MOHAVE GROUND SQUIRREL SURVEY
AT THE SNOWLINE UNIFIED SCHOOL DISTRICT
SNOWLINE II SOLAR PV DUNCAN ROAD PROJECT SITE,
APN 3098-311-11
PHELAN, SAN BERNARDINO COUNTY, CALIFORNIA

Prepared for

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5 August 2013

Certification: *I hereby certify that the statements furnished herein present data and information required for this Biological Survey to the best of my ability, and the facts, statements, and information presented are true and correct to the best of my knowledge and belief.*

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5 Aug 2013

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Date

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SUMMARY

The Snowline Unified School District proposes to install photovoltaic panels on a parcel along Duncan Road in Phelan (3098-311-11), San Bernardino County, California. Visual and trapping surveys were conducted on the proposed project site to determine the presence or absence of Mohave ground squirrels (*Xerospermophilus mohavensis*), a State-listed threatened species. One trapping grid was established at the site. No Mohave ground squirrels were seen during the visual survey or captured during the three trapping periods at the site. The negative result does not necessarily prove that Mohave ground squirrels do not exist on the site or that the site is not actual or potential habitat for the species. However, in the circumstance of such a negative result, the California Department of Fish and Wildlife will stipulate that the project site harbors no Mohave ground squirrels. This stipulation will expire one year from the ending date of the last trapping on the project site, which was 5 July 2013.

This study was conducted under the authority of a Memorandum of Understanding between EREMICO Biological Services and the California Department of Fish and Wildlife, dated 28 August 2007.

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1. INTRODUCTION

1.1. PROJECT DESCRIPTION

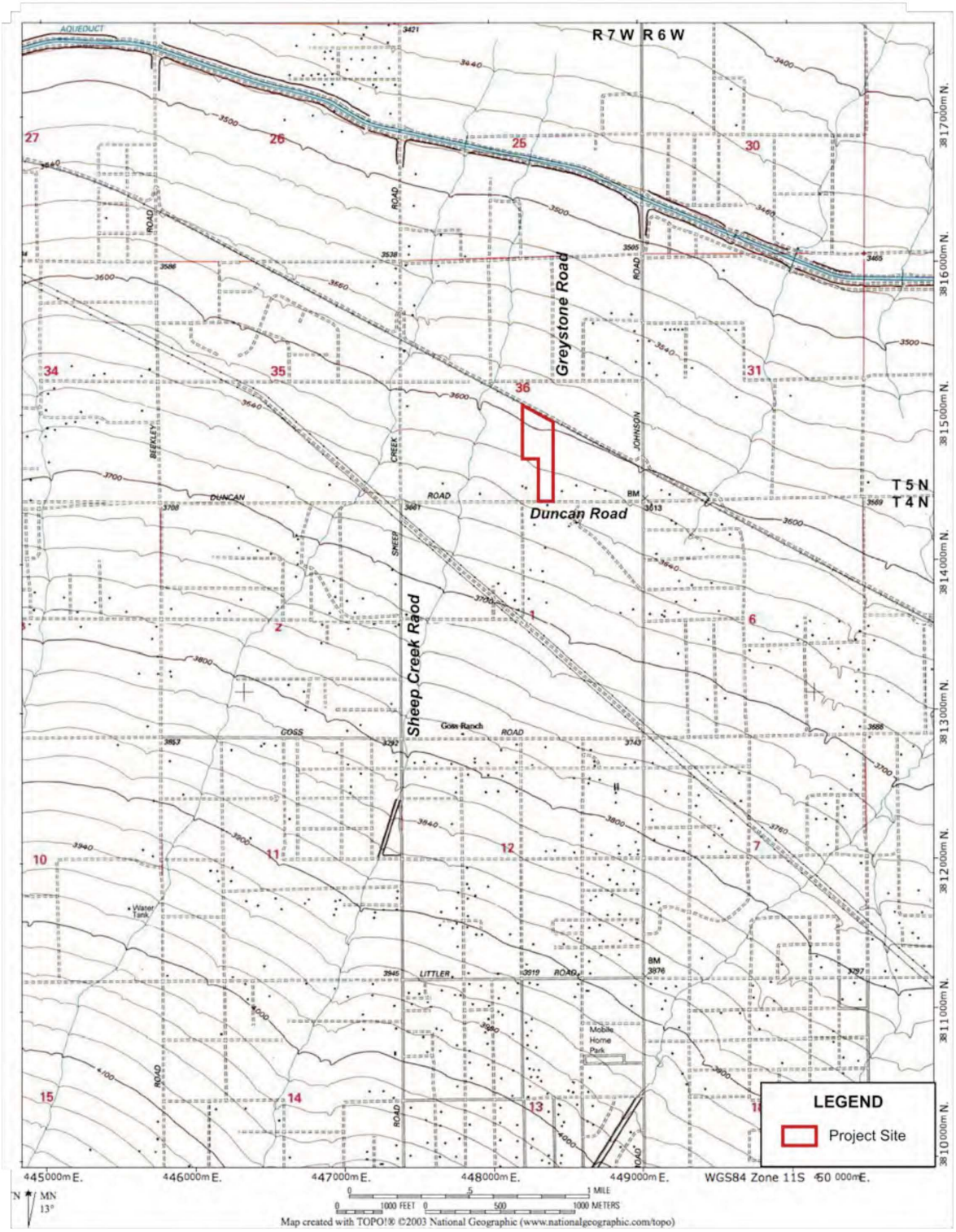
The Snowline School District proposes to install photovoltaic (PV) panels on a 25.89-ac parcel in Phelan, San Bernardino County, California. The project is entitled Snowline II Solar PV, Duncan Road Project Site. The Assessor's Parcel Number is 3098-311-11.

