
MOHAVE GROUND SQUIRREL SURVEY
FOR THE FORD LAND COMPANY, TENTATIVE TRACT MAP 16301
VICTORVILLE, SAN BERNARDINO COUNTY, CALIFORNIA

Prepared for

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Prepared by

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July 2004

Expired



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INTRODUCTION

PROJECT DESCRIPTION

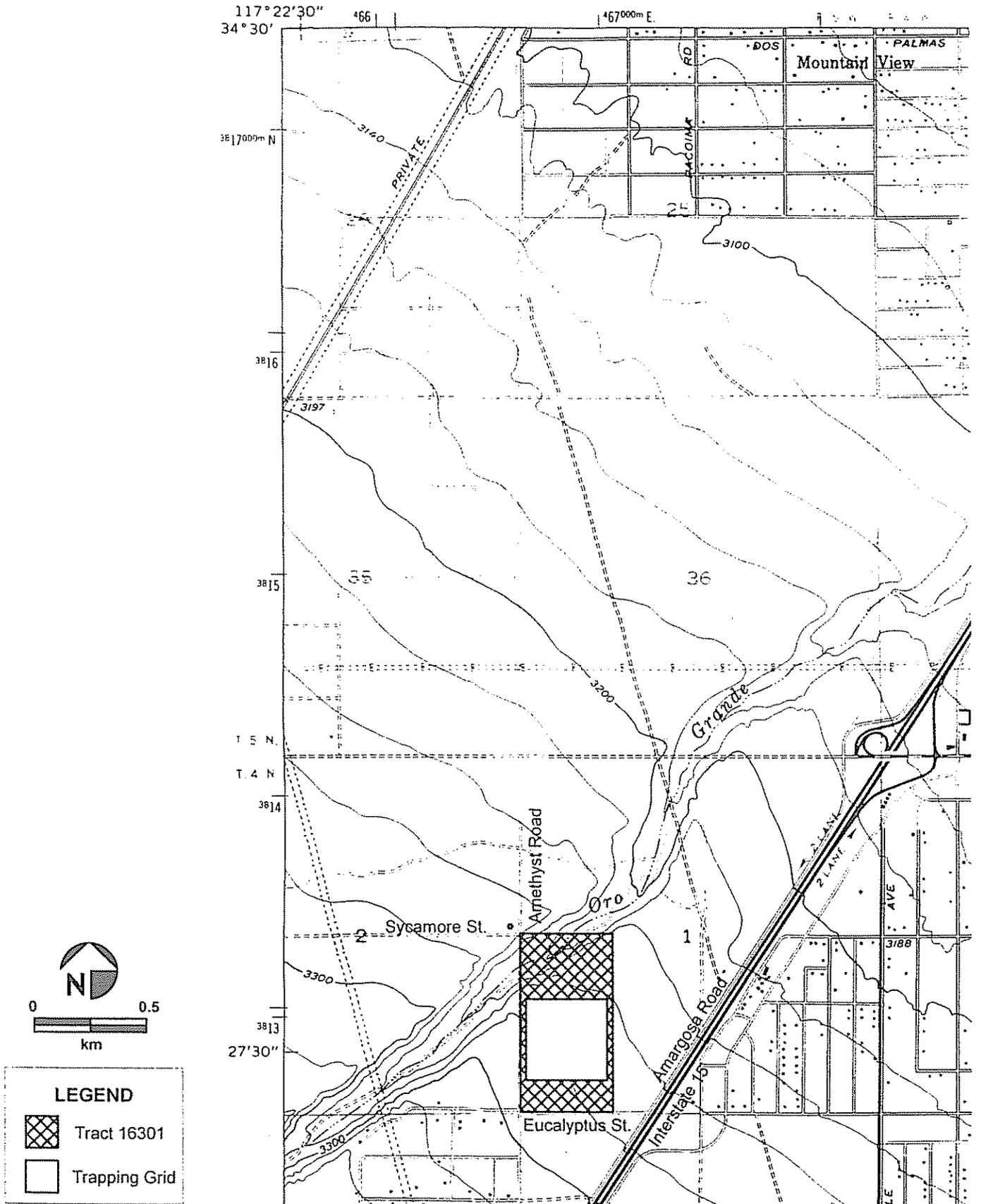
The Ford Land Company proposed to construct 216 homes on 65 acres (Parcel 1) of an 86-acre site in Victorville, San Bernardino County, California (Tentative Tract Map 16301). The project proponent has no immediate plans to develop the remaining 21 acres (Parcels 2 and 3) of the site.

