

**HABITAT ASSESSMENT
&
FOCUSED BURROWING OWL SURVEY**

**R. HOVE FT. IRWIN PIT
P201100278
MINING CUP
AP20120011**

SAN BERNARDINO COUNTY, CALIFORNIA
(USGS Lane Mountain, CA Quad., Township 12 North, Range 2 East, Section 16)

Owner/Applicant

**Daily Transit Mix, LLC
1771 Bear Valley Road
Hesperia, CA 92345
(760) 244-9325**

Prepared by:

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

Project No: RCA#2013-66B

November 6, 2013

Table of Contents

Section	Page
Executive Summary	1
1.0 Project and Property Description	2
2.0 Literature/Record Review - Burrowing Owl	7
3.0 Methodology	8
4.0 General Biological Survey Results	9
5.0 Results – Burrowing Owl	11
6.0 Impacts and Recommendations	12
7.0 Proposed Mitigation Measures	13
8.0 References	14
List of Tables	
Burrowing Owl Occurrences	
List of Figures	
Vicinity Map	
Site Photographs	
Appendix A – Flora and Fauna Compendia	
Certification	

EXECUTIVE SUMMARY

The project proponent is proposing to expand an existing mine located about 0.9-miles east of Ft. Irwin Road and Paradise Road intersection in Section 16, Township 12 North, Range 2 East in San Bernardino County. An existing mine is currently located in the northeastern portion of the site as shown on Figure 1. The total area surveyed for burrowing owls encompasses an area of about 28-acres plus the ZOI (Figures 1 and 2). Vegetation within the 28-acre area has been disturbed by various past activities (Figure 3). Vegetation consisted of a desert scrub community dominated by creosote bush (*Larrea tridentata*), ephedra (*Ephedra nevadensis*), and burrobrush (*Franseria dumosa*).

The property is located within the known distribution of the burrowing owl; therefore, focused surveys were performed for the species on October 17, 2013 from approximately 0730 to 1430 hours in conjunction with the tortoise surveys. Surveys were also conducted in the zone of influence, where possible, as per survey protocol. The burrowing owl survey was performed by Randall Arnold (Senior Biologist) and Ryan Mann (Senior Biologist) using the standard survey protocol for the species (i.e., 30-meter belt transects) as required by California Department of Fish and Wildlife (CDFW).

The site does support suitable habitat for the burrowing owl based on the field investigations conducted on October 17, 2013; however, no owls, owl sign or suitable burrows were observed. The species has been documented in the region and the nearest observation is about 6-miles west of the site (CNDDDB, 2013). There is a low probability that the species will move on to the site in the future based on the absence of any suitable burrows within the area proposed for the mine expansion.

Note: If burrowing owls are observed on the site in the future, the owls should not be removed, harassed, or in any way 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 Wildlife (CDFW) and San Bernardino County should be notified.

1.0 PROJECT AND PROPERTY DESCRIPTION

The property is about 40-acres in size and an existing mine is located in the northeast portion of the site; however, the proposed mine expansion will cover an area of approximately 28-acres south and west of the existing pit (Figures 1 and 2). Much of the 28-acre area shows some signs of past disturbance associated with installation of water lines, placement of existing mobile homes, and other activities (Figures 3 and 4). Various structures and buildings are located adjacent to the existing mine and various mobile homes, and other outbuildings are also located within the 28-acre area (Figure 4).

The parcel is located about 0.9-miles east of the intersection of Ft. Irwin Road and Paradise View Road in San Bernardino County (Township 12 North, Range 2 East, Section 16). Elevations of the site range from 2,120 and 2,160 feet (MSL). Soils have been disturbed in the past; however, they appear to be primarily sandy loam. No water resources were observed on the site and the USGS Paradise Range Quadrangle (1986) does not show any blue-line channels on the site. No sensitive wildlife habitats, sensitive wildlife species, or wildlife corridors were associated with the site. Weather conditions during the October 17, 2013 survey consisted of winds of 0 to 5 mph, temperatures in the low 50's (AM) to low 80's (PM, °F) with clear skies.

