



**BIOLOGICAL RESOURCES OF THE  
SEARLES VALLEY MINERALS  
EAST BORROW PIT (CA MINE ID NO. 91-36-0028)  
TRONA, SAN BERNARDINO COUNTY, CALIFORNIA**

*Prepared for:*

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Appendix 1 – California Natural Diversity Data Base. Printout for a nine (9) USGS quadrangle area centered on Searles Lake, Calif.

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## **Summary**

A survey of biological resources of the Searles Valley Minerals (SVM) East Borrow Pit (CA Mine ID # 91-36-0028) was conducted from 7 - 11 April, 2016. SVM and their predecessors have mined sand and gravel from the East Borrow Pit (pursuant to San Bernardino County Reclamation Plan 78M-0013) to provide material for construction of facilities on Searles Dry Lake since 1978.

The East Borrow Pit is located within Section 20, Township 25 South, Range 44 East, Mount Diablo Meridian, upon public land administered by the Bureau of Land Management Ridgecrest Field Office (BLM). The site is located where the alluvial fans emanating from the Slate Range to the east and north of the site meet the playa of Searles Dry Lake. SVM conducts mining of the site pursuant to a mineral material sales contract with BLM.

Material is excavated, stockpiled then loaded and hauled from the pit. There are no structures and no processing activities conducted in the pit. Mobile equipment is serviced and stored off site. The entire contract area is 160 acres of which approximately 122 acres have been mined or do not provide suitable construction material, resulting in a project area of 38 acres.

The survey resulted in the observation or detection of thirteen plant species and ten animal species. Although the survey did not result in observation of any species of plant or animal listed as “threatened” or “endangered” by either the Federal or State government the presence or absence of Mohave ground squirrel (State listed as “threatened”) cannot be determined conclusively through a visual survey. Therefore, an additional survey is required to be conducted in March by a State authorized surveyor (CDFW, May 2016). In addition to no listed species being observed, there were no “sensitive species” or “species of concern” observed.

## INTRODUCTION

The biological resources of the Searles Valley Minerals East Borrow Pit were surveyed from 7-11 April, 2016, by Paul Kielhold. The site is located on public lands administered by the Bureau of Land Management Ridgecrest Field Office. The project site is a 38-acre portion of a 160-acre mineral sales contract area. The site is located in the northwest corner of San Bernardino County near the community of Trona. The site receives about 4 inches of rain per year. The site is the source of sand and gravel which is excavated from an alluvial fan for use in construction of facilities (roads and pads) on Searles Lake (dry).

