicanus*).

## 2.0 INTRODUCTION

AMEC was contracted by Reno Contracting, Inc. to conduct a General Biological Resources Assessment at the site of a proposed PV solar project site (Project) located approximately 5.8 miles ESE of Phelan, in unincorporated San Bernardino County (see Figure 1 in Appendix A). AMEC was also contracted to perform habitat assessments and focused surveys for a variety of sensitive biological resources that have potential to occur on or adjacent to the Project site. This report provides results and discussion of the protocol surveys for burrowing owl.

### 2.1 Project and Property Description

The Project site consists of one parcel: APN: 3065-561-07 which is 47.80 acres. The property is bordered by Nielson Road, vacant land, and low density residential development on the north; White Road, vacant land, and low density residential development to the east and south; and low density residential, vacant land, and Pueblo Trail on the west. Hollister Road more or less bisects the site, from east to west (see Figures 1 & 2 in Appendix A). The property is located on the 7.5-minute Baldy Mesa, CA United States Geological Survey (USGS) quadrangle in Township 4 North, Range 6 West, southeast ¼ of Section 23 (see Appendix A). The Project site is almost level, gently sloping from an elevation of approximately 3,910 feet above mean sea level (AMSL) on the southern edge of the site to approximately 3,830 feet AMSL on the northern edge of the site.

Vegetation on the Project site is an intergrade between Joshua Tree Woodland and Mojavean Juniper Woodland and Scrub, with understory elements from Mojave Mixed Woody Scrub. Arborescent species include Joshua tree (*Yucca brevifolia*), California juniper (*Juniperus californica*), and on the southwestern portion of the site a fairly dense stand of Tucker's oak (*Quercus john-tuckeri*). Dominant "understory" species include peach thorn (*Lycium cooperi*), Great Basin sagebrush (*Artemisia tridentata*), blue sage (*Salvia dorrii*), California buckwheat (*Eriogonum fasciculatum*), Cooper's goldenbush (*Ericameria cooperi* var. *cooperi*), Interior goldenbush (*Ericameria linearifolia*), rubber rabbitbrush (*Ericameria nauseosa*), and bladder-sage (*Scutellaria mexicana*). Creosote bush (*Larrea tridentata*) is not present on the Project site, reflecting a stronger montane/coastal influence in the vegetation communities on this site. The habitat shows extensive signs of anthropogenic disturbance, such as mechanical disturbance of soil, vegetation removal, off road vehicle tracks, presence of dirt roads on some parts of the site, domestic dog "diggings" (dug out burrows), trash deposition, and the

presence of an abandoned residential dwelling on the southern portion of the parcel. No drainages were observed on the Project site.

Two soil types are mapped on the Project site (USDA 2013): Hesperia Loamy Fine Sand, 2 to 5 percent slopes, is the only soil type mapped on the southern "half" of the site (from just below where Hollister Road crosses the site). The remainder of the parcel is mapped as Cajon Sand, 0 to 2 percent slopes (see Figure 2 in Appendix A). The Cajon series consists of very deep, somewhat excessively drained soils on alluvial fans and river terraces. Cajon soils formed in alluvium from dominantly granitic sources. Soils in this series have slopes ranging from 0 to 15 percent. Hesperia Loamy Fine Sand is also a very deep, well-drained soil formed in alluvium derived from granitic material, and is usually vegetated with junipers, desert shrubs, grasses and forbs.

The solar power developer for this project will be Sun Edison (in partnership with Reno Consulting, Inc.). This Project site is one of three sites that taken in sum total approximately 66.6 acres. These three sites are considered Phase 2 of a past project completed by Sun Edison and Reno Contracting in 2011. The surrounding area is a patchwork of undeveloped lands, unpaved roads, and low density rural residences. The undeveloped lands provide potential wildlife corridors to/from the site between disturbed areas.