The site is bordered on the north and east by lands managed by the U.S. Bureau of Land Management (BLM) and by vacant lands to the south and west (Figures 4). Single-family dwellings are also located at the southeast and southwest corners of the property (Figure 4). The site supports a desert scrub community typical of the area dominated by creosote bush (*Larrea tridentata*), ephedra (*Ephedra nevadensis*), and burrobush (*Franseria dumosa*). Annuals consisted of erodium (*Erodium texanum*), schismus (*Schismus barbatus*), buckwheat (*Eriogonum fasciculatum*) and brome grass (*Bromus* sp.). Section 4.0 provides a more detailed discussion of the biological resources. The site map is provided below (Figure 1), and the USGS quadrangle map is provided in Figure 2. Figure 3 provides photographs of the site.

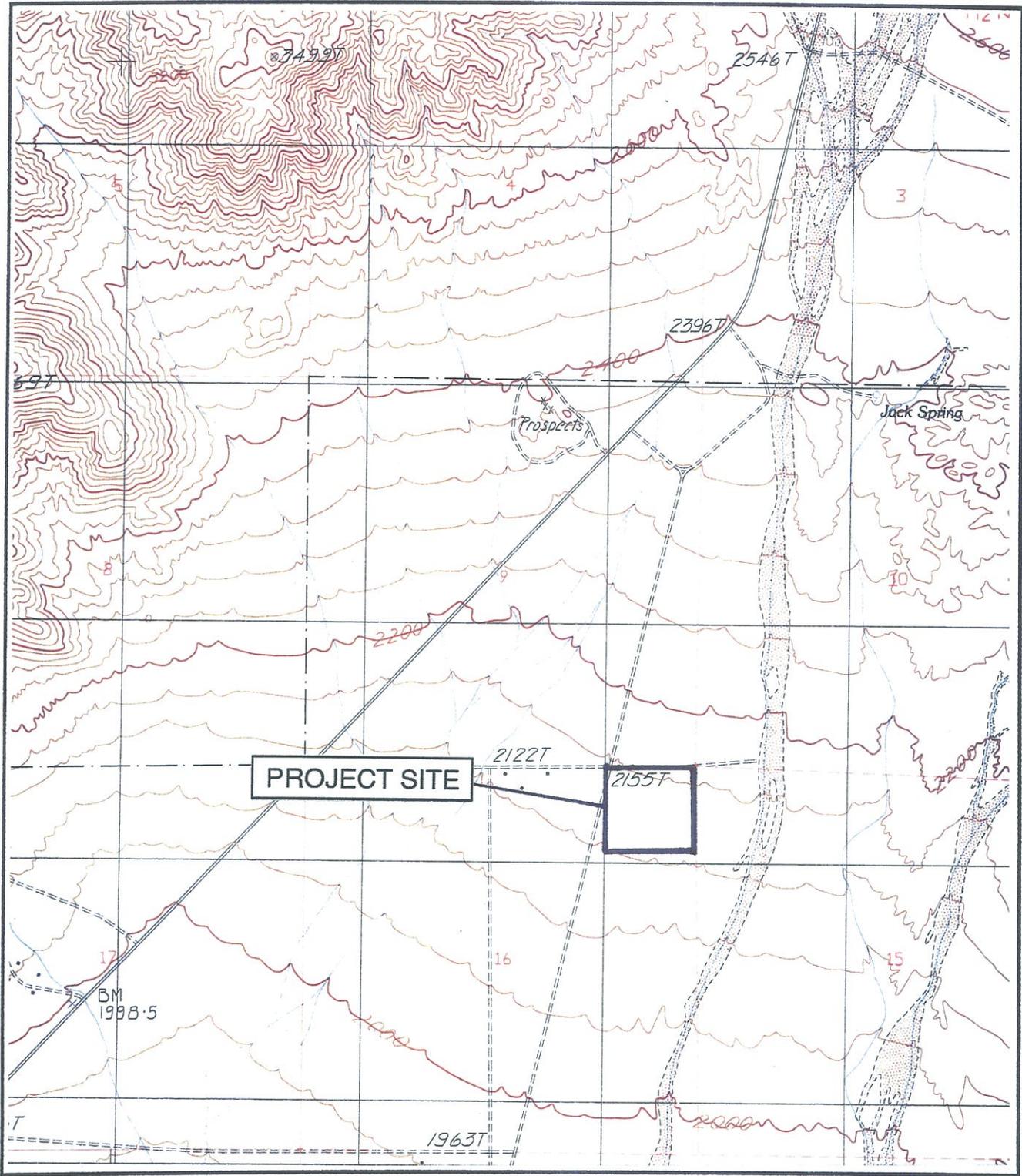
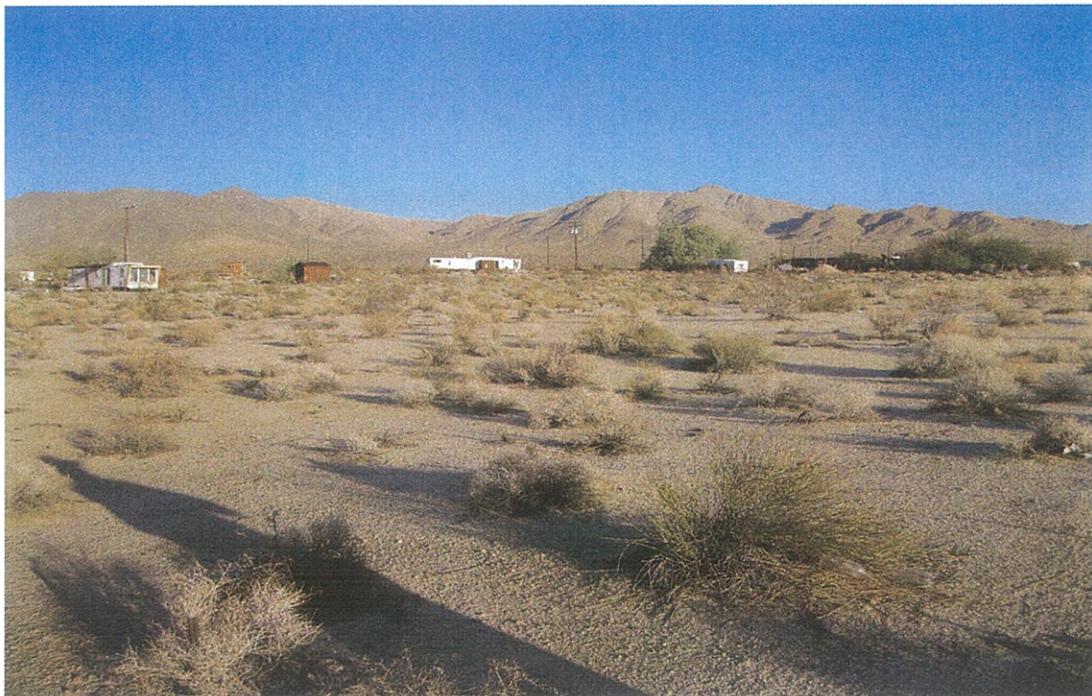


