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DRAFT REPORT

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Acronyms

°	degree
AFB	Air Force Base
AFFTC	Air Force Flight Test Center
AGS	(White-tailed) antelope ground squirrel
C	Celsius
CDFG	California Department of Fish and Game
DOD	Department of Defense
EAFB	Edwards Air Force Base
ESA	Endangered Species Act
F	Fahrenheit
HQA	Habitat Quality Analysis
INRMP	Integrated Natural Resource Management Plan
MGS	Mohave ground squirrel
NEPA	National Environmental Policy
PIRA	precision impact range area
WEMO	West Mojave Plan

Inventory for Presence of Mohave Ground Squirrel, Edwards Air Force Base, California

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1.0 Abstract

The large areas of natural habitat at Edwards Air Force Base (AFB) provide habitat for the California state-listed threatened Mohave ground squirrel (*Spermophilus mohavensis*), which is currently a federal species of concern and is the subject of a current petition for federal listing. Edwards AFB conducted an inventory for the presence of the Mohave ground squirrel (MGS) for five consecutive days at eleven 100-trap grids on the western side of the base between April 4 and May 13, 2005. No Mohave ground squirrels were captured during this inventory. One hundred ten antelope ground squirrels (*Ammospermophilus leucurus*) and six California ground squirrels (*Spermophilus beecheyi*) were captured. One incidental detection of an MGS was made on the grids trapped for this inventory and an additional 19 Mohave ground squirrels were incidentally detected during other concurrent spring surveys on the base. Joshua tree woodland habitats may be an important indicator of habitat for the Mohave ground squirrel at Edwards AFB. None of the grids sampled in 2005 were located in Joshua tree woodland communities. Focusing on grid location and suspected habitat preference on the base may allow more efficiency in locating and monitoring this species on Edwards AFB. In addition, conducting trapping in multiple sessions at each grid location may increase the likelihood of MGS being trapped, particularly in areas where populations may be sparser.

2.0 Introduction

2.1 Location and Area

Edwards Air Force Base (AFB) is located on approximately 301,000 acres (121,810 hectares) in the Antelope Valley portion of the western Mojave Desert (Figure 1). Edwards AFB is divided among three California counties; Kern, Los Angeles, and San Bernardino, with the majority of the base in Los Angeles County. Edwards is approximately 100 miles (161 km) northeast of Los Angeles and 90 miles (145 km) northwest of San Bernardino. Approximately 94 percent of Edwards AFB remains undeveloped in order to support aircraft test ranges and facilities [Air Force Flight Test Center (AFFTC), 2001]. The primary habitat types found on base include Joshua tree woodland, halophytic saltbush scrub, xerophytic saltbush scrub, creosote bush scrub, playa lake beds, and mesquite woodlands (AFFTC, 2001).

For reasons of safety and security, Department of Defense (DOD) installations often incorporate large land areas located far from civilian population concentrations. As a result, DOD installations often include relatively undisturbed natural areas. The large areas of natural habitat at Edwards AFB provide habitat for one Federally and state-listed threatened species, the desert tortoise (*Gopherus agassizii*), one California state-listed threatened species and Federal Species of Concern, the Mohave ground squirrel (MGS) (*Spermophilus mohavensis*), and several other federal- and state-listed species of concern. This Inventory Report regards the presence of MGS on Edwards AFB.

2.1 Mohave Ground Squirrel Natural History

The Mohave ground squirrel is endemic to California, limited to a geographic range in the western Mojave Desert in San Bernardino, Los Angeles, Kern, and Inyo Counties in California. Studies have shown that the optimal habitat types for the MGS include plant communities that harbor spiny hopsage (*Grayia spinosa*) and winterfat (*Krascheninnikovia lanata*) including creosote scrub, xerophytic saltbush, and Joshua tree woodland communities. Mohave ground squirrels have been found at elevations ranging from 1,800 to 5,000 feet (549 to 1,524 meters) above mean sea level (Brooks and Matchett, 2002; WEMO, 2005). An estimated 7,691 square miles (2 million hectares) of potential habitat exists in the western Mojave Desert on federal, state, and private lands, making them rare throughout their range (Brooks and Matchett, 2002).