### **3.0 BURROWING OWL SURVEY**

#### **3.1 Burrowing Owl Background**

The burrowing owl is a small, tan, short-tailed, ground-dwelling owl that occupies underground burrows. A member of the Strigidae (typical owls family), this species is associated with grasslands and other arid open terrain, including Mojave Creosote Bush Scrub, throughout much of the western United States. Burrowing owls are opportunistic in their selection of burrows, typically utilizing the burrows of small mammals (e.g., ground squirrels, kit fox (*Vulpes macrotis*), but also use desert tortoise (*Gopherus agassizii*) burrows, drain pipes, culverts, and other suitable natural or manmade cavities at or below ground level. In California, the species often occurs in association with colonies of the California ground squirrel (*Spermophilus beecheyi*), where it makes use of the squirrel's burrows. The entrance of the burrow is often adorned with animal dung, feathers, debris, and other small objects. The species is active both day and night, and may be seen perching conspicuously on fence posts or standing at the entrance of their burrows. Due to the characteristic fossorial habits of burrowing owls, nest burrows are a critical component of their habitat.

In southern California, burrowing owls are not only found in undisturbed natural areas, but also fallow agricultural fields, margins of active agricultural areas, livestock farms, airports, and vacant lots. In spite of their apparent tolerance to human activities, burrowing owl populations in California are clearly declining and, if declines continue, the species may qualify for listing under the state and/or federal Endangered Species Acts (California Department of Fish and Game [CDFG] 1995). The declines in Burrowing Owl populations are attributed to loss and degradation of habitat, to ongoing residential and commercial development, and to rodent control programs. The burrowing owl is currently designated a California Species of Concern (CSC) by the CDFG (note that the CDFG changed their name in 2013 to the California Department of Fish and Wildlife [CDFW]), managed as a Bird of Conservation Concern by the U.S. Fish and Wildlife Service (USFWS), is considered "sensitive" by the U. S. Bureau of Land Management (BLM), and protected by the Migratory Bird Treaty Act (MBTA) and California Fish and Game Code Sections 3503, 3503.5, 3513, and 3800.

The California Burrowing Owl Consortium (CBOC) developed the Burrowing Owl Survey Protocol and Mitigation Guidelines to meet the need of uniform standards when surveying burrowing owl populations and evaluating impacts from development projects (CBOC 1993). In 1995 the CDFG issued the Staff Report on Burrowing Owl Mitigation to all of its regional managers to ensure consistency in standards, policies, and regulatory mandates relating to the burrowing owl (CDFG 1995). Due to the continued decline of burrowing owl populations statewide and as an attempt to reverse this trend, the CDFG issued more effective, viable, coordinated and concerted approach to burrowing owl conservation actions with the release of an updated Staff Report on Burrowing Owl Mitigation (CDFG 2012).

### 3.2 Burrowing Owl Survey Methods

A protocol level habitat assessment for the burrowing owl was conducted by AMEC Biologists Nathan T. Moorhatch and Scot Chandler, as well as subconsultants Ted Rado and Phillip Clevinger on April 11 and 12, 2013. The habitat assessment was conducted on foot, visually inspecting and mapping all areas of the site and adjacent areas (a 500 foot buffer around the site) for components of burrowing owl habitat (i.e., sparsely vegetated areas with appropriate sized burrows or man-made structures suitable for burrowing owl use). The first of four focused surveys was conducted concurrent with the habitat assessment. That survey visit and the subsequent surveys were conducted between morning civil twilight sunrise and 10:00 AM (hours spent onsite after 10:00 AM on April 11<sup>th</sup> were spent performing other focused surveys and the habitat assessment). Straight line transects spaced no more than 20 meters apart (ten meters apart on the Project site) were walked throughout all suitable areas of the site and buffer area to identify occupiable habitat. Trimble Juno series hand-held global positioning system (GPS) units pre-loaded with transect route coordinates were used by surveyors to navigate along each survey transect line. Burrows suitable for burrowing owl occupation were recorded with the Trimble Juno unit, and closely monitored and inspected during each subsequent visit for evidence of burrowing owl use (i.e., whitewash, pellets, feathers and other adornments). Binoculars were used to identify birds and to survey perches and potential burrows prior to closer approach. A handheld anemometer was used to record temperatures and wind speeds. Survey dates, times, and weather conditions are presented in Table 1 below.