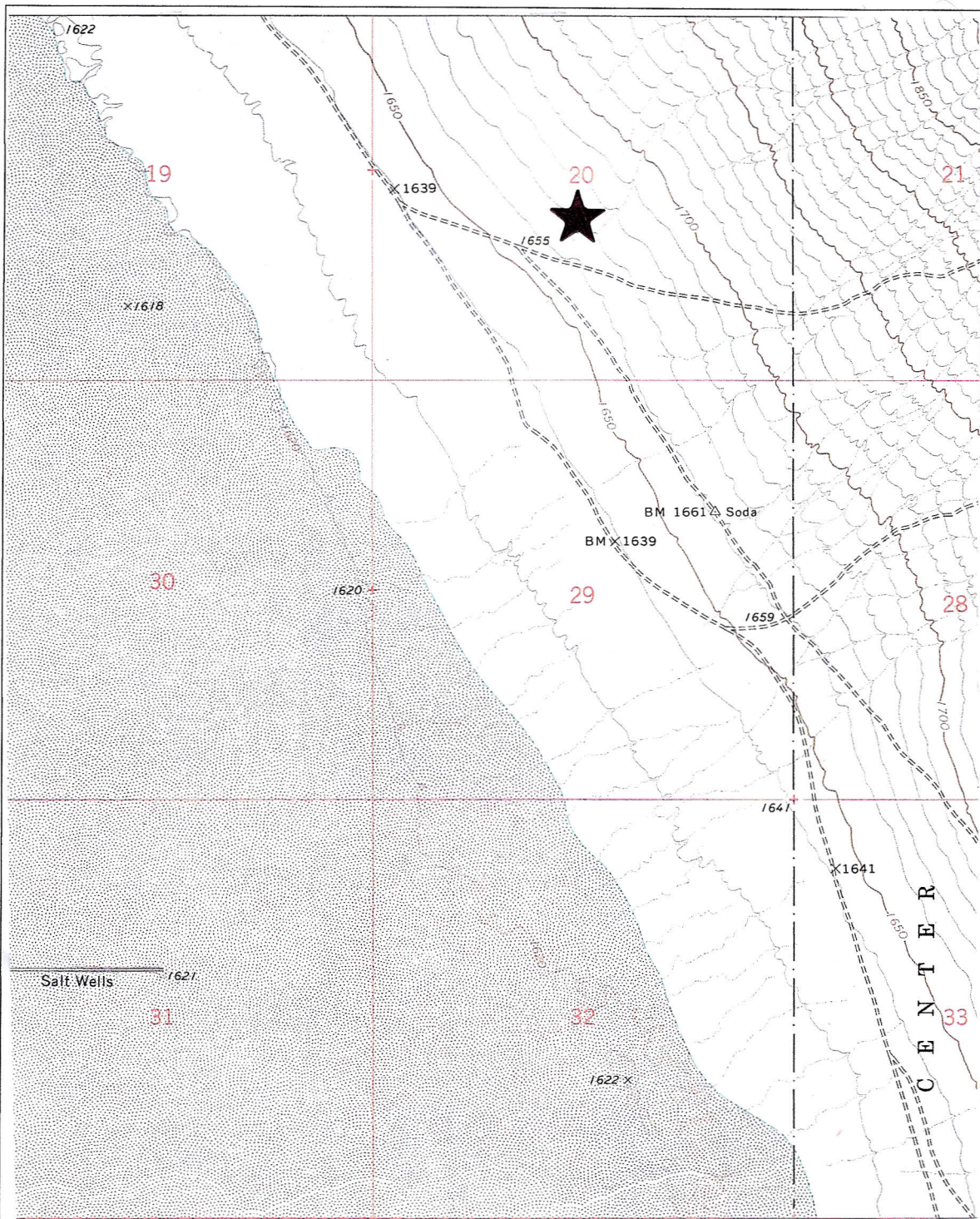
The site is located within Section 20, Township 25 South, Range 44 East, Mount Diablo Meridian (**Figure 1**). The site is bounded on the west and south by Searles Lake and on the east and north by the Slate Range. The land uses in the vicinity include the mineral recovery operations on Searles Lake and the Naval Air Weapons Station east of the site. Most of the surrounding lands are vacant. There are no structures and no equipment on site. The site ranges in elevation from about 1700 feet above sea level at the end of the cut to about 1760 feet above sea level in the northeast corner of the contract area, resulting in an overall slope of about 3 per cent. The site receives an average of about 4 inches of precipitation annually.

## METHODOLOGY

Prior to the field survey, the records of the California Natural Diversity Data Base were searched (Appendix 1). Nomenclature in this report follows Sawyer, Keeler-Wolf and Evens, 2009, for plant communities; Hickman 1993, for plants species; and Stebbins, 2003, for reptiles. Prior to conducting the field survey, contact was made with biologists of USFWS, BLM and CDFW to identify “sensitive species” and “species of concern” in addition to all listed species. Also reviewed was the “Revegetation Plan for the East Pit”, Kielhold, 2010, for identification of vegetation and animal habitat. The site has also been the subject of a survey conducted by Lisa M. Kegarice of Tom Dodson and Associates in 1994. In that survey, no tortoises or tortoise sign were observed and the Mohave ground squirrel habitat was found to be of low quality.

The current survey was conducted using the “Field Protocol for Any Federal Action That May Occur within the Range of the Desert Tortoise” revised January 1992. The survey was conducted when biological activity and species identification are expected to be at a maximum; early April with air temperatures ranging from a low of 60°F (15.6°C) to a high of 79°F (26.1°C). Biological resource occurrences were assessed through a visual survey of 100 per cent of the project footprint (38 acres) and conducting transects throughout the “zone of influence” ( $\pm$  400 acres). This method provides for a complete survey of the project footprint and a sampling of the area surrounding the project. The recommended zone of influence was truncated by the occurrence of non-habitat areas, Searles Lake, and the Naval Air Weapons Station. Transects were conducted at 100-, 300-, 600- and 1200-foot distances from the site.