The proposed project site lies within the known range of Mohave ground squirrels (*Xerospermophilus mohavensis*) (Gustafson 1993, Leitner 2008), a State-listed threatened species (State of California 2013b). Since the construction of the photovoltaic panels at the site may negatively impact a State-listed species, surveys following standardized protocols (California Department of Fish and Game [CDFG] 2003) were initiated to determine the status of Mohave ground squirrels in the project area.

1.2. PROJECT SITE

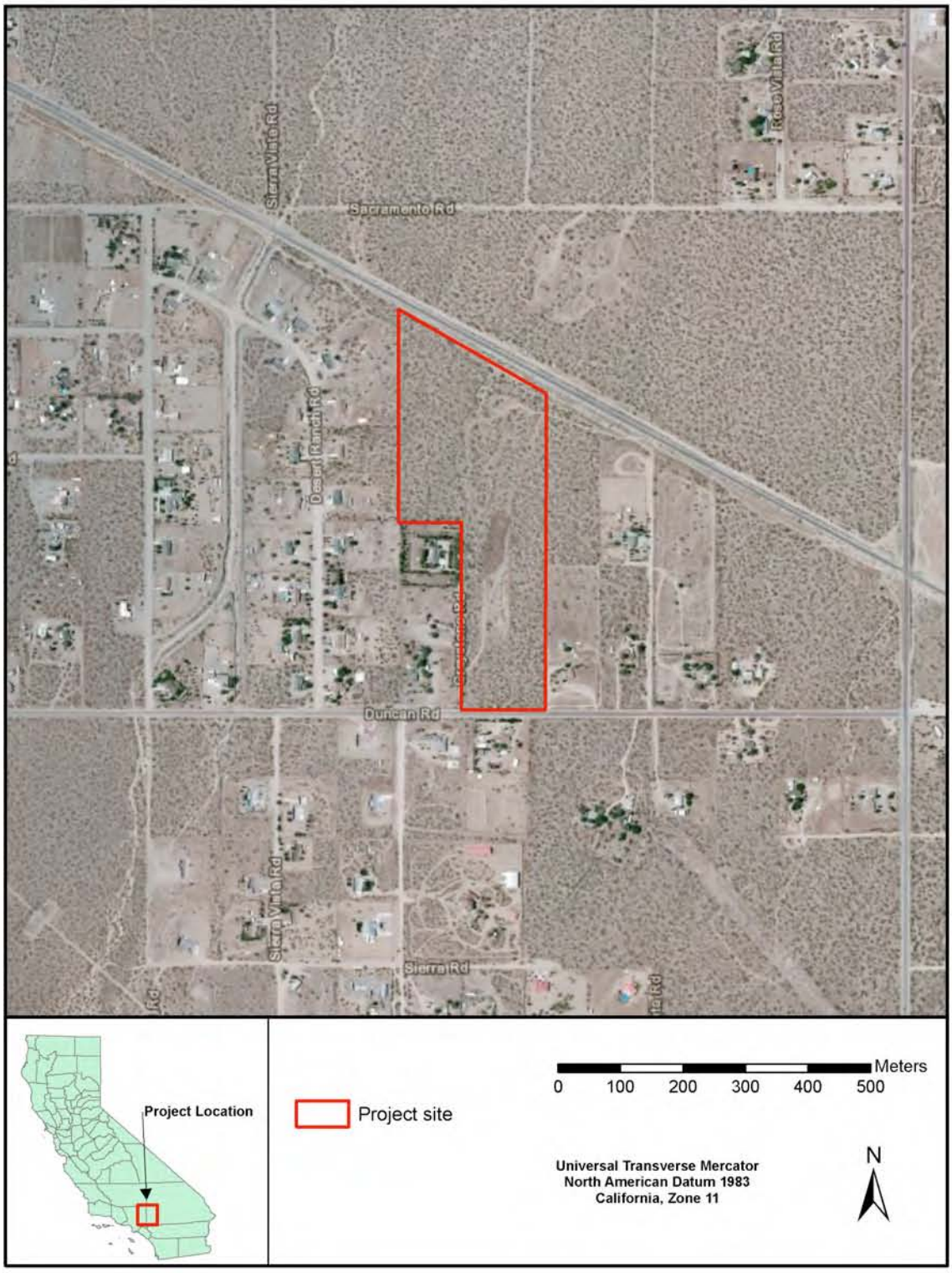
The Duncan Road site lies northwest of the intersection of Duncan Road and Greystone Road in Phelan. It is located in a portion of the west half of the southwest quarter of the southeast quarter and a portion of the west half of the northwest quarter of the southeast quarter of Section 36, Township 5 North, Range 7 West, San Bernardino Meridian (Phelan Quadrangle, U.S. Geological Survey 7.5-minute Series) (Figure 2a). The elevation ranges from approximately 3,590 to 3,640 ft above mean sea level. The project site consists of disturbed and natural habitats. Adjacent properties include vacant (open desert) and developed parcels (Figure 2b).

Figure 1a. Proposed Snowline II Solar PV Duncan Road project site, Phelan, California (USGS Phelan Quadrangle, 7.5 minute Series).



Phelan, California, USGS 7.5 minute Quadrangles; T5N, R7W, SBM

Figure 1b. Proposed Snowline II Solar PV Duncan Road project site, Phelan, California (aerial view).



2. METHODS

To determine presence of Mohave ground squirrels on the project site, a visual survey and then a trapping survey were conducted. The visual survey was conducted by walking a meandering transect through the project site. The purpose of this survey was to unobtrusively search for Mohave ground squirrels, to evaluate the habitat for its potential to support this squirrel, and to select the site for the trapping grid. The Mohave ground squirrel presence-or-absence trapping study was conducted using standardized survey guidelines (California Department of Fish and Game [CDFG] 2003). One grid is required per 80 acres of potential Mohave ground squirrel habitat on the project site (CDFG 2003). The Duncan Road project site supports less than 80 acres of potential habitat. Therefore, one grid was established at the site.