The California Department of Fish and Game (CDFG) has determined that the Mohave ground squirrel (*Spermophilus mohavensis*), a State listed threatened species (CDFG 2003c), may occur on the project site. The site lies within the known range of the species (Gustafson 1993). The Mohave ground squirrel is also a federal species of concern [U.S. Fish and Wildlife Service (USFWS) 2003]. The federal designation for this species, however, is informal and is used by some, but not all, USFWS offices. Federal species of concern receive no legal protection and the use of the term does not necessarily mean that the species will eventually be proposed for listing as a threatened or endangered species. Since the project may negatively impact a State listed species, surveys following CDFG recommended protocols (CDFG 2003a) were initiated to determine the status of Mohave ground squirrels in the proposed project area.

PROJECT SITE

The project site is located in the west half of the southwest quarter of Section 1, Township 4 North, Range 5 West, in the City of Victorville, San Bernardino County, California (Figure 1). The elevation ranges from approximately 3,220 ft to 3,300 ft. Oro Grande Wash bisects the northwest corner of the parcel. The site is bound by Eucalyptus Street (dirt) on the south, Amethyst Road (dirt) on the west, and Sycamore Street (dirt) on the north. A cemetery occurs within 330 ft of the

eastern boundary of the parcel. A few homes and a church lie near the southwest corner of the parcel. Another church is on the adjacent parcel towards the north. Most of the project site and other adjacent parcels support native vegetation. There is, however, a 2-acre catchment basin on the parcel, located in Oro Grande Wash. In addition, the wash and adjacent slopes are heavily impacted by off-highway vehicle activity.



USGS Hesperia, California Quadrangle, 7.5 Minute Series; 1927 North American Datum; Zone 11

FIGURE 2. Mohave Ground Squirrel Tapping Grid on the Ford Land Company Project Site, Tract 16301, Victorville, California

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

(*Gilia minor*), Bud eriophyllum (*Eriophyllum pringlei*), vinegar-weed (*Lessingia lemmonii*), white tidy-tips (*Layia glandulosa*), white fiesta-flower (*Pholistoma membranaceum*), golden linanthus (*Linanthus aureus*), and sand bur (*Ambrosia acanthicarpa*).

Existing impacts at the project site included several off-highway vehicle trails, tracks, and denuded areas; dumped and wind blown trash; and a 2-acre catchment basin. Photographs of the project site are provided in Appendix B.

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 arthropods (Gustafson 1993).

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). The Mohave ground squirrel is a State list threatened species and a Federal Species of Concern (CDFG 2003c).

Locality records for Mohave ground squirrels in the vicinity of the project site are presented in Table 1 (CDFG 2003b). The latest record is from 1980. The current status of Mohave ground squirrels at these locations is not known, but due to the increase in development in the Victorville, Hesperia, and Adelanto areas, occurrences at these previously known sites is improbable. It is apparent that the project site was, at least historically, within the range of this species. However, due to habitat loss, degradation, and fragmentation in the general area of the project site, it is unlikely that Mohave ground squirrels presently inhabit the site.

Visual Survey Results

The visual survey was conducted on 15-16 March 2004. No Mohave ground squirrels were observed on the project site during the visual survey. Hence, the trapping survey was initiated.

Trapping Results

The first trapping period occurred from 17-21 March 2004 and consisted of 4,775 trap-hours. Daily temperatures during this period never reached or exceeded 32°C (90°F), so trap closures were not necessary due to heat, as required in the trapping protocol (CDFG 2003a). Temperatures during this period ranged from 4.8°C to 30.5°C. Results of the trapping effort during the first period are summarized in Table 2. There were 88 captures of white-tailed antelope squirrels. From the mark/recapture data, it was estimated that 44 individual white-tailed antelope squirrels (22 males, 22 females) were captured during the first period. No Mohave ground squirrels were trapped or observed during this period.