**FIGURE 1: PROJECT LOCATION MAP**

Source – U.S. Geological Survey  
Searles Lake Quadrangle, California  
7.5 Minute Series





2400'

1200'

600'

300'

100'

100'

300'

600'

1200'

Project Area

100'

300'

600'

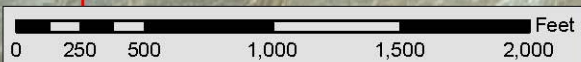
Zone of Influence

1200'

NAWS Property Fence Line - No Access

# LEGEND

Section Lines



SVM East Borrow Pit  
Spring 2016 Biological Survey Area  
and Zone of Influence

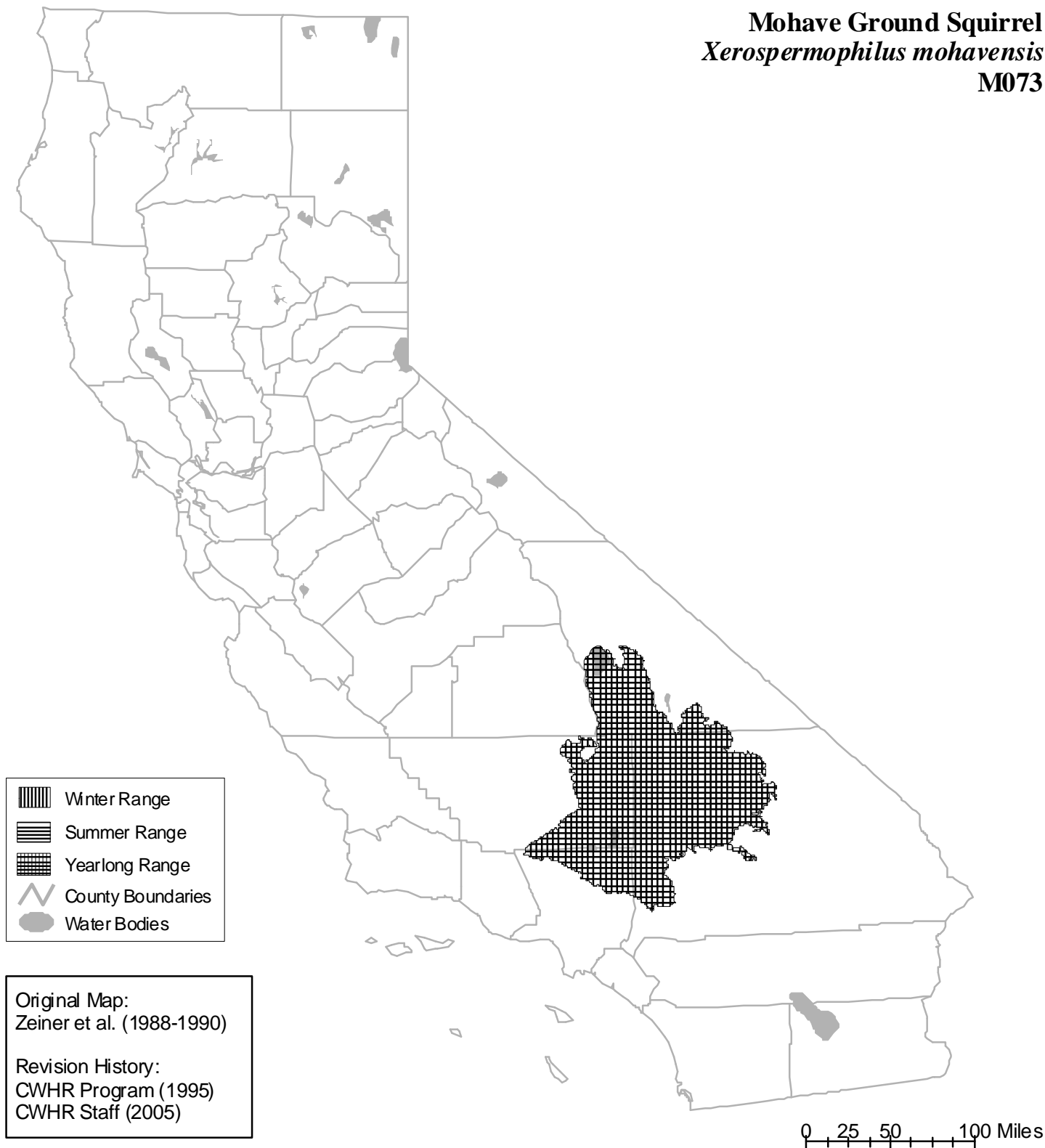
# California Wildlife Habitat Relationships System

California Department of Fish and Wildlife

California Interagency Wildlife Task Group

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## Mohave Ground Squirrel *Xerospermophilus mohavensis* M073



Range maps are based on available occurrence data and professional knowledge. They represent current, but not historic or potential, range. Unless otherwise noted above, maps were originally published in Zeiner, D.C., W.F. Laudenslayer, Jr., K.E. Mayer, and M. White, eds. 1988-1990. California's Wildlife. Vol. I-III. California Depart. of Fish and Game, Sacramento, California. Updates are noted in maps that have been added or edited since original publication.