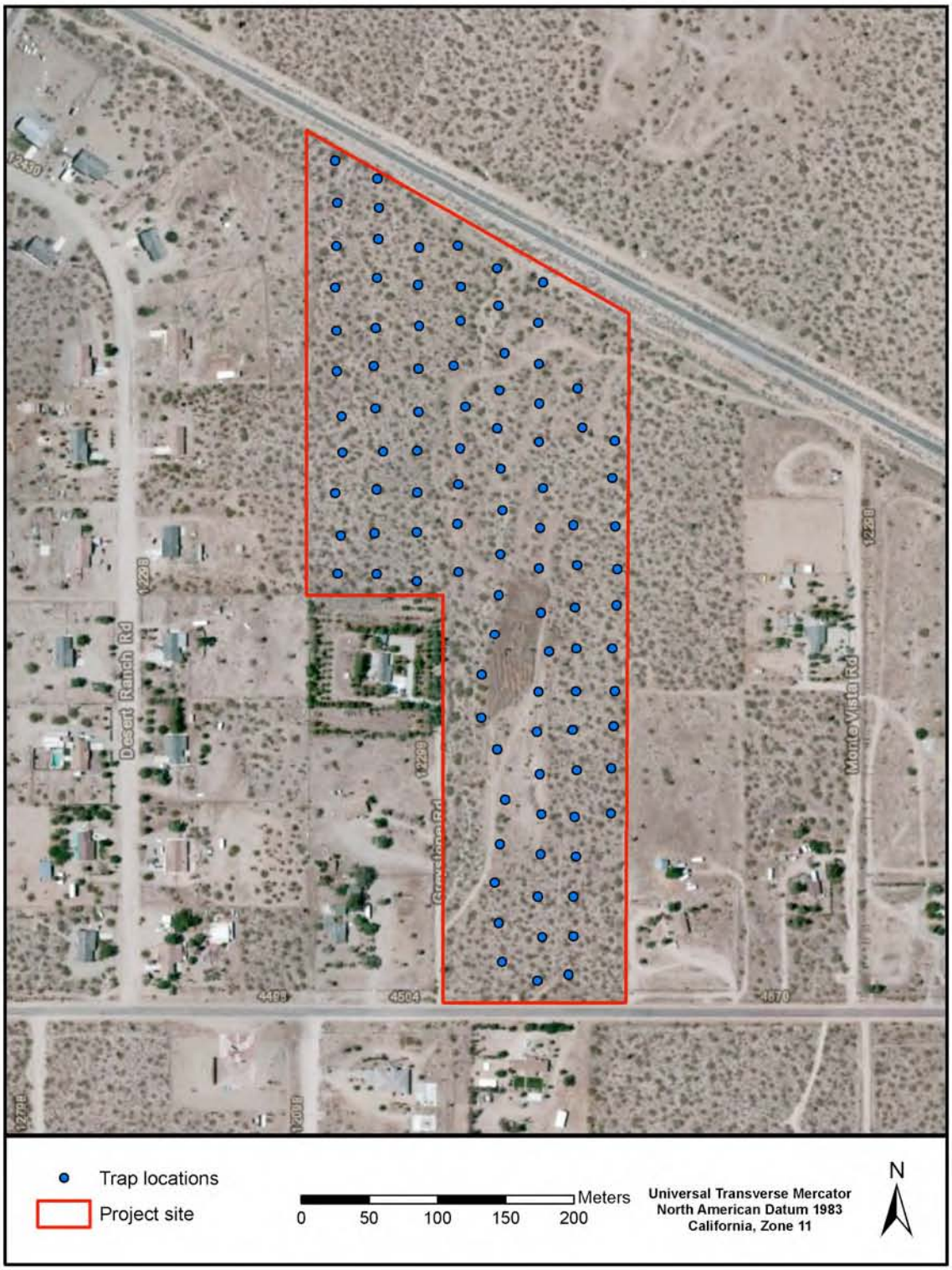
The trapping grid was configured to stay within the boundaries of the parcel (Figure 2). The grid consisted of 100 Sherman live traps (12-inch kangaroo rat model). The distance between traps was 115 ft. Each trap was placed in a 5 x 5 x 17-inch open-ended corrugated cardboard box. The boxes not only provided shade but also insulation to minimize thermal stress on captured animals. Traps and shelters were placed on the north-south axis and were baited with a mixture of sweet horse grain and a blend of peanut butter and rolled oats. The traps were opened by one hour after sunrise or when the air temperature at 1 ft above the ground reached 50°F. The ambient air temperature 1 ft above the ground and surface temperature, both in the shade, were recorded every hour during the trapping effort. Cloud cover and wind speed and direction were also recorded three times during trapping. If the air temperature exceeded 90°F, then the traps were closed until the temperature fell below 90°F. Traps were also closed during periods of rain and high wind. Traps were checked every 2-4 hours and closed by sunset.

The following data were recorded on all captured animals: capture time, trap number, species, sex, age (adult or juvenile), and reproductive condition. No animals were marked. After each animal was processed, it was released at the point of capture. A California Native Species Field Survey Form for Mohave ground squirrels was completed for the project site regardless of the outcome of trapping.

The grid was trapped for a maximum of three, 5-consecutive day periods. According to the trapping protocol (CDFG 2003) the first trapping session was to occur between 15 March and 30 April 2013. The second session was to occur at least two weeks after the end of the first trapping session and between 1 May and 31 May 2013. The third session was to occur at least two weeks after the end of the second trapping session and between 15 June and 15 July 2013. Trapping was to cease upon the capture of a Mohave ground squirrel. Hence, if a Mohave ground squirrel was captured during the first trapping period, then the second and third trapping sessions would not be necessary.