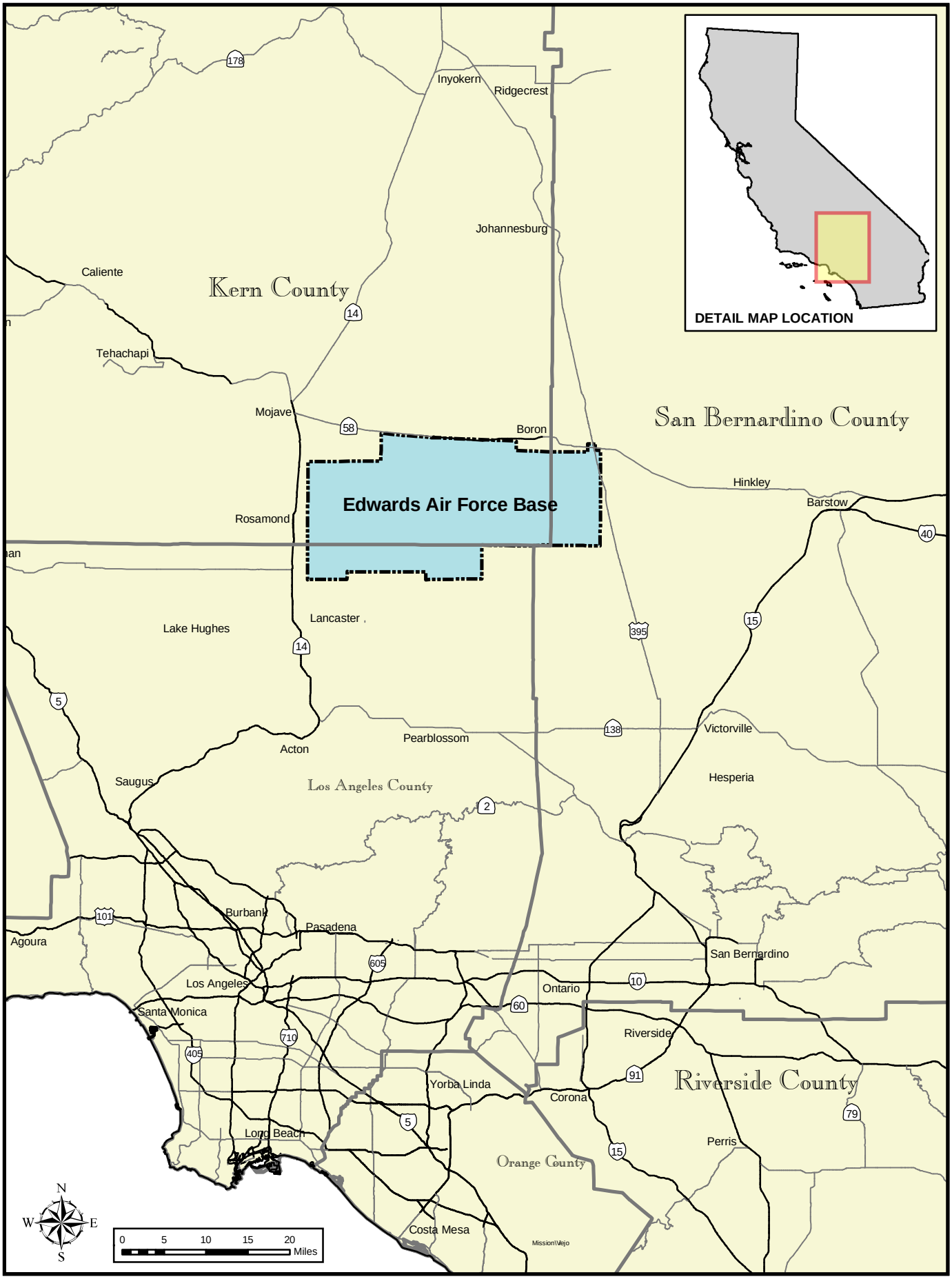

Figure 1 Location of Edwards Air Force Base, California

Threats to MGS populations include agricultural development, grazing, off-road vehicle use and other human disturbances (WEMO, 2005). Overall, about 10 percent of the habitat for MGS has deteriorated due to development (agricultural, residential, industrial, and commercial), with more of that habitat being lost as development spreads rapidly in the southern part of their range (Laabs, 1998).

The natural history and habitat requirements for the MGS are very dependent on elevation, climate, topography and weather. The diurnal MGS is only active in the early spring through early summer (approximately mid-February through June) when they feed on native shrubs and annual plants (WEMO, 2005). MGS begin to emerge from their burrows in February to begin reproduction, males emerging approximately two weeks before females (WEMO, 2005). By the end of March, litters of four to ten young (average of six) are born to each female, and by late May the young begin to disperse (WEMO, 2005; Desert Tortoise Preserve Committee, 1999). As summer approaches and vegetation begins to dry out, the MGS prepare for a long period of dormancy (aestivation) by consuming as many nutrients and fats as they can in their diet. By midsummer (July to mid-August) the MGS return to the underground nests and by this time body temperature, heart rate, and metabolism have fallen drastically to prepare for aestivation. MGS are able to survive in this physiological state on their stored body fats until the winter rains come and restore the vegetation. If sufficient rains (>3 inches) do not occur during the winter, the MGS will likely not reproduce due to lack of sufficient vegetation to support the young (WEMO, 2005). When a drought year occurs, the MGS will convert all available forage to body fat and enter aestivation as early as April. These biological and physiological adaptations allow them to survive the harsh conditions which occur in the Mojave Desert.

2.3 Purpose and Objectives

The inventory of MGS included in this report assists in providing information on where this species occurs on base, allowing the Environmental Conservation Program to make appropriate land-use decisions on base regarding the management of MGS and its habitat. This has become increasingly important as the MGS has been petitioned for federal listing (Stewart, 2005). Knowing what areas of the base support the highest populations of MGS could help current missions activities avoid adverse effects to this species and possibly preclude federal listing of the species. If the MGS is listed, DOD will be required to protect this species and its habitat on its facilities, thus possibly adversely affecting mission activities (i.e. delays or relocation of mission activities).

The DOD is required to manage threatened and endangered species on military installations pursuant to the Endangered Species Act (ESA), DOD Instruction 4715.3 (Environmental Conservation Program) and many other federal laws. The Environmental Conservation Program requires that an Integrated Natural Resource Management Plan (INRMP) be developed and implemented for all DOD facilities and installations which would ensure that the natural resources under DOD care are being sustained in a healthy condition. The INRMP at Edwards was developed with cooperation between the Air Force and Federal and State agencies to manage its natural resources program. Compliance with the National Environmental Policy Act (NEPA), Endangered Species Act, Air Force regulations, and Federal and State laws ensures that an INRMP will provide Air Force staff with the information they need to make natural resource management decisions. This enables them to meet their mandate of increasing their understanding of the natural resources occurring on base, while ensuring that the defense mission requirements of AFFTC are also fulfilled (AFFTC, 2001).

3.0 Methods

3.1 Grid Locations

Grids for this MGS inventory study were placed in the same areas as a subset of habitat quality analysis (HQA) transects. The HQA locations were selected in 1993 (AFFTC 1993) to distribute transects throughout all habitat types on the base to sample vegetation and wildlife species in these areas and monitor these areas over time. Eleven grids were trapped during this inventory (Figure 2). Grids used for the 2005 inventory included 9, 14, 22, 23, 29, 45, 52, 48, 54, 59, and 60.

Each HQA transect is a 500-meter long linear transect. A grid of 100 traps were arranged in four lines of 25 traps each and spaced 35 meters (114.8 feet) apart covering a total area of approximately one hectare (2.5 acres). Trap lines were labeled A through D and traps numbered 1 through 25. Trap lines were centered on the HQA transect line, with traps A1 and D1 equidistant from the 0-meter stake of the HQA transect. Because the trap lines extend beyond the end of the HQA transects, traps 16 through 25 on each line were placed beyond the end of the transect (Figure 3). Digital photographs were taken across the grid at each end at the center of each transect.

3.2 Mohave Ground Squirrel

All Mohave ground squirrel trapping performed at Edwards AFB was conducted under the California Department of Fish and Game (CDFG) Mohave Ground Squirrel Survey Guidelines (2003) for collecting the MGS data and the Scope of Work developed by Edwards AFB for Inventory of Presence of Mohave Ground Squirrels (MGS) (2005), Edwards AFB, California. Trapping was conducted under four separate Memoranda of Understanding with CDFG, issued to David Laabs, Dr. Howard Shellhammer, Stephen J. Montgomery, and Kathy Simon as Principal Investigators. Trapping on site was conducted by D. Laabs, S. Montgomery and K. Simon as Principal Investigators, and by Field Investigators Mark Allaback (under Principal Investigator David Laabs) and Howard Clark (under Principal Investigator Dr. Howard Shellhammer). Two Field Assistants (Caleb Murphy and Donald R. Mitchell under Principal Investigator David Laabs) assisted in setting up grids and recording data during the inventory. Table 1 lists the dates of each trapping session and the Investigator responsible for each grid.