FIGURE 2
PROPERTY LOCATION
R. HOVE FT. IRWIN PIT
 (Source: USGS Paradise Range, CA Quad., 1986)





NORTHEAST CORNER LOOKING SOUTHWEST



SOUTHEAST CORNER LOOKING NORTHWEST

FIGURE 3
SITE PHOTOGRAPHS
(R. HOVE FT. IRWIN PIT)



SOUTHWEST CORNER LOOKING NORTHEAST



NORTHWEST CORNER LOOKING SOUTHEAST

FIGURE 3, cont.
SITE PHOTOGRAPHS
(R. HOVE FT. IRWIN PIT)

2.0 LITERATURE/RECORD REVIEW - BURROWING OWL

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 prior to initiation of field surveys to determine if burrowing owls have been documented on the site or in the 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 according to CNDDDB (2013). The nearest documented owl populations (in 1989) are about six miles west of the site (Occurrence #25) according to CNDDDB (2013).

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 October 17, 2013 to determine if suitable habitat was present on the site. Burrowing owls are typically found in a wide variety of habitats including desert scrub communities, disturbed grasslands, and agricultural areas. Therefore, a Phase II survey was conducted to determine if any owls or occupiable burrows were 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; therefore, ZOI surveys were performed to the east, west, south, and north where possible. 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. Owl surveys were performed on the site from about 0730 to about 1430 hours in conjunction with the focused surveys performed for the desert tortoise.

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 October survey were in the low 50's (AM) to low 80's (PM) (°F), wind speeds of about 0 to 5 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 CDFW. If owls are observed during future project activities, project activities should cease immediately and CDFW 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 disturbed by past activities, and currently supports a disturbed desert scrub community (Figure 4). Native shrubs noted during the field investigations included creosote bush (*Larrea tridentata*), ephedra (*Ephedra nevadensis*), and burobrush (*Franseria dumosa*) (Figure 3). Other perennials observed included yellow-green matchweed shrubs (*Gutierrezia sarothrae*), Russian thistle (*Salsola tragus*), and buckwheat (*Eriogonum fasciculatum*). Annuals were composed primarily of erodium (*Erodium texanum*), schismus (*Schismus barbatus*), and bromus grass (*Bromus* sp.). Table 1 provides a compendium of plants observed on the property (Appendix A).

Only a few wildlife species were identified during the field investigations conducted on October 17, 20123 from 0730 to 1430 hours. Birds observed were limited to mourning doves (*Zenaida macroura*), ravens (*Corvus corax*), and song sparrows (*Melospiza melodia*). A few side-blotched lizards (*Uta stansburiana*) were observed and western whiptail lizards (*Cnemidophorus tigris*) are relatively common in the area and may occur on the property. Jackrabbits (*Lepus californicus*) were seen during the surveys and other mammals known to occur in the area include antelope ground squirrels (*Ammospermophilus leucurus*), desert cottontail rabbits (*Sylvilagus auduboni*), and Merriam's kangaroo rats (*Dipodomys merriami*). No wildlife corridors were identified on the site or in the immediate surrounding area, and no breeding activities were observed among any of the wildlife species identified. Table 2 (Appendix A) provides a compendium of wildlife species observed on the site and other species known to occur in the region.



FIGURE 4
BIOLOGICAL RESOURCES MAP
(R. HOVE FT. IRWIN PIT)

5.0 RESULTS – BURROWING OWL

The site supports marginal 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 within the boundaries of the proposed mine expansion area. Therefore, no Phase III surveys (i.e., owl surveys, census, and mapping) were conducted as per the survey protocol outlined in the “Burrowing Owl Survey Protocol and Mitigation Guidelines” (Staff Report on Burrowing Owl Mitigation, March 7, 2012) based on the results of the owl surveys conducted on October 17, 2013.

6.0 IMPACTS AND RECOMMENDATIONS

Expansion of the existing mine into the 28-acre area 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 October 17, 2013. No additional investigations are recommended at this time; however, CDFW and the County will require the proponent to conduct a 30-day pre-construction survey immediately prior to the start of excavation activities. This survey will be required to determine if any owls have moved onto the site since the October 2013 surveys.

7.0 PROPOSED MITIGATION MEASURES

The site does not support any burrowing owls at the present time. However, if owls or any other sensitive species are observed on the site during future construction activities, CDFW and the County should be contacted to discuss mitigations which may be required. CDFW is the only agency which can grant authorization for the “take” of any sensitive species, including the burrowing owl.

8.0 REFERENCES

- Baldwin, Bruce G, et. al.
2002. The Jepson Desert Manual. Vascular Plants of Southeastern California. University of California Press, Berkeley, CA.
- California Burrowing Owl Consortium
April 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.
March 7, 2012. Staff Report on Burrowing Owl Mitigation. 33 pp.
- California Department of Fish and Game
1995. Staff Report on Burrowing Owl Mitigation.
- California Department of Fish and Game
1990 California's Wildlife, Volumes 1, 2, and 3. Sacramento.
- California Department of Fish and Game
2013 Natural Diversity Data Base. Sacramento
- 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.
- Munz, Philip A.
1974. A Flora of Southern California. University of California Press, Berkeley, California. 1086 pp.
- 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.