The Mohave ground squirrel survey was conducted under the authority of a Memorandum of Understanding between EREMICO Biological Services and the CDFW, dated 28 August 2007. Biologists Denise LaBerteaux and Bruce Garlinger conducted the visual survey and Mr. Garlinger conducted the trapping survey. Ms LaBerteaux is designated as principal investigator and Mr. Garlinger as field investigator on the Letter of Authorization under the MOU.

Figure 2. Mohave ground squirrel trapping grid at the proposed Snowline II Solar PV Duncan Road project site, Phelan, California.



During the course of the Mohave ground squirrel survey, the biologists recorded incidental observations of other wildlife species occurring in the project area.

3. RESULTS AND DISCUSSION

3.1. PHYSICAL ENVIRONMENT

The project site is located in the southwestern Mojave Desert, at the base of the San Gabriel Mountains. It is on an alluvial fan with a 3% grade and draining towards the north. The soils consist of granitic sand. The site supports a diverse *Larrea tridentata* Shrubland Alliance (creosote bush scrub), as defined by Sawyer et al. (2009). Other shrub species recorded during the survey are listed in Appendix A. Annual plants were very sparse (Appendix A) due to prevailing drought conditions.

Existing impacts at the Duncan Road site include one paved road (Duncan Road) along the southern boundary, railroad tracks along the northern boundary, one interior dirt road, a bladed area in the southern portion of the site, off-highway vehicle tracks and trails, and illegal dumping, including a large pile of sod (Figure 1b). Photographs of the site are provided in Appendix B.

3.2. MOHAVE GROUND SQUIRRELS

The Mohave ground squirrel's range is limited to the western Mojave Desert, generally from Lucerne Valley in San Bernardino County to Cartago in Inyo County. Within its range it has a patchy distribution but occupies a variety of habitats, including desert saltbush scrub, creosote bush scrub, Joshua tree woodland, shadscale scrub, blackbrush scrub, and sagebrush scrub. It occurs at elevations up to at least 5,600 feet. Mohave ground squirrels eat mainly leaves of forbs, shrubs, and grasses; fruit and flowers of forbs; seeds of forbs, grasses, shrubs, and Joshua trees; fungi; and anthropods (Gustafson 1993). Under drought conditions, saltbush (*Atriplex* spp.), winter fat (*Krascheninnikovia lanata*), spiny hop-sage (*Grayia spinosa*), and box-thorn (*Lycium* spp.) are probably the most important food plants, helping to sustain viable populations of Mohave ground squirrels throughout their range (Leitner and Leitner 1998).

Reasons for decline and extirpation of local populations include persistent drought, habitat destruction, degradation and fragmentation; use of pesticides for rodent control; domestic cat predation; and, possibly, shooting and vehicle strike (Gustafson 1993).

Despite the extensive trapping effort over the last 10 years in the southern portion of its range, the only recent records of a Mohave ground squirrel occur in Victorville, 9 miles east-southeast of the project site, and Adelanto, 9 miles towards the northeast. There are no records in the immediate vicinity of the project site (State of California 2013a).

3.2.1. Visual Survey

Visual surveys were conducted on 7 April 2013 between 1010 and 1115 hours. No Mohave ground squirrels were observed during the visual surveys; therefore, the trapping survey was initiated.

3.2.2. Trapping Survey

The first trapping period occurred from 8-12 April 2013 and consisted of 4,025 trap-hours. Prevailing weather conditions during trapping are provided in Appendix C. Results of the trapping effort during the first period are summarized in Table 1. Twenty-six white-tailed antelope squirrels, 1 California ground squirrel (*Spermophilus beecheyi*), 1 Cactus Wren, 1 Black-throated Sparrow (*Amphispiza bilineata*), and 1 tiger whiptail (*Aspidoscelis tigris*) were captured during the effort. No Mohave ground squirrels were trapped or observed during this period.

The second trapping period occurred from 13-17 May 2013. The effort totaled 4,325 trap-hours. Prevailing weather conditions during trapping are provided in Appendix C. Results of the trapping effort during the second period are summarized in Table 1. Captured animals included 4 white-tailed antelope squirrels, 11 California ground squirrels, 2 Cactus Wrens, 1 Black-throated Sparrow, and 1 tiger whiptail. No Mohave ground squirrels were detected on-site.

The third trapping period occurred from 1-5 July 2013. Prevailing weather conditions are provided in Appendix C. Temperatures exceeded 90°F on all 5 days of trapping; hence, trap closures were necessary, and the trapping effort totaled only 1,750 trap-hours. Results of the trapping effort during the third period are summarized in Table 1. Captures included 25 white-tailed antelope squirrels, 2 California ground squirrels, 1 Cactus Wren, and 1 common side-blotched lizard (*Uta stansburiana*). No Mohave ground squirrels were trapped or sighted during this period.

A standardized form, included in the survey guidelines (CDFG 2003), summarizing the Mohave ground squirrel survey and trapping effort at the site is provided in Appendix C. A completed California Native Species Field Survey Form that documents the negative trapping result is provided in Appendix D.

3.3. OTHER WILDLIFE

Other wildlife species that were incidentally observed during the Mohave ground squirrel survey are listed in Appendix E and include 2 reptiles, 13 birds, and 5 mammals. Most of these species are commonly found in the Mojave Desert and the foothills of the San Gabriel Mountains. None of the species have special status (State of California 2011, Shuford and Gardali 2008).

Table 1. Results of the Mohave ground squirrel trapping effort at the proposed Snowline II Solar PV Duncan Road project site, Phelan, California.