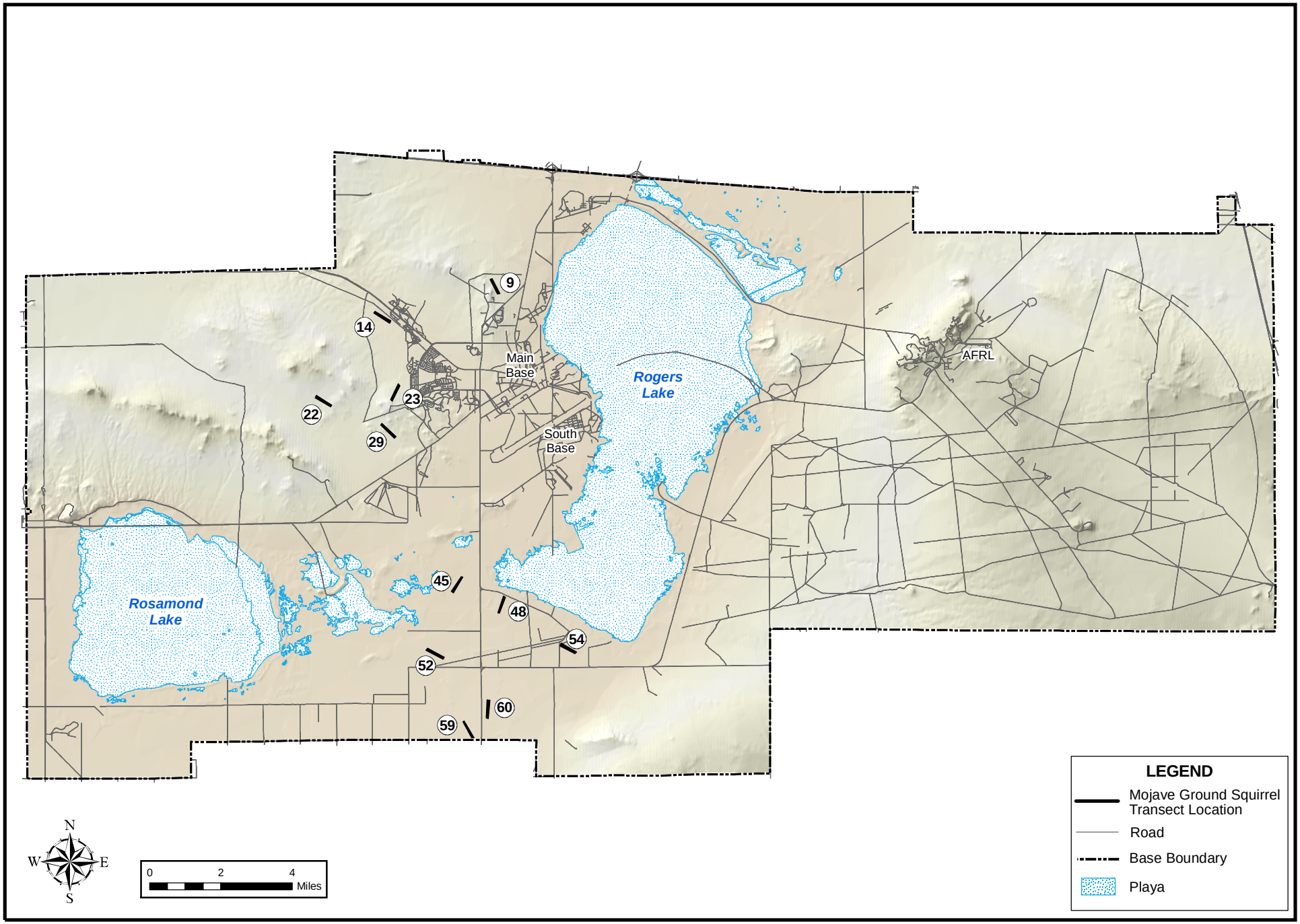

Figure 2 Mojave Ground Squirrel Transect Locations

Figure 3. Grid Diagram

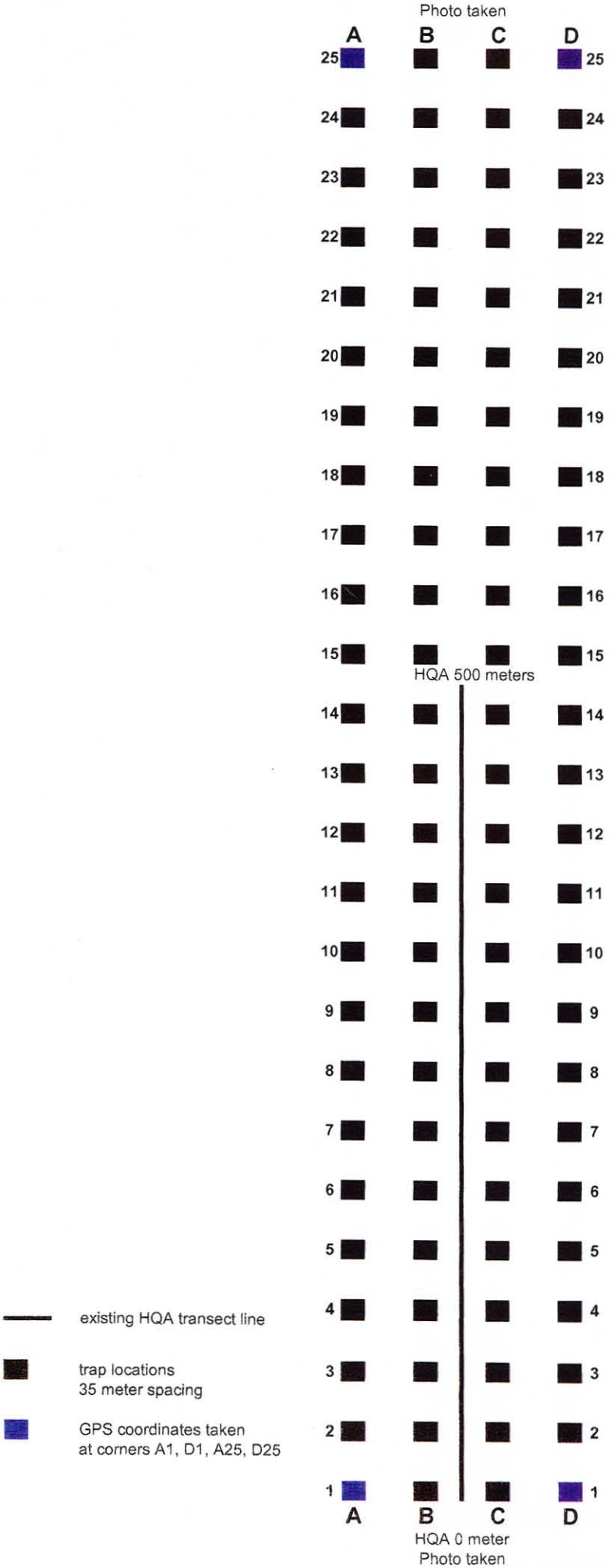

Table 1. Mohave Ground Squirrel Inventory Personnel and Schedule

Site	Investigator	Dates of Inventory (2005)
9	M. Allaback/S. Montgomery	May 9-13
14	K. Simon	May 9-13
22	D. Laabs	May 9-13
23	S. Montgomery	April 18-22
29	K. Simon	April 18-22
45	D. Laabs	April 18-22
48	D. Laabs	April 4-8
52	M. Allaback	April 18-22
54	M. Allaback	April 4-8
59	K. Simon	April 4-8
60	H. Clark	April 4-8

The timeframe for conducting live-trapping inventories for MGS is typically between March 15 and May 15 (CDFG, 2003). This inventory was conducted between April 4 and May 13, 2005. A grid of 100 standard 12-inch Sherman™ traps was placed at each grid location and maintained for five consecutive days, for a total of 500 trap-days per site. Each grid was trapped for a total of 5 consecutive days in one session.

Each trap was placed on the north side of vegetation and shaded with a cardboard A-frame to keep temperatures moderate inside the shade and trap. Traps were opened within 1 hour of sunrise in the morning and checked at least every 4 hours. Traps were closed within one hour of sunset or when the air temperature at 6 inches (15.2 cm) above the ground exceeded 90 degrees Fahrenheit (°F) [32 degrees Celsius (°C)]. On days when temperatures were certain to exceed 90°F (32°C), surveyors began to close all traps when temperatures reached approximately 88°F (31°C) in order to ensure that traps were closed be the time temperatures reached 90°F (32°C). Traps were baited with commercially available horse feed (4-Way Mix).

When individual squirrels were captured, the species, age class (adult, subadult, or juvenile), sex, reproductive condition, and any notes of unusual or abnormal circumstances were recorded.

Additional data collected at each trapping grid included vegetation (dominant perennial and annual species, and other species), land form, soil description, invasive or exotic species presence, and disturbances. Weather data were recorded throughout the day

during trapping. Digital photographs were taken at the center of the end points of each grid (see Figure 3).

3.3 Incidental Species Sightings

Throughout Spring 2005, incidental sightings of sensitive species were recorded throughout the base with particular attention to Mohave ground squirrel, desert tortoise, and sensitive plant species observations. These sightings are discussed briefly in this report, and further data are available from HQA Inventories conducted concurrently with this inventory in 2005.

4.0 Results

4.1 Grid Locations

Trapping grids were placed in several different habitat types including creosote bush scrub, halophytic phase saltbush scrub, xerophytic phase saltbush scrub and mesquite woodland, as shown on Table 2.

Table 2. Habitat Types and Vegetation

Site	Habitat Type	Dominant Plant Species