## RESULTS

The site is located within a White bursage (*Ambrosia dumosa*) scrub plant community located adjacent to Searles Lake on a bajada originating in the Slate Range (**Figure 2**). The vegetation on site is a homogeneous and sparse (12% cover) community dominated by white bursage (burro bush). Thirteen species of plants were observed. All species observed or detected on site are listed in **Table 1**. No plant species listed as “threatened” or “endangered” or “special species” or “species of concern” were observed or are expected to occur on site. Vegetation was drier as distance from the playa increased. The annual plants had dried out for the year and there was no surface water on site.

The site is within the historic range of the Mohave ground squirrel (**Figure 3**) and a habitat evaluation was prepared in 1994. However, the current protocol for this species requires live-trapping to be conducted by a biologist authorized by CDFW. Trapping follows a habitat evaluation performed during March. The site contains burrows which could be used by several species. The only sign seen were tracks and tail drags of kangaroo rat (*Dipodomys*). No fossorial animals were observed in burrows or above ground. There were no burrows seen of sufficient size for badgers and no badgers and no sign of badgers were observed.

No desert tortoises or their sign were observed during the survey. This result is consistent with the results of an earlier survey of the site conducted by Tom Dodson and Associates in 1994. The area proposed to be mined was surveyed as was the project “zone-of-influence”. This provided a sampling of  $\pm 400$ -acre area surrounding the  $\pm 38$ -acre project area. No animals or sign of animals (scat, tracks, skeleton, carapace or scutes) were observed, although animals have been observed both north and south of Searles Valley (Bransfield, 2016. pers. com. and Woods, 2016. pers. com.).

While, the site is potentially within the range of burrowing owl, there is no suitable habitat on the site and no burrowing owls or sign of them were seen. While the site contains burrows it does not have elevated positions which owls can use for hunting (typically berms or fences). The site does not contain habitat (surface water) for prey species (primarily insects) of burrowing owl and burrowing owls are not expected to occur on site.

Although the survey was conducted during the spring, when birds typically exhibit nesting behavior; there were no bird nests observed and no birds were seen collecting nesting material. The vegetation on site provides little cover from avian predators and the site is not expected to be used for nesting.

No raptors (eagles, hawks and owls) or raptor nests were observed on site. One golden eagle was observed foraging west of the project site within the “zone-of-influence”. In addition, there are no bats or bat roosts on the site. The site does not contain appropriate habitat, it is a gently sloping alluvial fan sparsely covered with low growing (< 1 meter tall) vegetation, although raptors and bats could forage over the site.



**TABLE 1. SPECIES OBSERVED OR DETECTED**

**ANIMALS**

**Reptiles**

Common side-blotched lizard (*Uta stansburiana*)  
Desert horned lizard (*Phrynosoma platyrhinos*)  
Western whiptail (*Cnemidophorus tigris*)

**Birds**

Rock wren (*Salpinctes obsoletus*)  
Golden eagle (*Aquila chrysaetus*)  
Raven (*Corvus corax*)

**Mammals**

Blacktail jack rabbit (*Lepus californicus*)  
\*Burro (*Equus asinus*)  
Coyote (*Canis latrans*, sign)  
Kangaroo rat (*Dipodomys* spp., sign)

**PLANTS**

**Asteraceae**

Burro bush/white bursage (*Ambrosia dumosa*)  
Desert sunflower (*Geraea canescens*)  
Fremont pincushion (*Chaenactis fremontii*)

**Cactaceae**

Barrel Cactus (*Ferocactus cylindraceus*)  
Beaver tail cactus (*Opuntia basilaris*)

**Chenopodiaceae**

Cattle spinach (*Atriplex polycarpa*)  
Four wing saltbush (*A. canescens*)  
Holly leaved saltbush (*A. hymenelytra*)

**Malvaceae**

Desert five spot (*Eremalche rotundifolia*)

**Onagraceae**

Woody bottle washer (*Camissonia boothii*)