PERIOD	DATE	TRAP-HOURS	SPECIES	Ad. M	Ad. F	Juv. M	Juv. F	Unk.	TOTAL CAPTURES
1	8 April 2013	500	White-tailed Antelope Squirrel	4	1				5
	9 April 2013	800	White-tailed Antelope Squirrel		3				3
	10 April 2013	1000	White-tailed Antelope Squirrel	6	1				7
	11 April 2013	1025	White-tailed Antelope Squirrel	3	3				6
			Cactus Wren					1	1
			Black-throated Sparrow					1	1
			Tiger Whiptail					1	1
	12 April 2013	700	White-tailed Antelope Squirrel	3	2				5
			California Ground Squirrel					1	1
2	13 May 2013	700	White-tailed Antelope Squirrel	1	1				2
			California Ground Squirrel					1	1
			Cactus Wren					1	1
	14 May 2013	775	California Ground Squirrel					3	3
			Cactus Wren					1	1
			Black-throated Sparrow					1	1
	15 May 2013	1050	White-tailed Antelope Squirrel	1					1
			California Ground Squirrel					2	2
	16 May 2013	1050	White-tailed Antelope Squirrel		1				1
			California Ground Squirrel					2	2
	17 May 2013	750	California Ground Squirrel					3	3
			Tiger Whiptail					1	1
3	1 July 2013	350	White-tailed Antelope Squirrel	2	2	4	4		12
			California Ground Squirrel					1	1
	2 July 2013	350	White-tailed Antelope Squirrel			2	2		4
			California Ground Squirrel					1	1
			Cactus Wren					1	1
	3 July 2013	350	White-tailed Antelope Squirrel			2			2
			Common Side-blotched Lizard					1	1
	4 July 2013	350	White-tailed Antelope Squirrel	2		1	1		4
	5 July 2013	350	White-tailed Antelope Squirrel	1	1	1			3

CONCLUSION

Surveys were conducted from early April through early July 2013 to determine the presence or absence of Mohave ground squirrels at the proposed Snowline II Solar PV project site in Phelan, San Bernardino County, California following standardized survey guidelines (CDFG 2003). No Mohave ground squirrels were captured or otherwise detected at the site during the surveys. The negative result does not necessarily prove that Mohave ground squirrels do not exist on the site or that the site is not actual or potential habitat for the species. However, the California Department of Fish and Wildlife will stipulate that the project site currently does not harbor Mohave ground squirrels. This stipulation will expire one year from the last day of trapping. Therefore, the results of this study will expire on 5 July 2014.

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APPENDIX A

VASCULAR PLANT LIST

Vascular plants recorded at the Snowline II Solar PV Duncan Road project site during the trapping effort.

FAMILY SCIENTIFIC NAME	COMMON NAME	HABIT
EPHEDRACEAE		
Ephedra nevadensis	Nevada ephedra	shrub
ASTERACEAE		
Acamptopappus sphaerocephalus var. *hirtellus*	goldenhead	shrub
Ambrosia dumosa	burro-bush	shrub
Ambrosia salsola	cheesebush	shrub
Guttierrezia microcephala	sticky snakeweed	subshrub
Lessingia glandulifera var. *glandulifera*	lessingia	annual forb
CACTACEAE		
Cylindropuntia echinocarpa	golden cholla	stem succulent
CHENOPODIACEAE		
Grayia spinosa	spiny hop-sage	shrub
Krascheninnikovia lanata	winter fat	shrub
GERANIACEAE		
*Erodium cicutarium**	red-stemmed filaree	annual forb
LAMIACEAE		
Scutellaria mexicana	bladder sage	shrub
POLYGONACEAE		
Eriogonum fasciculatum var. *polifolium*	California buckwheat	shrub
SOLANACEAE		
Lycium andersonii	desert tomato	shrub
Lycium cooperi	peach-thorn	shrub
ZYGOPHYLLACEAE		
Larrea tridentata	creosote bush	shrub
AGAVACEAE		
Yucca brevifolia	Joshua tree	tree-like
POACEAE		
Schismus sp.*	schismus	annual grass
Stipa speciosa	desert needlegrass	perennial grass

* non-native species

APPENDIX B

PHOTOGRAPHS

Trapping Site, Duncan Road Project Site, Phelan, California

View from northeast corner of trapping grid towards south

View from northeast corner of trapping grid towards west

Trapping Site, Duncan Road Project Site, Phelan, California

View from southeast corner of trapping grid towards northwest

View from southwest corner of trapping grid towards northeast

APPENDIX C

MOHAVE GROUND SQUIRREL SURVEY AND TRAPPING SUMMARY FORM

MOHAVE GROUND SQUIRREL (MGS) SURVEY AND TRAPPING FORM

PART 1 – PROJECT INFORMATION

Project Name: Snowline II Solar PV, Duncan Road, Phelan **Project Owner:** Snowline Unified School District

Location (Township, Range, Section): a portion of the west half of the southwest quarter of the southeast quarter and a portion of the west half of the northwest quarter of the southeast quarter of Section 36, Township 5 North, Range 7 West, San Bernardino Meridian, in Phelan, San Bernardino County.