9	creosote bush scrub	*Acamptopappus sphaerocephalus, Grayia spinosa, Larrea tridentata, Ambrosia dumosa*
14	xerophytic phase saltbush scrub	*Atriplex canescens, Grayia spinosa, Ambrosia dumosa, Acamptopappus sphaerocephalus*
22	creosote bush scrub	*Larrea tridentata, Ambrosia dumosa, Acamptopappus sphaerocephalus*
23	creosote bush scrub	*Acamptopappus sphaerocephalus, Grayia spinosa, Larrea tridentata, Ambrosia dumosa, Lycium andersonii, Hymenoclea salsola*
29	creosote bush scrub	*Larrea tridentata, Ambrosia dumosa, Ericameria cooperi, Tetradymia axillaris*
45	halophytic phase saltbush scrub	*Atriplex* sp., *Yucca brevifolia*
48	halophytic phase saltbush scrub	*Atriplex* sp., *Yucca brevifolia, Lycium andersonii*
52	halophytic phase saltbush scrub	*Atriplex* sp., *Prosopis glandulosa, Yucca brevifolia*
54	halophytic phase saltbush scrub	*Atriplex* sp., *Yucca brevifolia*
59	mesquite woodland	*Prosopis glandulosa, Atriplex* sp., *Yucca brevifolia*
60	halophytic phase saltbush scrub	*Prosopis glandulosa, Atriplex* sp., *Yucca brevifolia*

Appendix A provides additional data on the vegetation and grid characteristics at each grid. Appendix B has copies of all raw data forms.

4.2 Mohave Ground Squirrel

No Mohave ground squirrels were captured on these grids during this inventory. A total of 110 antelope ground squirrels (AGS) (*Ammospermophilus leucurus*) were captured, including 89 adults, 21 juveniles and one of unknown sex and age (Table 3). Almost even numbers of AGS of each gender were trapped (49% females and 51% males). Six California ground squirrels (*Spermophilus beecheyi*) were trapped, including one adult,

three subadults and two juveniles. The trapping results for the 2005 MGS inventory of Edwards AFB are provided in Appendix A.

Table 3. Summary of MGS Trapping Results

Grid #	*Ammospermophilus leucurus*					*Spermophilus beecheyi*		
	Female		Male		Unknown	Female and Male		
	Adult	Juv	Adult	Juv		Adult	SubAdult	Juv
48	1		4					
54	5		12		1			
59	2							
60	3		6					
29	2	1	2					
45	1		5	1				
52	2		5					
23	1	1	1			1	1	
9	5	10	7	4			2	2
14	13		6					
22	2	4	3					
Subtotal by age class	37	16	51	5	1	1	3	2
Subtotal by gender	53		56		1	6		
TOTAL	110							

4.3 Incidental Sensitive Species Sightings

One incidental detection of an MGS was made on the grids trapped for this Inventory. During visual surveys of grid 48 and after trapping at that site, one individual MGS was detected by vocalization, just west of the grid start point. An additional 19 Mohave ground squirrels were incidentally detected during Spring 2005 HQA surveys. These detections were from individuals seen on roads, identification by vocalization, or during small mammal nocturnal trapping (where MGS was a non-target species). Appendix C includes a map of the observed MGS, desert tortoises, and alkali mariposa lily, along with a table that includes all other incidental sightings of sensitive species.