**Table 1. Burrowing Owl Focused Survey & Habitat Assessment Data**

Date	Time	Sky	Temp. (°F)	Wind (mph)
11 April 2013	0900-1355	Clear	67-75	3-13
12 April 2013	0644-0926	Clear	54-75	0-4
8 May 2013	0802-0939	Clear	60-65	0-8
4 June 2013	0750-0920	Clear	73-78	3-7
2 July 2013	0755-0938	Clear	86-89	3-10

### 3.3 Burrowing Owl Survey Results

The habitat assessment/first focused survey detected several burrows that were potentially suitable for burrowing owl occupation (see Figure 2 in Appendix A). These burrows were located both on the Project site and in the buffer zone around the site. No burrowing owls or evidence thereof (i.e., whitewash, pellets, feathers, tracks, prey remains, egg shell fragments, nest adornment materials, etc.) were observed onsite or on adjacent properties surveyed during any of the four survey visits (or even during the “Zone of Influence” transects walked up to 600 meters around the site during the focused desert tortoise surveys). The only owl species observed was a single juvenile great horned owl (*Bubo*

*virginianus*) that was perched in a Joshua tree next to the abandoned dwelling on the southern portion of the Project site (seen on last two survey visits).

### **3.4 Discussion of Burrowing Owl Survey Results**

The results of the breeding season focused survey indicate that the burrowing owl does not currently occupy the site or immediately adjacent areas. However, because the area continues to provide suitable shelter and nesting habitat for burrowing owls, the potential remains for the species to occur on or adjacent to the site in the future. In accordance with the Staff Report on Burrowing Owl Mitigation (CDFG 2012), a “take avoidance survey” for the burrowing owl should be conducted no less than 14 days prior to the initiation of ground disturbance activities and a final survey should also be conducted within 24 hours prior to ground disturbance. If no burrowing owls are detected during the take avoidance surveys, implementation of ground disturbance activities could proceed without further consideration of this species. If burrowing owls are detected during the take avoidance survey, avoidance and minimization measures would then be required, under the guidance of the CDFW.

## 4.0 REFERENCES

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- Legislative Counsel of California. 2008. California Fish And Game Code. <http://www.leginfo.ca.gov/cgi-bin/calawquery?codesection=fgc&codebody=&hits=20>
- United States Fish and Wildlife Service (USFWS). 2012. Birds Protected by the Migratory Bird Treaty Act. Online at: <http://www.fws.gov/migratorybirds/RegulationsPolicies/mbta/mbtintro.html>

## **5.0 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. Field work 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."