Quad Map/Series: Phelan, 7.5 Minute Series

UTM Coordinates of Trapping Grid Corners: (NAD 83, Zone 11) NW Corner 448224E, 3815028N; NE Corner 448429E, 3814823N; SE Corner 448427E, 3814550N; SW Corner 448226E, 3814726N

Acreage of Project Site: 25.89 acres **Acreage of Potential MGS Habitat on Site:** 25.89 acres

Total Acreage Visually Surveyed on Project Site: 25.89 acres **Date(s) of Visual Survey:** 7 April 2013

Visual Survey Conducted By: Denise LaBerteaux, Bruce Garlinger

Total Acres Trapped: 25.89 acres **Number of Sampling Grids:** 1

Trapping Conducted By: Bruce Garlinger

Dates of Sampling Term(s): **FIRST** 8-12 Apr 2013; **SECOND** 13-17 May 2013; **THIRD** 1-5 July 2013

PART II – GENERAL HABITAT DESCRIPTION

Vegetation Type: *Larrea tridentata* shrubland alliance (creosote bush scrub)

Dominant Perennials: creosote bush (*Larrea tridentata*)

Other Perennials: Nevada ephedra (*Ephedra nevadensis*), goldenhead (*Acamptopappus sphaerocephalus* var. *hirtellus*), burro-bush (*Ambrosia dumosa*), cheesebush (*Ambrosia salsola*), sticky snakeweed (*Gutierrezia microcephala*), spiny hop-sage (*Grayia spinosa*), winter fat (*Krascheninnikovia lanata*), bladder sage (*Scutellaria mexicana*), California buckwheat (*Eriogonum fasciculatum* var. *polifolium*), desert tomato (*Lycium andersonii*), Joshua tree (*Yucca brevifolia*), and desert needlegrass (*Stipa speciosa*).

Dominant Annuals: cheat grass (*Bromus tectorum*), red-stemmed filaree (*Erodium cicutarium*),

Other Annuals: Low production this year – lessingia (*Lessingia glandulifera* var. *glandulifera*) and schismus (*Schismus* sp.).

Land Form: alluvial fan

Soils Description: sand

Elevation: 3,590 to 3,640 ft **Slope Aspect:** north **Percent Slope:** 3%

PART III – WEATHER

Project Name: Snowline II Solar PV, Duncan Road, Phelan
Property Owner: Snowline Unified School District

Year: 2013 (Trapping Period 1)

Grid Number: 1

WEATHER (temperature = °C; cloud cover = %; wind speed = km/h)

DATE: 7 April 2013 **ACTIVITY:** visual survey

WEATHER CONDITION	VALUE	TIME
AIR TEMPERATURE, MIN.	17.4	1115
AIR TEMPERATURE, MAX.	17.9	1010
SOIL TEMPERATURE, MIN.	19.2	1115
SOIL TEMPERATURE, MAX.	19.8	1010
CLOUD COVER, AM	70	1010
CLOUD COVER, PM		
WIND SPEED, AM	10.6	1010
WIND SPEED, PM		

DATE: 8 April 2013 **ACTIVITY:** trapping

WEATHER CONDITION	VALUE	TIME
AIR TEMPERATURE, MIN.	8.9	0700
AIR TEMPERATURE, MAX.	11.3	1300
SOIL TEMPERATURE, MIN.	8.0	0800
SOIL TEMPERATURE, MAX.	13.4	1500
CLOUD COVER, AM	20	0800
CLOUD COVER, PM	50	1600
WIND SPEED, AM	7.9	0800
WIND SPEED, PM	11.6	1600

DATE: 9 April 2013 **ACTIVITY:** trapping

WEATHER CONDITION	VALUE	TIME
AIR TEMPERATURE, MIN.	7.6	0800
AIR TEMPERATURE, MAX.	19.2	1600
SOIL TEMPERATURE, MIN.	8.0	0700
SOIL TEMPERATURE, MAX.	19.2	1600
CLOUD COVER, AM	1	0800
CLOUD COVER, PM	1	1600
WIND SPEED, AM	7.2	0800
WIND SPEED, PM	3.2	1600

DATE: 10 April 2013 **ACTIVITY:** trapping

WEATHER CONDITION	VALUE	TIME
AIR TEMPERATURE, MIN.	8.5	0700
AIR TEMPERATURE, MAX.	23.8	1600
SOIL TEMPERATURE, MIN.	8.5	0700
SOIL TEMPERATURE, MAX.	22.8	1500
CLOUD COVER, AM	1	0800
CLOUD COVER, PM	0	1600
WIND SPEED, AM	1.1	0800
WIND SPEED, PM	1.1	1600

DATE: 11 April 2013 **ACTIVITY:** trapping

WEATHER CONDITION	VALUE	TIME
AIR TEMPERATURE, MIN.	15.0	0700
AIR TEMPERATURE, MAX.	26.4	1300
SOIL TEMPERATURE, MIN.	14.3	0700
SOIL TEMPERATURE, MAX.	25.9	1400
CLOUD COVER, AM	50	0800
CLOUD COVER, PM	40	1600
WIND SPEED, AM	13.5	0800
WIND SPEED, PM	13.1	1600

DATE: 12 April 2013 **ACTIVITY:** trapping

WEATHER CONDITION	VALUE	TIME
AIR TEMPERATURE, MIN.	11.5	0700
AIR TEMPERATURE, MAX.	26.7	1400
SOIL TEMPERATURE, MIN.	12.6	0700
SOIL TEMPERATURE, MAX.	25.2	1400
CLOUD COVER, AM	20	0800
CLOUD COVER, PM	10	1200
WIND SPEED, AM	8.3	0800
WIND SPEED, PM	1.5	1200

Project Name: Snowline II Solar PV, Duncan Road, Phelan
Property Owner: Snowline Unified School District

Year: 2013 (Trapping Period 2)

Grid Number: 1

WEATHER (temperature = °C; cloud cover = %; wind speed = km/h)

DATE: 13 May 2013 **ACTIVITY:** trapping

WEATHER CONDITION	VALUE	TIME
AIR TEMPERATURE, MIN.	23.1	0700
AIR TEMPERATURE, MAX.	34.3	1100
SOIL TEMPERATURE, MIN.	23.1	0700
SOIL TEMPERATURE, MAX.	34.3	1100
CLOUD COVER, AM	0	0800
CLOUD COVER, PM	5	1200
WIND SPEED, AM	1.2	0800
WIND SPEED, PM	4.3	1200