5.0 Discussion and Recommendations

5.1 Discussion

The Mohave ground squirrel (MGS) inventory was conducted in prior to May 15, 2005 as requested by the Edwards AFB scope of work, and yielded no positive results. Past trapping surveys for MGS on the base have had positive results (AFFTC 1994; AFFTC 2004). Differences in trapping methods; grid locations and habitat; and survey year, seasonal timing, and study duration probably account for the differences in these results.

The only difference in trapping methods among these surveys is the type of bait used. Surveys in 1994 and 2005 used commercially available “4-Way Mix” horse feed, while surveys in 2004 used mixed grain, rolled oats, or birdseed with a small amount of peanut butter. It is unlikely that the bait used affected the trap success of these surveys because surveys in 1994 captured a total of 16 MGS using 4-Way Mix in locations similar to surveys in 2005, which had negative trap success.

The most likely factors that influenced the differences in study results are grid location and habitat. Surveys in 1994 trapped in areas to the north and south of Rogers Dry Lake and in an area in the northwest quadrant of the base (AFFTC 1994). Trapping conducted in 2004 was entirely on the eastern half of the base (AFFTC 2004) within the boundary of the precision impact range area (PIRA). The area trapped in 2004 is known to support a larger population of MGS than other areas of the base, or areas surrounding the base (WEMO 2005; Stewart, 2005). However, areas trapped in 1994 also were shown to support MGS at that time, particularly areas south of Rogers Dry Lake.

The grids trapped in 2005 had fewer historical records of MGS presence. Of the 11 grids sampled in 2005, only five were reported to have spiny hopsage and/or winterfat present, vegetation the MGS is known to rely on but does not necessarily dictate presence or absence of the species. Trapping studies performed in 2004 indicated that Joshua tree woodland habitats may be an important indicator of habitat for MGS at Edwards AFB (AFFTC 2004). None of the 11 grids sampled in 2005 were located in Joshua tree woodland communities.

The years these surveys occurred could have affected the results of the surveys. Rainfall in the two winters prior to 1994 surveys was high, and represented the highest combined two winters recorded in the past 20 years (Edwards AFB Climatology website). Rainfall in the two years prior to 2004 surveys showed moderate winter rainfall in both seasons, and moderate to high rainfall in the two seasons prior to 2005 surveys. Therefore, all three surveys were preceded by two good years of winter rainfall, suggesting increased reproduction of MGS (Leitner, personal communication 2005). However, because all three trapping studies were preceded by two years of average or above average rainfall, the trapping year is probably not a factor contributing to the differences in trapping success.

Seasonal timing of these trapping studies could be another factor that may attribute to the differences between study results. The 1994 study was conducted between April 5th and May 31st and MGS captures spanned this time period, with five of 16 total captures (31%) between May 15th and May 31st. The 2004 study was conducted between March 16th and April 25th with the majority of MGS captures (23 of 28 total adult captures) between March 27th and April 10th (82%). The 2005 study was conducted between April 4th and May 13th with no MGS captures. These results suggest that it may be prudent to trap either early in the season as in the 2004 study, or expand the study to more than one trapping session that spans the time period from March 15th to at least May 31st. Early season captures may be related to the active period of reproduction when males are actively searching for mates, while late season captures may be related to food supplies being reduced as vegetation begins to dry out (Leitner, personal communication 2005).

The duration of these studies may also affect the ability to detect MGS at each grid location. The 1994 study was conducted according to CDFG guidelines at that time (CDFG 1993) which included two trapping sessions of 5 days each, one in the earlier part of the season (March 15th to April 30th) and one between May 1st and 31st. Current CDFG guidelines (CDFG 2003) include three trapping sessions, adding a session between June 15th and July 15th. Past trapping studies in 1994 and 2004 suggest that using at least two sessions may assist in detecting MGS presence at a grid location. The 1994 study and 2005 study trapped similar grid locations south of Rogers Dry Lake. The 1994 study trapped 13 MGS in this area. Although the 2005 survey year had no

captures in this area, one detection by vocalization was heard, and one road-kill MGS along Mercury Boulevard adjacent to this area was observed. It is likely that MGS are still present in this area, and may not have been trapped in only 5 days of study.

5.2 Recommendations

Recommendations for each of the differences above are discussed in this section (differences in trapping methods; grid locations and habitat; and survey year, seasonal timing, and study duration). No changes in trapping methods are recommended as it is unlikely that using different bait (the only difference among studies) could result in differing trap success between these studies.

Focusing on grid location and suspected habitat preference on the base may allow AFFTC to be more efficient in locating and monitoring this species on Edwards AFB. The 2004 study suggested a preference for Joshua tree woodland habitat on the base. This is supported by data from the 1994 study in which most MGS trapped were in areas either characterized as Joshua tree woodland (AFFTC, 2001) or areas that may be characterized as another habitat type but support substantial numbers of Joshua trees. In contrast, few areas trapped in the 2005 study support substantial numbers of Joshua trees.

Conducting trapping in at least two sessions at each grid location or in three sessions as suggested in the CDFG Guidelines (CDFG, 2003) may increase the likelihood of MGS being trapped, particularly in areas where populations may be more sparse. If trapping is conducted in two sessions, the time periods in the CDFG 1993 guidelines are recommended (March 15th to April 30th and May 1st to 31st). If future trapping is conducted in three sessions, those in the CDFG 2003 guidelines are recommended.

Implementing these recommendations would likely improve the success of MGS inventories on the base, efficiency of studies, and may provide more accurate information, facilitating better management decisions regarding MGS populations and their habitat on the base. The ability to improve knowledge of locations and habitat for this species on the base may in turn assist in reducing the possibility of the species being federally-listed and allow more flexibility for management of the species in relation to military missions on the base.

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Appendix A

Mohave Ground Squirrel Grid Locations and Trapping Data

Figure A	Mohave Ground Squirrel Grid Locations
Appendices A-1 – A-11	These appendices provide information and data for each grid in the following order: • individual grid maps • grid photos • grid information • weather data • trapping data