TABLES

Burrowing Owl Occurrences

Burrowing Owl occurrences within about 6-miles of the site based on California Diversity Data Base (2013). (SC = Species of special concern)

Name	Listing Status	Habitat Requirements	Presence/Absence	Comments
Burrowing owl <i>(Athene cunicularia)</i>	CDFW: SC	Various: desert scrub, agricultural lands, disturbed areas	Site support very marginal habitat.	Occurrence #25 (1989), six miles west of project site.

FIGURES

Vicinity Map

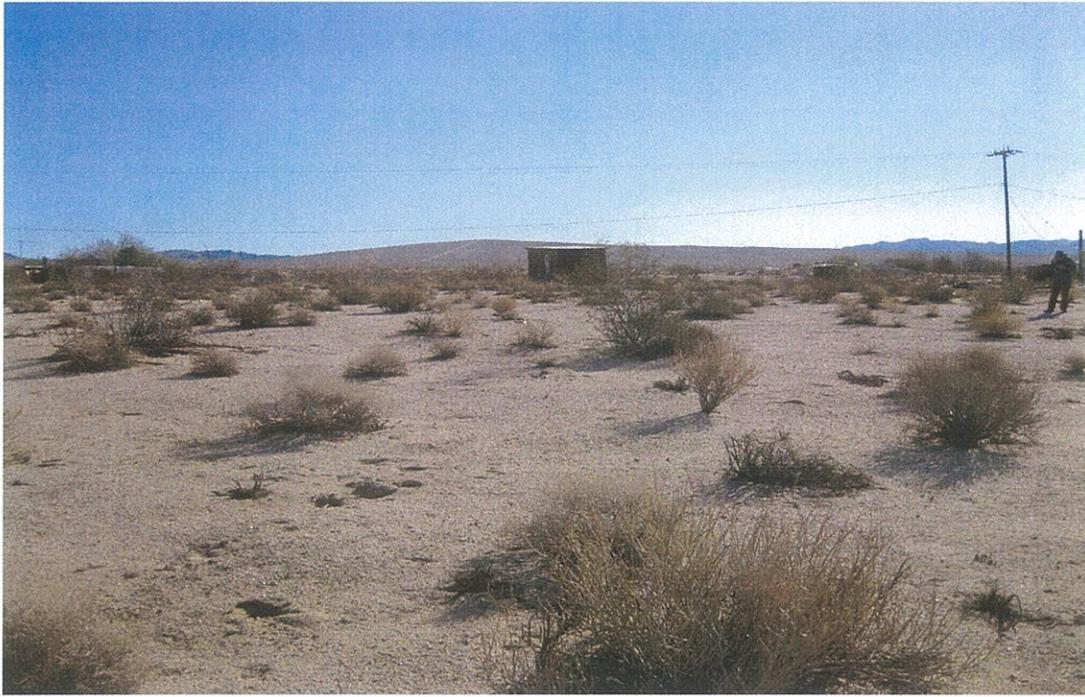


VICINITY MAP

R. HOVE FT. IRWIN PIT
 (Source: USGS Paradise Range, CA Quad., 1986)



SITE PHOTOGRAPHS



CENTER OF SITE LOOKING EAST

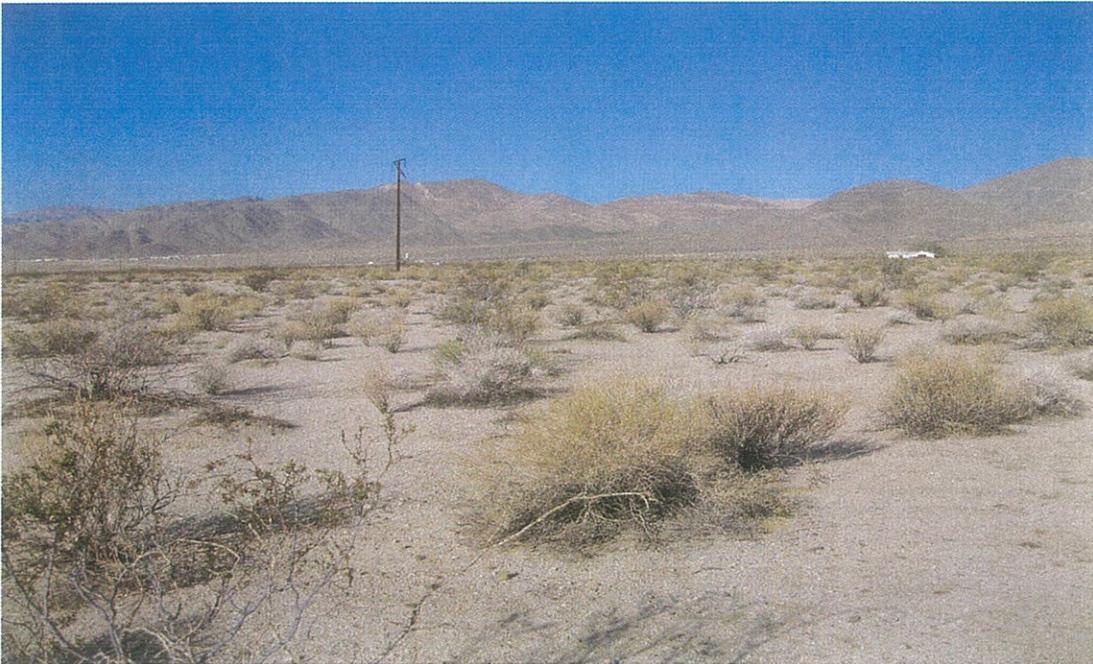


CENTER OF SITE LOOKING NORTH

SITE PHOTOGRAPHS
(R. HOVE FT. IRWIN PIT)



CENTER OF SITE LOOKING SOUTH



CENTER OF SITE LOOKING WEST

SITE PHOTOGRAPHS
(R. HOVE FT. IRWIN PIT)

APPENDIX A

Flora and Fauna Compendia

Table 1 - Plants observed on the site and in zone of influence (ZOI).

Common Name	Scientific Name	Location
Erodium	<i>Erodium texanum</i>	On-site & ZOI.
Schismus	<i>Schismus barbatus</i>	“
Buckwheat	<i>E. fasciculatum</i>	“
Brome grass	<i>Bromus sp.</i>	“
Fiddleneck	<i>Amsinckia tessellate</i>	“
Rabbitbrush	<i>Chrysothamnus depressus</i>	“
Saltbush	<i>Atriplex canescens</i>	“
Creosote bush	<i>Larrea tridentate</i>	“