DATE: 14 May 2014 **ACTIVITY:** trapping

WEATHER CONDITION	VALUE	TIME
AIR TEMPERATURE, MIN.	19.9	0600
AIR TEMPERATURE, MAX.	33.9	1400
SOIL TEMPERATURE, MIN.	18.5	0600
SOIL TEMPERATURE, MAX.	33.9	1400
CLOUD COVER, AM	70	0800
CLOUD COVER, PM	40	1200
WIND SPEED, AM	5.6	0800
WIND SPEED, PM	12.3	1200

DATE: 15 May 2013 **ACTIVITY:** trapping

WEATHER CONDITION	VALUE	TIME
AIR TEMPERATURE, MIN.	19.0	0630
AIR TEMPERATURE, MAX.	30.8	1600
SOIL TEMPERATURE, MIN.	18.3	0630
SOIL TEMPERATURE, MAX.	31.5	1500
CLOUD COVER, AM	10	0800
CLOUD COVER, PM	20	1200
WIND SPEED, AM	6.4	0800
WIND SPEED, PM	11.2	1600

DATE: 16 May 2013 **ACTIVITY:** trapping

WEATHER CONDITION	VALUE	TIME
AIR TEMPERATURE, MIN.	13.5	0630
AIR TEMPERATURE, MAX.	28.3	1500
SOIL TEMPERATURE, MIN.	13.8	0630
SOIL TEMPERATURE, MAX.	28.6	1500
CLOUD COVER, AM	30	0800
CLOUD COVER, PM	50	1200
WIND SPEED, AM	2.8	0800
WIND SPEED, PM	9.6	1600

DATE: 17 May 2013 **ACTIVITY:** trapping

WEATHER CONDITION	VALUE	TIME
AIR TEMPERATURE, MIN.	12.4	0630
AIR TEMPERATURE, MAX.	24.1	1400
SOIL TEMPERATURE, MIN.	13.0	0630
SOIL TEMPERATURE, MAX.	24.3	1400
CLOUD COVER, AM	70	0800
CLOUD COVER, PM	20	1200
WIND SPEED, AM	4.2	0800
WIND SPEED, PM	9.2	1200

Project Name: Snowline II Solar PV, Duncan Road, Phelan
Property Owner: Snowline Unified School District

Year: 2013 (Trapping Period 3)

Grid Number: 1

WEATHER (temperature = °C; cloud cover = %; wind speed = km/h)

DATE: 1 July 2013 **ACTIVITY:** trapping

WEATHER CONDITION	VALUE	TIME
AIR TEMPERATURE, MIN.	24.8	0600
AIR TEMPERATURE, MAX.	35.5	0900
SOIL TEMPERATURE, MIN.	24.4	0600
SOIL TEMPERATURE, MAX.	36.0	0900
CLOUD COVER, AM	99	0800
CLOUD COVER, PM		
WIND SPEED, AM	5.3	0800
WIND SPEED, PM		

DATE: 2 July 2013 **ACTIVITY:** trapping

WEATHER CONDITION	VALUE	TIME
AIR TEMPERATURE, MIN.	24.1	0600
AIR TEMPERATURE, MAX.	32.6	0900
SOIL TEMPERATURE, MIN.	23.8	0600
SOIL TEMPERATURE, MAX.	33.5	0900
CLOUD COVER, AM	80	0800
CLOUD COVER, PM		
WIND SPEED, AM	3.1	0800
WIND SPEED, PM		

DATE: 3 July 2013 **ACTIVITY:** trapping

WEATHER CONDITION	VALUE	TIME
AIR TEMPERATURE, MIN.	25.5	0600
AIR TEMPERATURE, MAX.	31.8	0900
SOIL TEMPERATURE, MIN.	25.5	0600
SOIL TEMPERATURE, MAX.	31.1	0900
CLOUD COVER, AM	90	0800
CLOUD COVER, PM		1200
WIND SPEED, AM	3.7	0800
WIND SPEED, PM		1200

DATE: 4 July 2013 **ACTIVITY:** trapping

WEATHER CONDITION	VALUE	TIME
AIR TEMPERATURE, MIN.	24.1	0600
AIR TEMPERATURE, MAX.	33.5	0900
SOIL TEMPERATURE, MIN.	23.6	0600
SOIL TEMPERATURE, MAX.	33.3	0900
CLOUD COVER, AM	30	0800
CLOUD COVER, PM		
WIND SPEED, AM	7.2	0800
WIND SPEED, PM		

DATE: 5 July 2013 **ACTIVITY:** trapping

WEATHER CONDITION	VALUE	TIME
AIR TEMPERATURE, MIN.	22.8	0600
AIR TEMPERATURE, MAX.	32.9	1000
SOIL TEMPERATURE, MIN.	23.4	0600
SOIL TEMPERATURE, MAX.	33.8	1000
CLOUD COVER, AM	90	0800
CLOUD COVER, PM		
WIND SPEED, AM	6.4	0800
WIND SPEED, PM		

APPENDIX D

CALIFORNIA NATIVE SPECIES FIELD FORM

Mail to:
California Natural Diversity Database
Department of Fish and Game
1807 13th Street, Suite 202
Sacramento, CA 95814
Fax: (916) 324-0475 email: WHDAB@dfg.ca.gov

For Office Use Only
Source Code _____ Quad Code _____
Elm Code _____ Occ. No. _____
EO Index No. _____ Map Index No. _____

Date of Field Work *mm/dd/yyyy:* 07/05/2013

Reset

California Native Species Field Survey Form

Send Form

Scientific Name: *Xerospermophilus mohavensis*

Common Name: Mohave Ground Squirrel

Species Found? ☐ Yes ☑ No _____ If not, why?