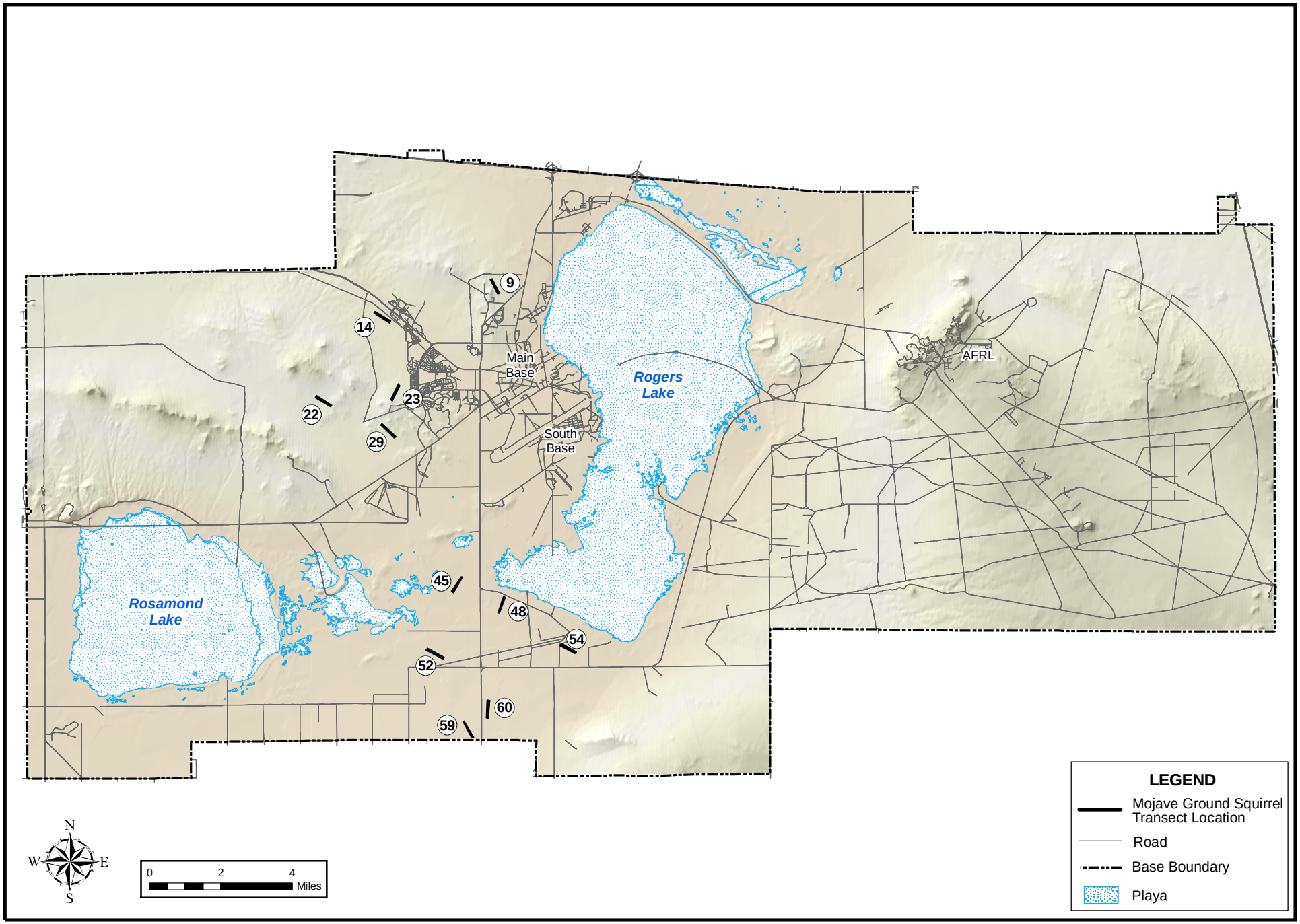

Figure A Mojave Ground Squirrel Transect Locations

Appendix A-1

Grid 9

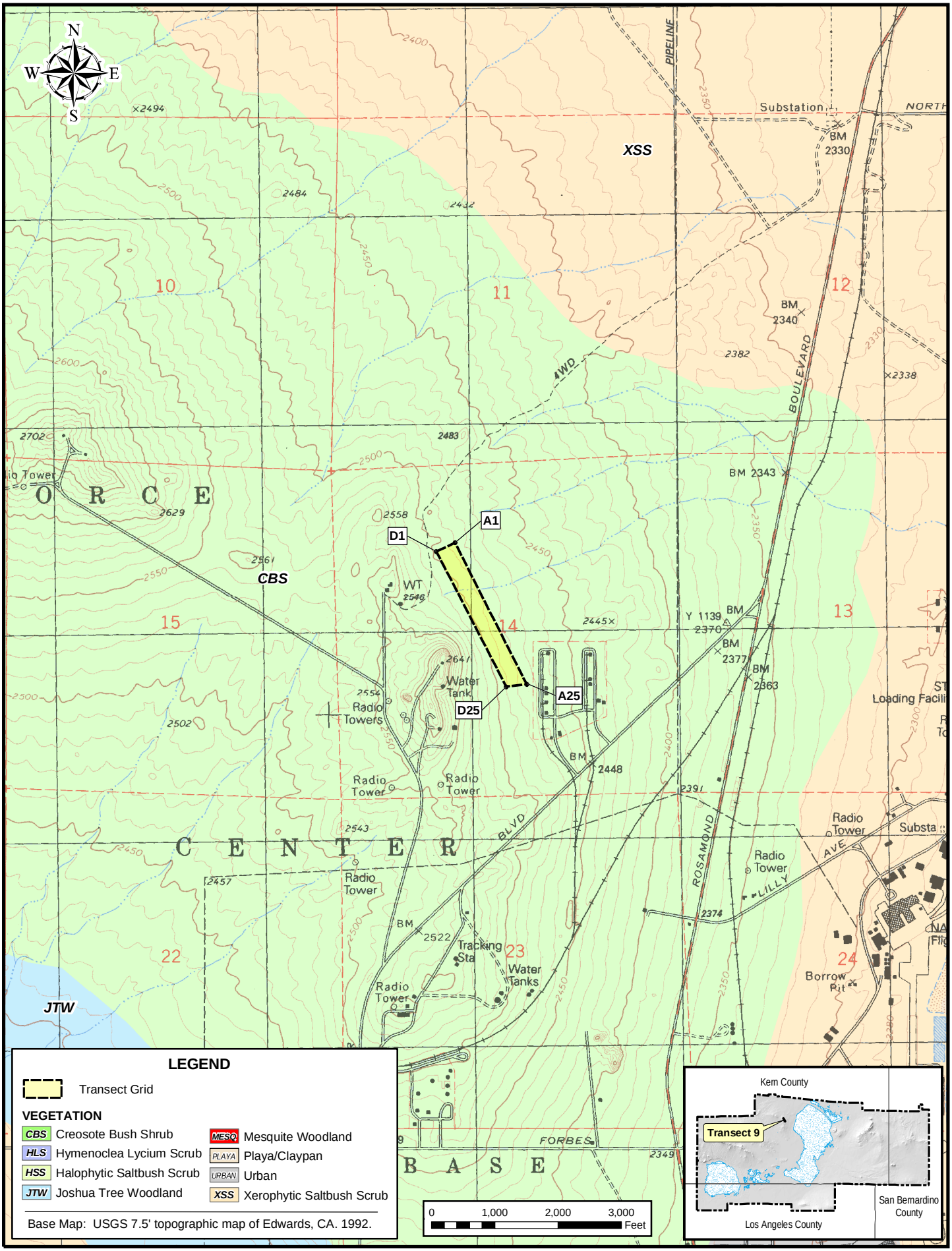

Figure A-1 Mojave Ground Squirrel Survey Transect 9 Location

Grid 9

Looking from 0m to 840m

Looking from 840m to 0m

Mohave Ground Squirrel (MGS) Survey and Trapping Form

PART IB - GRID INFORMATION

Project Name: Edwards AFB MGS Survey **Grid #:** 9

Property Owner: US Air Force

UTM Coordinates of grid corners (NAD 83)