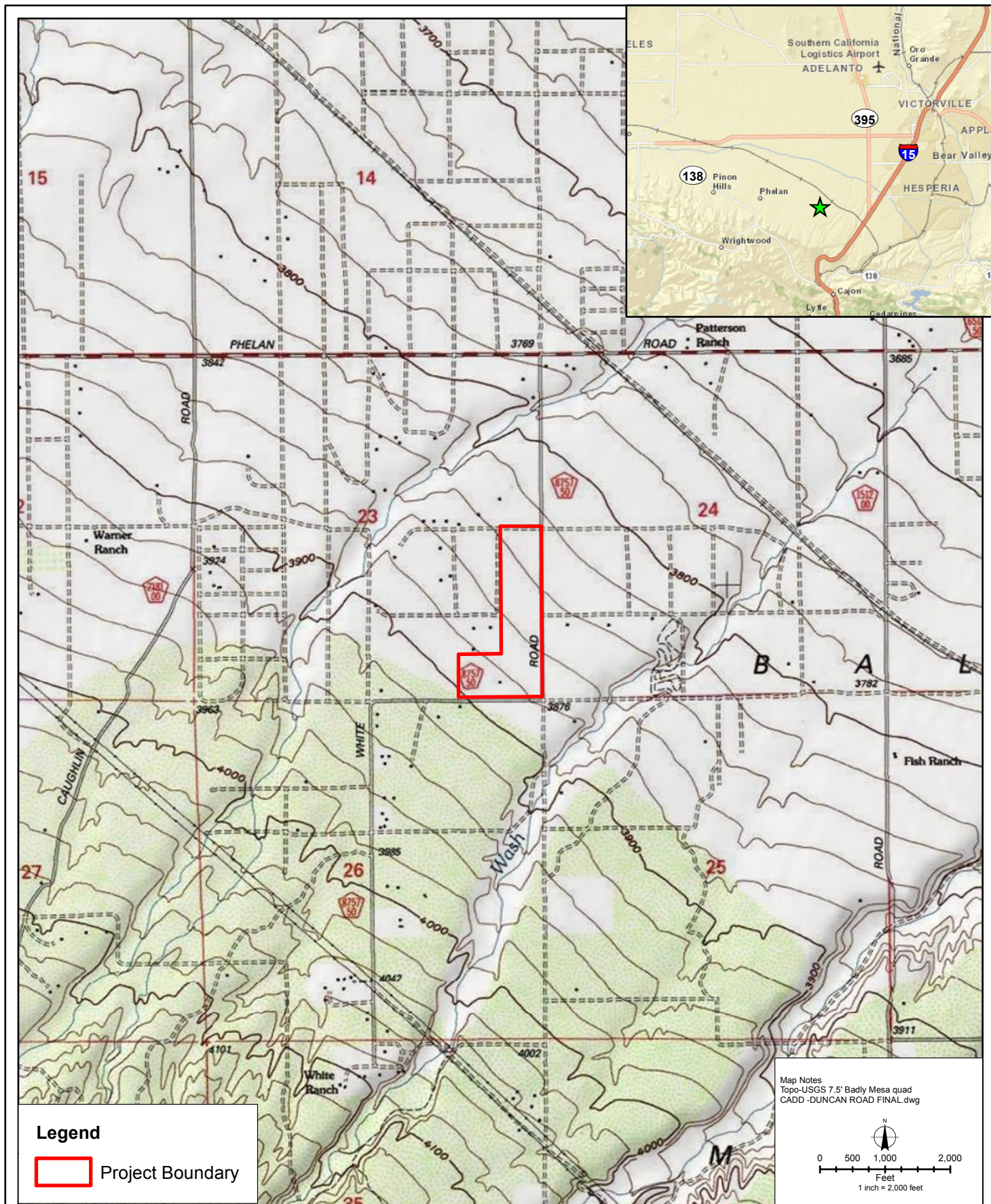
DATE: 19 July 2013

SIGNED:

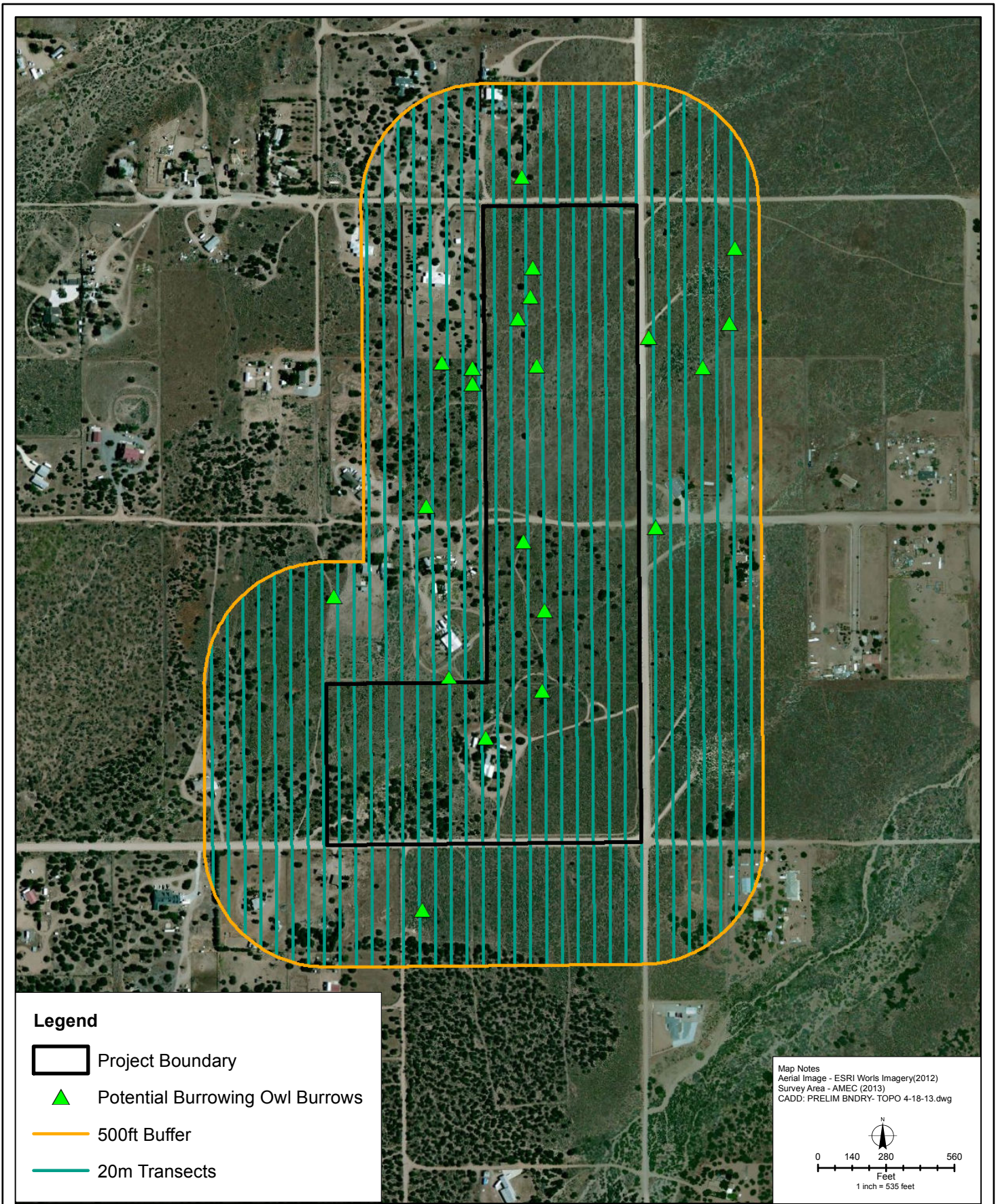
- 1) Fieldwork Performed By:  
Nathan T. Moorhatch



## **Appendix A      Project Map Figures**







## **Appendix B      Site Photographs**





**Photograph 1.** Representative view of disturbed habitat present on the central and northern portions of the White Road Project site.



**Photograph 2.** Another view of the same area.



**Photograph 3.** Habitat near the southern portion of the parcel.



**Photograph 4.** Juniper dominated habitat, southern portion of site, showing downed Joshua tree limbs and California ground squirrel burrows.





**Photograph 5.** Tucker oaks on southwest portion of parcel.



**Photograph 6.** California ground squirrel burrow under rubble pile, within 500 foot buffer east of site, potential for burrowing owl use.



**Photograph 7.** Another representative California ground squirrel burrow onsite.



**Photograph 8.** Juvenile great horned owl in Joshua tree next to abandoned dwelling onsite. Seen on last two focused surveys.



## **Appendix C      Vertebrate Wildlife**

**Vertebrate Species Observed on the Project Site and Buffer  
Transects**

**REPTILIA**

**Phrynosomatidae**

*\*\*Phrynosoma blainvillii*  
*Sceloporus occidentalis longipes*  
*Uta stansburiana*