**Plantaginaceae**

Plantain (*Plantago insularis*)

**Poaceae**

\*Annual bluegrass (*Poa annua*)

**Zygophyllaceae**

Creosote bush (*Larrea tridentata*)

\*Non-native species

## DISCUSSION

The survey of the East Borrow Pit was conducted over a five-day period, from 7-11 April 2016, and covered the area of proposed disturbance (38 acres) and provided a sampling of the surrounding area ( $\pm$  400 acres). The site is an arid bajada covered by sand, both eolian (windblown) and alluvial. The eolian sand presumably covers the alluvial sand and is relatively deep ( $\pm$  3 feet) near the lake margin thinning upslope to a veneer and eventually to individual piles of sand at the bases of larger (perennial) plants. The alluvial sand is suitable for construction on Searles Lake and the eolian sand is not. The eolian sand is finer and provides a less stable surface. There is no surface water on site.

The vegetation forms a sparse plant community (12% cover) ranging from a burrobrush and saltbush mixture near the lake margin to a nearly homogeneous community of burrobrush over most of the site with creosote bush occurring occasionally and increasing with distance upslope toward the Slate Range. This plant community is common throughout the Mohave Desert. The dominant annual plant species, plantain and bluegrass, had dried out for the year. The perennial plants were also dry upslope from the playa and “greener” near the playa. The site exhibits relatively low biological diversity and abundance as is expected in an arid environment.

The areas covered by eolian sand exhibited burrows which readily collapse. Many of the burrows observed had previously collapsed. The burrows on site and in surrounding areas exhibited sign of use by kangaroo rats. Sign of other fossorial species such as desert tortoise, burrowing owl and ground squirrels was not observed. Burrow entrances had concave floors rather than the flat floors and platforms attributable to desert tortoises. The burrows appear to be used by mammals and not reptiles or birds. No fossorial animals; desert tortoise, burrowing owl or kangaroo rats were observed above ground. No burrows large enough for badger were observed and a few burrows had been excavated, apparently by coyotes. Burros were commonly seen traversing the area after the mine crew and equipment had left for the day, in the early afternoon. Burro sign was common throughout the site and surrounding area.

Birds were rarely observed and the site lacks nesting habitat, water and trees or large shrubs. The aridity of the site is likely to limit food production and the low vegetative cover increases exposure to predators. The birds observed appeared to be foraging throughout the area. None were observed in nesting behaviors and no nests were seen. No raptors (eagles, hawks or owls) were seen on site. One golden eagle was observed west of the site in habitat where it is expected to forage.

The survey did not result in observation or detection by sign of any plant or animal species listed as “threatened” or “endangered” by the Federal government or State of California; however, this survey and the previous MGS habitat evaluation are not deemed conclusive by the State DFW with regard to the occurrence of the State listed “threatened” Mohave ground squirrel (Calvert, 2016. pers. com.). In addition, no “special species” or “species of concern” were observed.

## REFERENCES

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- U. S. Fish and Wildlife Service. 2016. Ray Bransfield, personal communication.



Photo No. 1. – Lake operations (typical, roads and wells built on gravel pads).



Photo No. 2. – East pit, looking south from the north end.





Photo No. 3. – Burro, west of the project site within the “Zone of Influence”.



Photo No. 4. – Kangaroo rat (*Dipodomys* spp.) sign is common on the project site.



Photo No. 5. – Looking at the Slate Range east of project site within the NAWS.



Photo No. 6. East Pit, looking to the south from the north end.





Photo No. 7. – Unsuitable material (eolian sand) within the “Zone-of-Influence”.



Photo No. 8 – Project area (showing burrobush with creosote bush and plantain).