The second trapping period occurred from 3-7 May 2004. During this session, daily temperatures exceeded 32°C (90°F) on 3 days, so trap closures were necessary. Daytime temperatures during this period ranged from 11.5°C to 35.8°C. The effort during the second trapping period totaled 4,600 trap-hours. Results of the trapping effort during the second period are summarized in Table 2. There were 279 captures of white-tailed antelope squirrels. From the mark/recapture data, it was estimated that 87 individual white-tailed antelope squirrels (39 males, 48 females) were captured during the second period. No Mohave ground squirrels were trapped or observed during this period.

The third trapping period occurred from 16-20 June 2004. Daytime temperatures during this period ranged from 11.4°C to 35.3°C. Temperatures exceeded 32°C on 3 days of trapping; hence, trap closures were necessary. The effort during the third trapping period totaled 4,825 trap-hours. Results of the trapping effort during the third period are summarized in Table 2. There were 332 captures of white-tailed antelope squirrels. From the mark/recapture data, it was estimated that 111 individual white-tailed antelope squirrels (65 males, 44 females) were captured during the

third period. In addition, there were 5 captures of California ground squirrels (*Spermophilus beecheyi*), and 5 captures of Cactus Wrens (*Campylorhynchus brunneicapillus*). No Mohave ground squirrels were trapped or observed during this period.

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

OTHER WILDLIFE

Other wildlife species that were observed during the Mohave ground squirrel survey included side-blotched lizard (*Uta stansburiana*), Red-tailed Hawk (*Buteo jamaicensis*), American Kestrel (*Falco sparverius*), Prairie Falcon (*Falco mexicanus*), California Quail (*Callipepla californica*), Rock Pigeon (*Columba livia*), Mourning Dove (*Zenaida macroura*), Greater Roadrunner (*Geococcyx californianus*), Say's Phoebe (*Sayoris saya*), Western Kingbird (*Tyrannus verticalis*), Horned Lark (*Eremophila alpestris*), Common Raven (*Corvus corax*), Northern Mockingbird (*Mimus polyglottos*), European Starling (*Sturnus vulgaris*), Yellow-rumped Warbler (*Dendroica coronata*), Chipping Sparrow (*Spizella passerina*), Black-throated Sparrow (*Amphispiza bilineata*), Sage Sparrow (*Amphispiza belli*), Savannah Sparrow (*Passerculus sandwichensis*), White-crowned Sparrow (*Zonotrichia leucophrys*), Western Meadowlark (*Sturnella neglecta*), Brewer's Blackbird (*Euphagus cyanocephalus*), and black-tailed hare (*Lepus californicus*). Most of these species are commonly found in the Mojave Desert.

LITERATURE CITED

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DEPARTMENT OF FISH AND GAME

Eastern Sierra-Inland Deserts Region
Bishop Field Office
407 W. Line Street
Bishop, CA 93514
<http://www.dfg.ca.gov>



March 8, 2004

Ms. Denise LaBerteaux
EREMICO Biological Services
211 Snow Street
Weldon, CA 93283

Subject: Request to Modify Mohave Ground Squirrel Trapping Guidelines

Dear Ms. LaBerteaux:

The Department of Fish and Game (Department) has reviewed your request to modify the Mohave ground squirrel (MGS) trapping guidelines on the Ford Land Company 86-acre site located on the northeast corner of Eucalyptus Street and Amethyst Rd in the city of Victorville. The site comprises 86-acres of land. Standard guidelines state that typically one trapping grid per 80 acres should be used to get adequate detection of the species. Your request is to use only one trapping grid for the entire 86-acre site. Your request also indicates that a portion of the site is disturbed to the extent that it may no longer constitute MGS habitat. As such, the Department concurs that the use of a single trapping grid should provide coverage at the project site.

It should be noted that you indicate that a desert wash crosses the project site. The project proponent should be made aware that alteration of the bed, bank, or channel of a desert wash falls under the jurisdiction of Fish and Game Code §1600 and a streambed alteration agreement may be necessary.