Total No. Individuals 0 Subsequent Visit? ☐ yes ☑ no
Is this an existing NDDB occurrence? _____ ☐ no ☐ unk.
Yes, Occ. #

Collection? If yes: _____ Number _____ Museum / Herbarium

Reporter: Denise L. LaBerteaux
Address: 211 Snow Street
Weldon, CA 93283
E-mail Address: eremico@aol.com
Phone: (760) 378-3021

Plant Information

Phenology: _____ % vegetative _____ % flowering _____ % fruiting

Animal Information

_____ # adults _____ # juveniles _____ # larvae _____ # egg masses _____ # unknown

☐ breeding ☐ wintering ☐ burrow site ☐ rookery ☐ nesting ☐ other

Location Description ***(please attach map AND/OR fill out your choice of coordinates, below)***

Phelan, northwest of the intersection of Duncan Road and Greystone Road

County: San Bernardino Landowner / Mgr.: Snowline Unified School District
Quad Name: Phelan Elevation: 3615 ft
T 5N R 7W Sec 36 , W1/2 ¼ of SE ¼, Meridian: H☐ M☐ S☑ Source of Coordinates (GPS, topo. map & type): GPS
T___ R __ Sec ____ , ____ ¼ of _____ ¼, Meridian: H☐ M☐ S☐ GPS Make & Model GARMIN 76CS
Datum: NAD27☐ NAD83☑ WGS84☐ Horizontal Accuracy 3 meters meters/feet
Coordinate System: UTM Zone 10☐ UTM Zone 11☑ *OR* Geographic (Latitude & Longitude)☐
Coordinates: Easting/Longitude 448326 Northing/Latitude 3814782

Habitat Description *(plant communities, dominants, associates, substrates/soils, aspects/slope):*

Alluvial fan. Larrea tridentata Shrubland Alliance with Ephedra nevadensis, Acamptopappus sphaerocephalus var. hirtellus, Ambrosia dumosa, Ambrosia salsola, Gutierrezia microcephala, Grayia spinosa, Krascheninnikovia lanata, Scutellaria mexicana, Eriogonum fasciculatum var. polifolium, Lycium andersonii, Yucca brevifolia, and Stipa speciosa. Soils: sand. Aspect: north. Slope: 3%.

Other rare taxa seen at THIS site on THIS date:

Site Information Overall site quality: ☐ Excellent ☐ Good ☑ Fair ☐ Poor

Current / surrounding land use: open desert; rural residences; railroad tracks

Visible disturbances: dirt roads, OHV tracks/trails, illegal dumping

Threats: proposed PV Solar

Comments: One grid trapped on 8-12 Apr, 13-17 May, 1-5 July 2013 on 25.89 ac. Trapping grid corners: NW Corner 448224E, 3815028N; NE Corner 448429E, 3814823N; SE Corner 448427E, 3814550N; SW Corner 448226E, 3814726N. No Mohave G.S. observed. Trapping was conducted by Bruce Garlinger

Determination: *(check one or more, and fill in blanks)*
☐ Keyed (cite reference): _____
☐ Compared with specimen housed at: _____
☐ Compared with photo / drawing in: _____
☐ By another person (name): _____
☐ Other: _____

Photographs: *(check one or more)*

	Slide	Print	Digital
Plant / animal	☐	☐	☐
Habitat	☐	☐	☑
Diagnostic feature	☐	☐	☐

May we obtain duplicates at our expense? ☑ yes ☐ no

FG/WHDAB/1747 Rev.10/2003

APPENDIX E

WILDLIFE LIST

Vertebrate species (or their sign) recorded at the Snowline II Solar PV Duncan Road project site during the trapping effort.

SCIENTIFIC NAME	COMMON NAME
CLASS	**CLASS**
FAMILY	FAMILY
Species	Species
REPTILIA	**REPTILES**
PHRYNOSOMATIDAE	SPINY LIZARDS AND RELATIVES
Uta stansburiana	Common Side-blotched Lizard
TEIIDAE	WHIPTAILS
Aspidoscelis tigris	Tiger Whiptail
AVES	**BIRDS**
CATHARTIDAE	NEW WORLD VULTURES
Cathartes aura	Turkey Vulture
ODONTOPHORIDAE	NEW WORLD QUAIL
Callipepla californica	California Quail
COLUMBIDAE	PIGEONS, DOVES
Streptopelia decaocto	Eurasian Collared-Dove
Zenaida macroura	Mourning Dove
CUCULIDAE	CUCKOOS, ROADRUNNERS
Geococcyx californianus	Greater Roadrunner
TYRANNIDAE	TYRANT FLYCATCHERS
Sayornis saya	Say's Phoebe
Tyrannus verticalis	Western Kingbird
CORVIDAE	JAYS, MAGPIES, CROWS
Corvus corax	Common Raven
REMIZIDAE	VERDINS
Auriparus flaviceps	Verdin
TROGLODYTIDAE	WRENS
Campylorhynchus brunneicapillus	Cactus Wren
MIMIDAE	MOCKINGBIRDS, THRASHERS
Mimus polyglottos	Northern Mockingbird
EMBERIZIDAE	TOWHEES, SPARROWS
Amphispiza bilineata	Black-throated Sparrow
Zonotrichia leucophrys	White-crowned Sparrow
MAMMALIA	**MAMMALS**
LEPORIDAE	HARES AND RABBITS
Lepus californicus	Black-tailed Jackrabbit
Sylvilagus auduboni	Desert Cottontail
SCIURIDAE	SQUIRRELS, CHIPMUNKS
Ammospermophilus leucurus	White-tailed Antelope Squirrel
Spermophilus beecheyi	California Ground Squirrel
CANIDAE	FOXES, WOLVES, COYOTES
Canis latrans	coyote