NW corner (A1)		NE corner (A25)		SE corner (D25)		SW corner (D1)	
Easting	Northing	Easting	Northing	Easting	Northing	Easting	Northing
416840	3869627	417179	3868941	417078	3868929	416748	3869585

PART II - GENERAL HABITAT DESCRIPTION

Vegetation

dominant perennials: goldenheads (*Acamptopappus sphaerocephalus*); desert needlegrass (*Achnatherum speciosum*); cheesebush (*Hymenoclea salsola*); creosote (*Larrea tridentata*); burro bush (*Ambrosia dumosa*); spiny hopsage (*Grayia spinosa*); longspine horsebrush (*Tetradymia axillaris*)

other perennials: Nevada ephedra (*Ephedra nevadensis*); winterfat (*Krascheninnikovia lanata*); cholla (*Opuntia ramosissima*)

dominant annuals: dwarf white milkvetch (*Astragalus didymocarpus*); California goldfields (*Lasthenia californica*); fiddleneck (*Amsinckia tessellata*); *Phacelia* sp.; red-stemmed filaree (*Erodium cicutarium*)*

other annuals: cream cups (*Platystemon californicus*)

Disturbances A few pipeline roads in the eastern half; erosion

Land Forms (i.e. mesa, bajada, washes) Uneven and hilly

Soils Description Rocky

Elevation 2,500 feet (760 meters) **Slope** 0-3%

*Non-native species

Mohave Ground Squirrel (MGS) Survey and Trapping Form

PART III - WEATHER GRID 9

Day	Date	Air Temperature (°F)				Cloud Cover				Wind Speed (mph)			
		Maximum	Time	Minimum	Time	Maximum	Time	Minimum	Time	Maximum	Time	Minimum	Time
1	05/09/05	69	1110	60	1740	95%	1740	70%	1110	20	1403	2	1740
2	05/10/05	67	1446	48	0620	20%	0620	1%	1348	35	1722	2	0705
3	05/11/05	84	1126	55	0735	2%	1355	0%	0640	15	1821	0	0640
4	05/12/05	90	1430	50	0620	15%	1430	0%	0620	5	1835	0	0620
5	05/13/05	59	0726	52	0542	80%	0542	60%	0726	1	0726	0	0542

Edwards Air Force Base MGS Trapping Data
GRID 9

DATE	TRAP #	SPECIES	RECAP	SEX	A/SA/J	REPRO
05/09/05	D1	AMLE		F	A	Lactating
05/09/05	C24	AMLE		F	A	
05/09/05	D25	AMLE		F	A	Lactating
05/09/05	B11	AMLE		M	A	
05/09/05	B22	AMLE		M	A	
05/09/05	D1	AMLE		M	J	
05/10/05	D6	AMLE		M	A	
05/10/05	D9	AMLE		M	A	
05/10/05	B24	AMLE		M	J	
05/11/05	D2	AMLE		F	J	
05/11/05	D11	AMLE		F	J	
05/11/05	A17	AMLE		F	J	
05/11/05	D2	AMLE		F	J	
05/11/05	D11	AMLE		F	J	
05/11/05	A17	AMLE		F	J	
05/11/05	A14	AMLE		M	A	
05/11/05	A14	AMLE		M	A	
05/11/05	B25	AMLE		M	J	
05/11/05	B25	AMLE		M	J	
05/11/05	D3	SPBE			J	
05/11/05	D3	SPBE			J	
05/12/05	A18	AMLE		F	J	Lactating
05/12/05	B25	AMLE		F	J	
05/12/05	D25	AMLE		F	J	
05/12/05	A18	AMLE		F	J	
05/12/05	A18	AMLE		F	A	Lactating
05/12/05	C7	AMLE		M	A	Scrotal
05/12/05	B25	AMLE	X			
05/12/05	A8	SPBE		M	SA	Scrotal
05/13/05	D25	AMLE		F	A	
05/13/05	A10	AMLE	X			
05/13/05	A9	SPBE			SA	

Legend

AMLE = white-tailed antelope ground squirrel (*Ammospermophilus leucurus*)
SPBE = California ground squirrel (*Spermophilus beechyi*)