Questions regarding this letter should be directed to Ms. Adrienne Disbrow, Environmental Scientist, at (760) 873-4412.

Sincerely

A handwritten signature in cursive script that reads "Denyse Racine".

Denyse Racine, Supervisor
Habitat Conservation Program

FORD LAND COMPANY, TRACT 16301, VICTORVILLE, CALIFORNIA

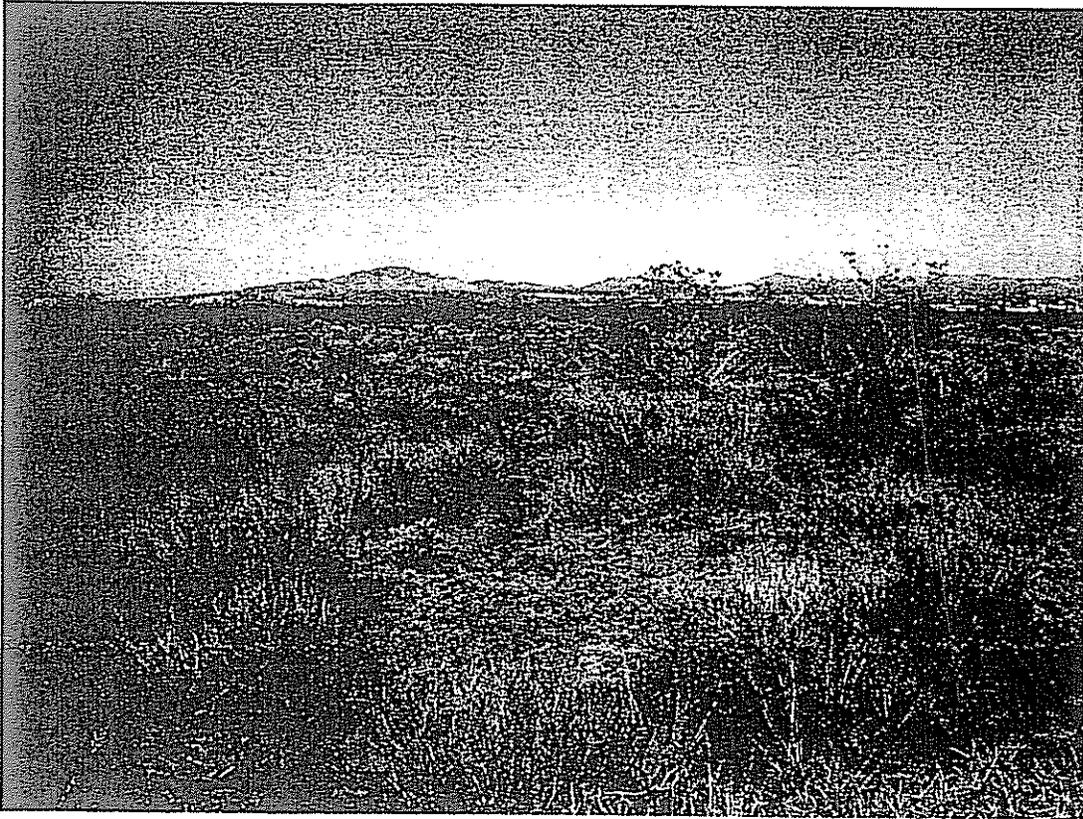


Photo 1. Parcel from southwest corner towards northeast.



Photo 2. Parcel from southeast corner toward northwest.

MOHAVE GROUND SQUIRREL (MGS) SURVEY AND TRAPPING FORM

PART 1 – PROJECT INFORMATION

Project Name: Tract 16301

Property Owner: Ford Land Company

Location (Township, Range, Section): T4N, R5W, Sec. 1, W1/2 of SW1/4, Victorville,
San Bernardino County

Quad Map/Series: Hesperia, 7.5 Minute Series

UTM Coordinates of Trapping Grid Corners: (NAD 27, Zone 11) NE Corner 467017E, 3813006N; NW
Corner 466702E, 3813006E; SW Corner 466702E, 3812692N; SE Corner 467017E, 3812692N