## **APPENDIX 1**



**CNDDB 9-Quad Species List** 52 records.

Element Type	Scientific Name	Common Name	Element Code	Federal Status	State Status	CDFW Status	CA Rare Plant Rank	Quad Code	Quad Name	Data Status	Taxonomic Sort
Animals - Birds	<i>Accipiter striatus</i>	sharp-shinned hawk	ABNKC12020	None	None	WL	-	3511774	Trona West	Unprocessed	Animals - Birds - Accipitridae - <i>Accipiter striatus</i>
Animals - Birds	<i>Aquila chrysaetos</i>	golden eagle	ABNKC22010	None	None	FP, WL	-	3511774	Trona West	Unprocessed	Animals - Birds - Accipitridae - <i>Aquila chrysaetos</i>
Animals - Birds	<i>Aquila chrysaetos</i>	golden eagle	ABNKC22010	None	None	FP, WL	-	3511754	Spangler Hills East	Unprocessed	Animals - Birds - Accipitridae - <i>Aquila chrysaetos</i>
Animals - Birds	<i>Charadrius alexandrinus nivosus</i>	western snowy plover	ABNNB03031	Threatened	None	SSC	-	3511764	Westend	Mapped	Animals - Birds - Charadriidae - <i>Charadrius alexandrinus nivosus</i>
Animals - Birds	<i>Charadrius alexandrinus nivosus</i>	western snowy plover	ABNNB03031	Threatened	None	SSC	-	3511763	Searles Lake	Mapped	Animals - Birds - Charadriidae - <i>Charadrius alexandrinus nivosus</i>
Animals - Birds	<i>Melospiza crissalis eremophilus</i>	Inyo California towhee	ABPBX74071	Threatened	Endangered	-	-	3511774	Trona West	Mapped and Unprocessed	Animals - Birds - Emberizidae - <i>Melospiza crissalis eremophilus</i>
Animals - Birds	<i>Spizella atrogularis</i>	black-chinned sparrow	ABPBX94070	None	None	-	-	3511774	Trona West	Unprocessed	Animals - Birds - Emberizidae - <i>Spizella atrogularis</i>
Animals - Birds	<i>Spizella breweri</i>	Brewer's sparrow	ABPBX94040	None	None	-	-	3511774	Trona West	Unprocessed	Animals - Birds - Emberizidae - <i>Spizella breweri</i>
Animals - Birds	<i>Falco columbarius</i>	merlin	ABNKD06030	None	None	WL	-	3511774	Trona West	Unprocessed	Animals - Birds - Falconidae - <i>Falco columbarius</i>
Animals - Birds	<i>Falco mexicanus</i>	prairie falcon	ABNKD06090	None	None	WL	-	3511774	Trona West	Mapped and Unprocessed	Animals - Birds - Falconidae - <i>Falco mexicanus</i>
Animals - Birds	<i>Falco mexicanus</i>	prairie falcon	ABNKD06090	None	None	WL	-	3511764	Westend	Mapped and Unprocessed	Animals - Birds - Falconidae - <i>Falco mexicanus</i>
Animals - Birds	<i>Falco mexicanus</i>	prairie falcon	ABNKD06090	None	None	WL	-	3511772	Copper Queen Canyon	Mapped and Unprocessed	Animals - Birds - Falconidae - <i>Falco mexicanus</i>
Animals - Birds	<i>Falco mexicanus</i>	prairie falcon	ABNKD06090	None	None	WL	-	3511773	Trona East	Mapped	Animals - Birds - Falconidae - <i>Falco mexicanus</i>
Animals - Birds	<i>Falco mexicanus</i>	prairie falcon	ABNKD06090	None	None	WL	-	3511753	Christmas Canyon	Mapped and Unprocessed	Animals - Birds - Falconidae - <i>Falco mexicanus</i>
Animals - Birds	<i>Gavia immer</i>	common loon	ABNBA01030	None	None	SSC	-	3511763	Searles Lake	Unprocessed	Animals - Birds - Gaviidae - <i>Gavia immer</i>
Animals - Birds	<i>Lanius ludovicianus</i>	loggerhead shrike	ABPBR01030	None	None	SSC	-	3511774	Trona West	Unprocessed	Animals - Birds - Laniidae - <i>Lanius ludovicianus</i>
Animals - Birds	<i>Toxostoma lecontei</i>	Le Conte's thrasher	ABPBK06100	None	None	SSC	-	3511772	Copper Queen Canyon	Mapped	Animals - Birds - Mimidae - <i>Toxostoma lecontei</i>
Animals - Birds	<i>Toxostoma lecontei</i>	Le Conte's thrasher	ABPBK06100	None	None	SSC	-	3511764	Westend	Mapped and Unprocessed	Animals - Birds - Mimidae - <i>Toxostoma lecontei</i>
Animals - Birds	<i>Toxostoma lecontei</i>	Le Conte's thrasher	ABPBK06100	None	None	SSC	-	3511762	Layton Spring	Unprocessed	Animals - Birds - Mimidae - <i>Toxostoma lecontei</i>