Yellow-matchweed	<i>Gutierrezia sarothrae</i>	“
Russian thistle	<i>Salsola tragus</i>	“
Ephedra	<i>Ephedra nevadensis</i>	“
Burrobush	<i>Franseria dumosa</i>	“
Deciduous trees & shrubs	?	Near mobile home dwellings.

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

Common Name	Scientific Name	Location
Common raven	<i>Corvus corax</i>	Observed on-site
Song sparrow	<i>Melospiza melodia</i>	“
Morning dove	<i>Zenaida macroura</i>	“
Western kingbird	<i>Tyrannus verticalis</i>	Observed in ZOI
Western whiptail lizard	<i>Cnemidophorus tigris</i>	May occur on site
Side-blotched lizard	<i>Uta stansburiana</i>	Observed on-site and ZOI.
Antelope ground squirrel	<i>Ammospermophilus leucurus</i>	Known to occur in ZOI.
Desert spiny lizard	<i>Sceloporus magister</i>	“
California ground squirrel	<i>Spermophilus beecheyi</i>	“
Coyote	<i>Canis latrans</i>	“
Merriam’s kangaroo rat	<i>Dipodomys mohavensis</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 have been identified on the site or in the region by biologists from RCA Associates, LLC, or which are common species 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 and/or other biologists 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: 11-6-2013 Signed: 
Report Author

Field Work Performed By: Randall Arnold
Senior Biologist

Field Work Performed By: Ryan Mann
Senior Biologist