Acreage of Project Site: 86 acres

Acreage of Potential MGS Habitat on Site: approx. 80 acres

Total Acreage Visually Surveyed on Project Site: 86 acres **Date(s) of Visual Survey:** 15-16 March 2004

Visual Survey Conducted By: Denise LaBerteaux and Bruce Garlinger

Total Acres Trapped: 80 acres

Number of Sampling Grids: 1

Trapping Conducted By: Bruce Garlinger

Dates of Sampling Term(s): **FIRST** 17-21 March 2004 **SECOND** 3-7 May 2004 **THIRD** 16-20 June 2004

PART II – GENERAL HABITAT DESCRIPTION

Vegetation Type: Mojave creosote bush scrub

Dominant Perennials: On bajada: *Larrea tridentata*, *Ephedra nevadensis*, *Eriogonum fasciculatum* ssp. *polifolium*, *Acamptopappus sphaerocephalus*, on bajada. In wash: *Larrea tridentata*, *Chrysothamnus nauseosus*

Other Perennials: *Yucca brevifolia*, *Lycium andersonii*, *Krascheninnikovia lanata*, *Ambrosia dumosa*, *Ericameria cooperi*, *Grayia spinosa*, *Tetradymia stenolepis*, *Opuntia echinocarpa*, *Gutierrezia microcephala*, *Poa* sp., *Lycium cooperi*, *Tetradymia axillaris*, *Achnatherum speciosum*, *Artemisia tridentata*, *Juniperus californica*, *Muilla coronata*

Dominant Annuals: *Erodium cicutarium*, *Schismus barbatus*, *Bromus madritensis* ssp. *rubens*, *Pectocarya penicillata*

Other Annuals: *Amsinckia tessellata*, *Lasthenia californica*, *Tropidocarpum gracile*, *Linanthus aureus*, *Eriophyllum pringlei*, *Lessingia lemmonii*, *Pholistoma membranaceum*, *Layia glandulosa*, *Mentzelia eremophila*, *Cryptantha circumscissa*, *Phacelia tanacetifolia*, *Ambrosia acanthicarpa*, *Bromus tectorum*, *Gilia minor*

Land Form: Alluvial plain and wash

Soils Description: sand, loamy sand, some rock

Elevation: 3,220-3,300 ft **Slope Aspect:** NE

Percent Slope: 0-20%

Project Name: Tentative Tract Map 16301, Victorville

Property Owner: Ford Land Company

Year: 2004 (Trapping Period 2)

WEATHER (temperature = °C; cloud cover = %; wind speed = kph)

DATE: 3 May 2004 ACTIVITY: trapping

WEATHER CONDITION	VALUE	TIME
AIR TEMPERATURE, MIN.	11.5	0600
AIR TEMPERATURE, MAX.	35.8	1600
SOIL TEMPERATURE, MIN.	8.3	0600
SOIL TEMPERATURE, MAX.	34.6	1600
CLOUD COVER, AM	0	0800
CLOUD COVER, PM	1	1600
WIND SPEED, AM	3.5	0800
WIND SPEED, PM	14.5	1600
Trap Hours		575

DATE: 4 May 2004 ACTIVITY: Trapping

WEATHER CONDITION	VALUE	TIME
AIR TEMPERATURE, MIN.	14.4	0600
AIR TEMPERATURE, MAX.	34.3	1300
SOIL TEMPERATURE, MIN.	12.9	0600
SOIL TEMPERATURE, MAX.	33.6	1300
CLOUD COVER, AM	0	0800
CLOUD COVER, PM	1	1600
WIND SPEED, AM	2.5	0800
WIND SPEED, PM	18.3	1600
Trap Hours		700

DATE: 5 May 2004 ACTIVITY: Trapping

WEATHER CONDITION	VALUE	TIME
AIR TEMPERATURE, MIN.	14.5	0600
AIR TEMPERATURE, MAX.	30.0	1400
SOIL TEMPERATURE, MIN.	13.1	0600
SOIL TEMPERATURE, MAX.	32.8	1400
CLOUD COVER, AM	0	0800
CLOUD COVER, PM	0	1600
WIND SPEED, AM	10.7	0800
WIND SPEED, PM	17.6	1600
Trap Hours		1100