Animals - Birds	Setophaga petechia	yellow warbler	ABPBX03010	None	None	SSC	-	3511774	Trona West	Unprocessed	Animals - Birds - Parulidae - Setophaga petechia
Animals - Birds	Asio otus	long-eared owl	ABNSB13010	None	None	SSC	-	3511774	Trona West	Mapped and Unprocessed	Animals - Birds - Strigidae - Asio otus
Animals - Birds	Athene cunicularia	burrowing owl	ABNSB10010	None	None	SSC	-	3511762	Layton Spring	Mapped and Unprocessed	Animals - Birds - Strigidae - Athene cunicularia
Animals - Birds	Poliophtila californica californica	coastal California gnatcatcher	ABPBJ08081	Threatened	None	SSC	-	3511774	Trona West	Unprocessed	Animals - Birds - Sylviidae - Poliophtila californica californica
Animals - Birds	Calypte costae	Costa's hummingbird	ABNUC47020	None	None	-	-	3511774	Trona West	Mapped and Unprocessed	Animals - Birds - Trochilidae - Calypte costae
Animals - Mammals	Ovis canadensis nelsoni	desert bighorn sheep	AMALE04013	None	None	FP	-	3511773	Trona East	Mapped	Animals - Mammals - Bovidae - Ovis canadensis nelsoni
Animals - Mammals	Ovis canadensis nelsoni	desert bighorn sheep	AMALE04013	None	None	FP	-	3511772	Copper Queen Canyon	Mapped	Animals - Mammals - Bovidae - Ovis canadensis nelsoni
Animals - Mammals	Ovis canadensis nelsoni	desert bighorn sheep	AMALE04013	None	None	FP	-	3511762	Layton Spring	Mapped	Animals - Mammals - Bovidae - Ovis canadensis nelsoni
Animals - Mammals	Ovis canadensis nelsoni	desert bighorn sheep	AMALE04013	None	None	FP	-	3511752	Pilot Knob Valley West	Mapped	Animals - Mammals - Bovidae - Ovis canadensis nelsoni
Animals - Mammals	Ovis canadensis nelsoni	desert bighorn sheep	AMALE04013	None	None	FP	-	3511774	Trona West	Mapped	Animals - Mammals - Bovidae - Ovis canadensis nelsoni
Animals - Mammals	Xerospermophilus mohavensis	Mohave ground squirrel	AMAFB05150	None	Threatened	-	-	3511774	Trona West	Mapped	Animals - Mammals - Sciuridae - Xerospermophilus mohavensis
Animals - Mammals	Xerospermophilus mohavensis	Mohave ground squirrel	AMAFB05150	None	Threatened	-	-	3511752	Pilot Knob Valley West	Mapped	Animals - Mammals - Sciuridae - Xerospermophilus mohavensis
Animals - Mammals	Xerospermophilus mohavensis	Mohave ground squirrel	AMAFB05150	None	Threatened	-	-	3511753	Christmas Canyon	Mapped	Animals - Mammals - Sciuridae - Xerospermophilus mohavensis
Animals - Mammals	Xerospermophilus mohavensis	Mohave ground squirrel	AMAFB05150	None	Threatened	-	-	3511754	Spangler Hills East	Mapped	Animals - Mammals - Sciuridae - Xerospermophilus mohavensis
Animals - Mammals	Xerospermophilus mohavensis	Mohave ground squirrel	AMAFB05150	None	Threatened	-	-	3511764	Westend	Mapped	Animals - Mammals - Sciuridae - Xerospermophilus mohavensis
Animals - Mammals	Xerospermophilus mohavensis	Mohave ground squirrel	AMAFB05150	None	Threatened	-	-	3511773	Trona East	Mapped	Animals - Mammals - Sciuridae - Xerospermophilus mohavensis