**Xantusiidae**

*Xantusia vigilis vigilis*

**Teiidae**

*Aspiloscelis tigris tigris*

**Anguidae**

*Elgaria multicarinata webbia*

**Colubridae**

*Coluber flagellum piceus*  
*Pituophis catenifer annectens*

**AVES**

**Odontophoridae**

*Callipepla californica*

**Cathartidae**

*Cathartes aura*

**Columbidae**

*Streptopelia decaocto*  
*Zenaidura macroura*

**Strigidae**

*Bubo virginianus*

**Trochilidae**

*Calypte anna*  
*Calypte costae*

**Picidae**

*Picoides scalaris*  
*Colaptes auratus*

**Falconidae**

*Falco sparverius*  
*\*\*Falco mexicanus*

**REPTILES**

**Spiny and Horned Lizards**

Coast horned lizard  
Great Basin fence lizard  
side-blotched Lizard

**Night Lizards**

yucca night lizard

**Whiptails and Relatives**

Great Basin Whiptail

**Alligator Lizards and relatives**

San Diego alligator lizard

**Harmless Egg-laying Snakes**

red racer  
San Diego gopher snake

**BIRDS**

**New World Quail**

California quail

**New World Vultures**

turkey vulture

**Pigeons and Doves**

Eurasian collared-dove  
mourning dove

**Typical Owls**

great horned owl

**Hummingbirds**

Anna's hummingbird  
Costa's hummingbird

**Woodpeckers and Allies**

ladder-backed woodpecker  
northern flicker

**Caracaras and Falcons**

American kestrel  
Prairie falcon

**Tyrannidae**

*Sayornis saya*  
*Myiarchus cinerascens*  
*Tyrannus verticalis*

**Corvidae**

*Apelocoma californica*  
*Corvus corax*

**Paridae**

*Baeolophus inornatus*

**Remizidae**

*Auriparus flaviceps*

**Aegithalidae**

*Psaltirparus minimus*

**Troglodytidae**

*Thryomanes bewickii*  
*Campylorhynchus brunneicapillus*

**Poliopitilidae**

*Poliopitila caerulea*

**Turdidae**

*Sialia mexicana*

**Mimidae**

*Mimus polyglottos*  
*Toxostoma redivivum*

**Sturnidae**

*Sturnus vulgaris*

**Ptilonotidae**

*Phainopepla nitens*

**Emberizidae**

*Melospiza crissalis*  
*Spizella breweri*  
*Amphispiza bilineata*  
*Artemisiospiza belli*  
*Zonotrichia leucophrys*  
*Junco hyemalis*

**Icteridae**

*Molothrus ater*

**Tyrant Flycatchers**

Say's phoebe  
ash-throated flycatcher  
western kingbird

**Crows, Jays**

western scrub-jay  
common raven

**Chickadees and Titmice**

oak titmouse

**Penduline Tits and Verdins**

verdin

**Long-tailed Tits and Bushtits**

bushtit

**Wrens**

Bewick's wren  
cactus wren

**Gnatcatchers and Gnatwrens**

blue-gray gnatcatcher

**Thrushes**

western bluebird

**Mockingbirds and Thrashers**

northern mockingbird  
California thrasher

**Starlings**

European starling

**Silky-flycatchers**

phainopepla

**Emberizids**

California towhee  
Brewer's sparrow  
black-throated sparrow  
sage sparrow  
white-crowned sparrow  
dark-eyed junco

**Blackbirds, Orioles**

brown-headed cowbird

**Fringillidae**

*Haemorhous mexicanus*

**Passeridae**

*Passer domesticus*

**MAMMALIA**

**Leporidae**

*Lepus californicus*

*Sylvilagus audubonii*

**Sciuridae**

*Spermophilus beecheyi*

*Ammospermophilus leucurus*

**Geomyidae**

*Thomomys bottae*

**Canidae**

*Canis latrans*

**Fringilline and Cardueline Finches, Allies**

house finch

**Old World Sparrows**

house sparrow

**MAMMALS**

**Rabbits, Hares**

black-tailed jackrabbit

desert cottontail

**Squirrels and Chipmunks**

California ground squirrel (burrow)

white-tailed antelope squirrel

**Pocket Gophers**

Botta's pocket gopher (mounds)

**Wolves, Foxes, Coyote**

coyote (scat, burrow)

**KEY**

- \* = non-native species
- \*\* = special-status species
- \*\*\* = locally-protected species
- cf. = compares favorably with
- sp. = plant identified to genus only

This list reports only animals observed on the site by this study. Other species may have been overlooked or undetectable due to their growing season (plants) or their activity patterns and/or subterranean habitats (animals). Nomenclature and taxonomy for fauna generally follows the American Ornithologists' Union Checklist (2013) for avifauna and CDFG (2008) for herpetofauna and mammals.