DATE: 6 May 2004 ACTIVITY: Trapping

WEATHER CONDITION	VALUE	TIME
AIR TEMPERATURE, MIN.	12.6	0600
AIR TEMPERATURE, MAX.	30.9	1600
SOIL TEMPERATURE, MIN.	13.1	0600
SOIL TEMPERATURE, MAX.	30.5	1600
CLOUD COVER, AM	35	0800
CLOUD COVER, PM	0	1600
WIND SPEED, AM	16.9	0800
WIND SPEED, PM	14.7	1600
Trap Hours		1275

DATE: 7 May 2004 ACTIVITY: Trapping

WEATHER CONDITION	VALUE	TIME
AIR TEMPERATURE, MIN.	12.4	0600
AIR TEMPERATURE, MAX.	32.8	1300
SOIL TEMPERATURE, MIN.	13.1	0600
SOIL TEMPERATURE, MAX.	32.1	1400
CLOUD COVER, AM	90	0800
CLOUD COVER, PM	40	1200
WIND SPEED, AM	0	0800
WIND SPEED, PM	16.7	1200
Trap Hours		950

California Native Species Field Survey Form

Mail to:
 Natural Diversity Database
 California Department of Fish and Game
 1807 13th Street, Suite 202
 Sacramento, CA 95814

For Office Use Only

Source Code _____ Quad Code _____
 Elm Code _____ Occ. No. _____
 EO Index No. _____ Map Index No. _____

Site of Field Work: (see comments below)

 month _____ day _____ year _____

Scientific Name: Spermophilus mohavensis
 Common Name: Mohave Ground Squirrel

Species Found? yes no If not, why? _____
 Total No. Individuals 0 Subsequent Visit? yes no
 Is an existing NDDDB occurrence? no unk.
 Yes, Occ. # _____
 Action? If yes: _____
 Number _____ Museum / Herbarium _____

Reporter: Denise 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

Age Structure: _____
 # adults # juveniles # unknown
 breeding wintering burrow site rookery nesting other

Location (please also attach or draw map on back) Southwestern Mojave Desert, Victor Valley, 7 miles N of Victorville, NE of the intersection of Eucalyptus and Amethyst Roads. 86-acre parcel, Tract 16301
 County: San Bernardino Landowner / Mgr.: private
 Road Name: Hesperia 7.5 minute series Elevation: 3220-3300 ft.
4N R 5W W 1/2 of SW 1/4 of Section 1 T 4 R 1 1/4 of _____ 1/4 of Section _____
 M. Zone: 11 (10, 11) Datum: NAD 27 (NAD83, NAD27, WG584, other)
 Source: GPS (GPS, map & type, etc.) Point Accuracy: 3 Meters
 UTM Coordinates (corners of trapping grid): NE 467017E, 3813006N; NW 466702E, 3813006N; SW 466702E, 3812692N; SE 467017E, 3812692N

Habitat Description (plant communities, dominants, associates, substrates/soils, aspects/slope)
Mojave creosote bush scrub. Larrea tridentata dominating. Associates: Ephedra nevadensis, Amelanchier alnifolia, Eriogonum fasciculatum ssp. polifolium, Yucca brevifolia, Grayia leucostachya, Lycium andersonii, Tetradymia stenolepis. on alluvial plain bisected in the north-south direction by major wash (Oro Grande wash). Slope on plain 19%, slopes above wash 20% Aspect NE.
 Are there any other rare species? _____

Site Information Overall site quality: Excellent Good Fair Poor
 Current / surrounding land use: open desert; residential & commercial property adjacent to site.
 Possible disturbances / possible threats: In area of rapid development; heavy, localized ohv impacts
 Comments: 86-acre parcel trapped with one grid (100 traps) on 17-21 March, 3-7 May, 16-20 June 04. Trapping conducted by Bruce Garlinger

Verification: (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
 Plant / animal _____
 Habitat digital _____
 Diagnostic feature _____
 May we obtain duplicates at our expense? yes no