Animals - Mammals	Antrozous pallidus	pallid bat	AMACC10010	None	None	SSC	-	3511754	Spangler Hills East	Unprocessed	Animals - Mammals - Vespertilionidae - Antrozous pallidus
Animals - Mammals	Antrozous pallidus	pallid bat	AMACC10010	None	None	SSC	-	3511774	Trona West	Mapped and Unprocessed	Animals - Mammals - Vespertilionidae - Antrozous pallidus
Animals - Mammals	Corynorhinus townsendii	Townsend's big-eared bat	AMACC08010	None	Candidate Threatened	SSC	-	3511774	Trona West	Mapped	Animals - Mammals - Vespertilionidae - Corynorhinus townsendii
Animals - Mammals	Corynorhinus townsendii	Townsend's big-eared bat	AMACC08010	None	Candidate Threatened	SSC	-	3511762	Layton Spring	Mapped	Animals - Mammals - Vespertilionidae - Corynorhinus townsendii
Animals - Mammals	Corynorhinus townsendii	Townsend's big-eared bat	AMACC08010	None	Candidate Threatened	SSC	-	3511772	Copper Queen Canyon	Mapped	Animals - Mammals - Vespertilionidae - Corynorhinus townsendii
Animals - Mammals	Euderma maculatum	spotted bat	AMACC07010	None	None	SSC	-	3511774	Trona West	Unprocessed	Animals - Mammals - Vespertilionidae - Euderma maculatum
Animals - Mammals	Myotis ciliolabrum	western small-footed myotis	AMACC01140	None	None	-	-	3511774	Trona West	Mapped	Animals - Mammals - Vespertilionidae - Myotis ciliolabrum
Animals - Reptiles	Gopherus agassizii	desert tortoise	ARAAF01012	Threatened	Threatened	-	-	3511774	Trona West	Unprocessed	Animals - Reptiles - Testudinidae - Gopherus agassizii
Animals - Reptiles	Gopherus agassizii	desert tortoise	ARAAF01012	Threatened	Threatened	-	-	3511764	Westend	Unprocessed	Animals - Reptiles - Testudinidae - Gopherus agassizii
Animals - Reptiles	Gopherus agassizii	desert tortoise	ARAAF01012	Threatened	Threatened	-	-	3511754	Spangler Hills East	Mapped	Animals - Reptiles - Testudinidae - Gopherus agassizii
Animals - Reptiles	Gopherus agassizii	desert tortoise	ARAAF01012	Threatened	Threatened	-	-	3511753	Christmas Canyon	Mapped	Animals - Reptiles - Testudinidae - Gopherus agassizii
Plants - Bryophytes	Plagiobryoides vinosula	wine-colored tufa moss	NBMUS0Y090	None	None	-	4.2	3511774	Trona West	Unprocessed	Plants - Bryophytes - Bryaceae - Plagiobryoides vinosula
Plants - Vascular	Astragalus lentiginosus var. borreganus	Borrego milk-vetch	PDFAB0FB95	None	None	-	4.3	3511774	Trona West	Unprocessed	Plants - Vascular - Fabaceae - Astragalus lentiginosus var. borreganus
Plants - Vascular	Astragalus lentiginosus var. borreganus	Borrego milk-vetch	PDFAB0FB95	None	None	-	4.3	3511773	Trona East	Unprocessed	Plants - Vascular - Fabaceae - Astragalus lentiginosus var. borreganus
Plants - Vascular	Eremothera boothii ssp. boothii	Booth's evening-primrose	PDONA03052	None	None	-	2B.3	3511774	Trona West	Mapped	Plants - Vascular - Onagraceae - Eremothera boothii ssp. boothii
Plants - Vascular	Aliciella ripleyi	Ripley's aliciella	PDPLM041E0	None	None	-	2B.3	3511764	Westend	Mapped	Plants - Vascular - Polemoniaceae - Aliciella ripleyi

Plants - Vascular	Castela emoryi	Emory's crucifixion- thorn	PDSIM03030	None	None	-	2B.2	3511773	Trona East	Mapped	Plants - Vascular - Simaroubaceae - Castela emoryi
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## **APPENDIX 2**

Transect Length: \_\_\_\_\_ ft      Width: 30 ft      Other \_\_\_\_\_ ft      Time \_\_\_\_\_

Weather:    Airtemp at : 5 cm \_\_\_\_\_ °C      Surface \_\_\_\_\_ °C      Cloud cover \_\_\_\_\_ %

Rainfall \_\_\_\_\_ in      Wind speed \_\_\_\_\_      Rainfall in last 30 days \_\_\_\_\_ in

Land Form (e.g., mesa, bajada, wash) \_\_\_\_\_

% Slope:    high \_\_\_\_\_    low \_\_\_\_\_    Aspect \_\_\_\_\_    Elevation \_\_\_\_\_ ft

Vegetation:    dominant perennials \_\_\_\_\_  
\_\_\_\_\_  
dominant annuals \_\_\_\_\_  
\_\_\_\_\_

Adjacent Land Use: up to 1 mi \_\_\_\_\_

Soils \_\_\_\_\_