A = adult
SA = subadult
J = juvenile

Appendix A-2

Grid 14

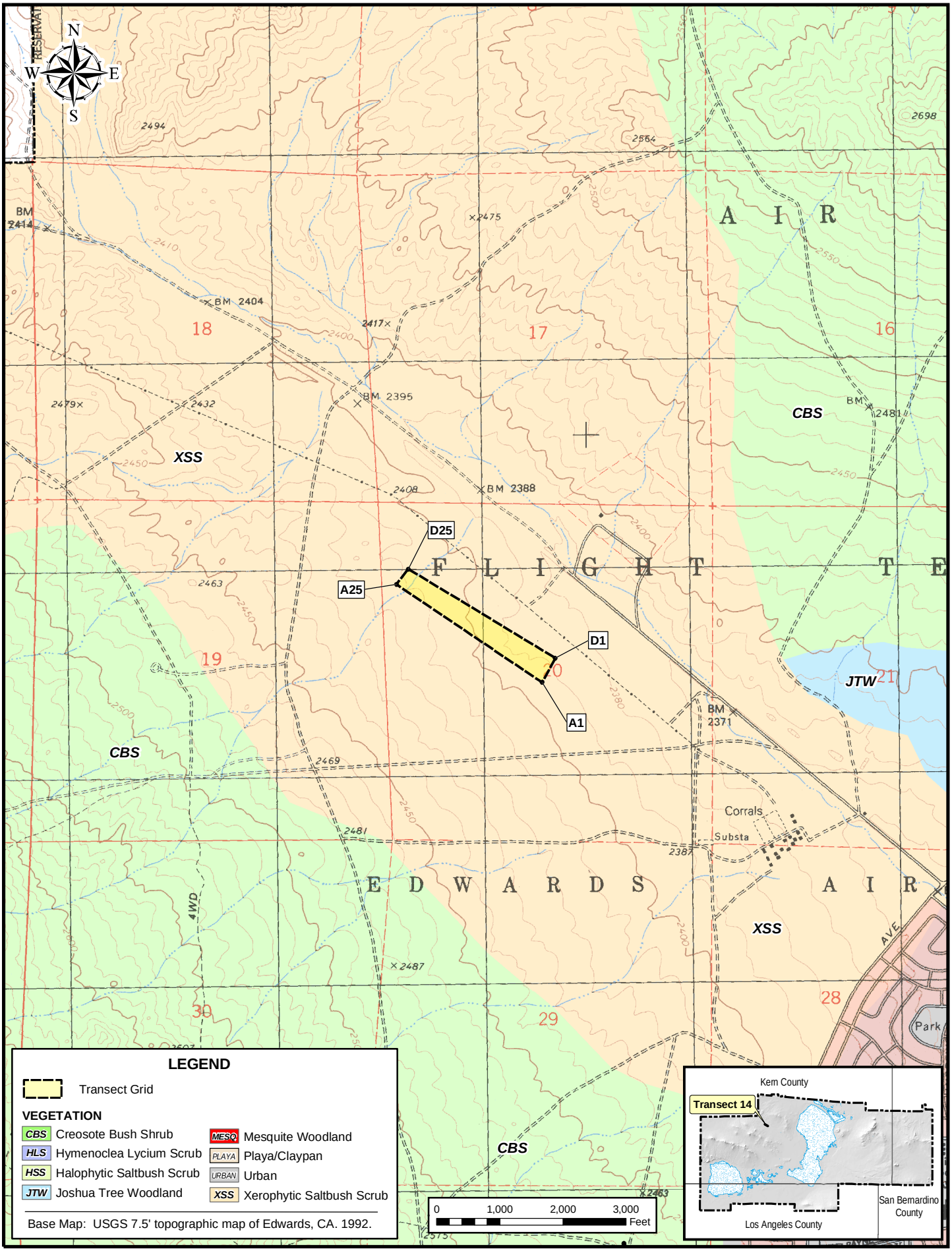

Figure A-2 Mojave Ground Squirrel Survey Transect 14 Location

Grid 14

Looking from 0m to 840m

Looking from 840 to 0m

Mohave Ground Squirrel (MGS) Survey and Trapping Form

PART IB - GRID INFORMATION

Project Name: Edwards AFB MGS Survey **Grid #:** 14

Property Owner: US Air Force

UTM Coordinates of grid corners (NAD 83)

NW corner (D1)		NE corner (A1)		SE corner (A25)		SW corner (D25)	
Easting	Northing	Easting	Northing	Easting	Northing	Easting	Northing
412263	3867762	412199	3867647	411501	3868125	411559	3868199

PART II - GENERAL HABITAT DESCRIPTION

Vegetation

dominant perennials shadescale (*Atriplex canescens*); spiny hopsage (*Grayia spinosa*); goldenbush (*Ericameria copperi*); burro bush (*Ambrosia dumosa*)

other perennials

dominant annuals fiddleneck (*Amsinckia tessellata*); *Phacelia* sp.; red-stemmed filaree (*Erodium cicutarium*)*

other annuals

Disturbances Transect is near the entrance to OHV Area 2. Entrance road goes through grid and a few older single tracks on site. Low level of trash-probably blown over from nearby dump.

Land Forms (i.e. mesa, bajada, washes) Bajada

Soils Description Sandy

Elevation 2,400 feet (730 meters) **Slope** 0-3%

*Non-native species

Mohave Ground Squirrel (MGS) Survey and Trapping Form

PART III - WEATHER GRID 14

Day	Date	Air Temperature (°F)				Cloud Cover				Wind Speed (mph)			
		Maximum	Time	Minimum	Time	Maximum	Time	Minimum	Time	Maximum	Time	Minimum	Time
1	05/09/05	69	1110	60	1740	95%	1740	70%	1110	20	1403	2	1740
2	05/10/05	67	1446	48	0620	20%	0620	1%	1348	35	1722	2	0705
3	05/11/05	84	1126	55	0735	2%	1355	0%	0640	15	1821	0	0640
4	05/12/05	90	1430	50	0620	15%	1430	0%	0620	5	1835	0	0620
5	05/13/05	59	0726	52	0542	80%	0542	60%	0726	1	0726	0	0542

Edwards Air Force Base MGS Trapping Data
GRID 14

DATE	TRAP #	SPECIES	RECAP	SEX	A/SA/J	REPRO
05/09/05	D10	AMLE		F	A	Lactating
05/09/05	C1	AMLE		M	A	Scrotal
05/10/05	D13	AMLE		F	A	Lactating
05/10/05	D10	AMLE		F	A	Lactating
05/10/05	D8	AMLE		F	A	Lactating
05/10/05	C1	AMLE		F	A	Lactating
05/10/05	D9	AMLE		F	A	Lactating
05/10/05	D3	AMLE		M	A	
05/10/05	D10	AMLE		M	A	Scrotal
05/10/05	D12	AMLE	X			
05/10/05	C17	CNTI				
05/11/05	D3	AMLE		F	A	Lactating
05/11/05	B14	AMLE		F	A	Lactating
05/11/05	C16	AMLE		F	A	Lactating
05/11/05	D18	AMLE		F	A	Lactating
05/11/05	C6	AMLE		F	A	Pregnant
05/11/05	C9	AMLE	X			
05/11/05	C10	AMLE	X			
05/11/05	B12	AMLE	X			
05/11/05	C10	AMLE	X			
05/12/05	A9	AMLE		F	A	Lactating
05/12/05	B14	AMLE		M	A	Scrotal
05/12/05	C10	AMLE		M	A	Scrotal
05/12/05	B14	AMLE		M	A	Scrotal
05/12/05	D3	AMLE	X			
05/12/05	A11	AMLE	X			
05/12/05	C10	AMLE	X			
05/12/05	D10	AMLE	X			
05/12/05	C10	AMLE	X			
05/13/05	D13	AMLE		F	A	Lactating
05/13/05	D7	AMLE	X			
05/13/05	C1	AMLE	X			

Legend

AMLE = white-tailed antelope ground squirrel (*Ammospermophilus leucurus*)
CNTI = western whiptail (*Cnemidophorus tigris*)

A = adult
SA = subadult
J = juvenile

Appendix A-3

Grid 22

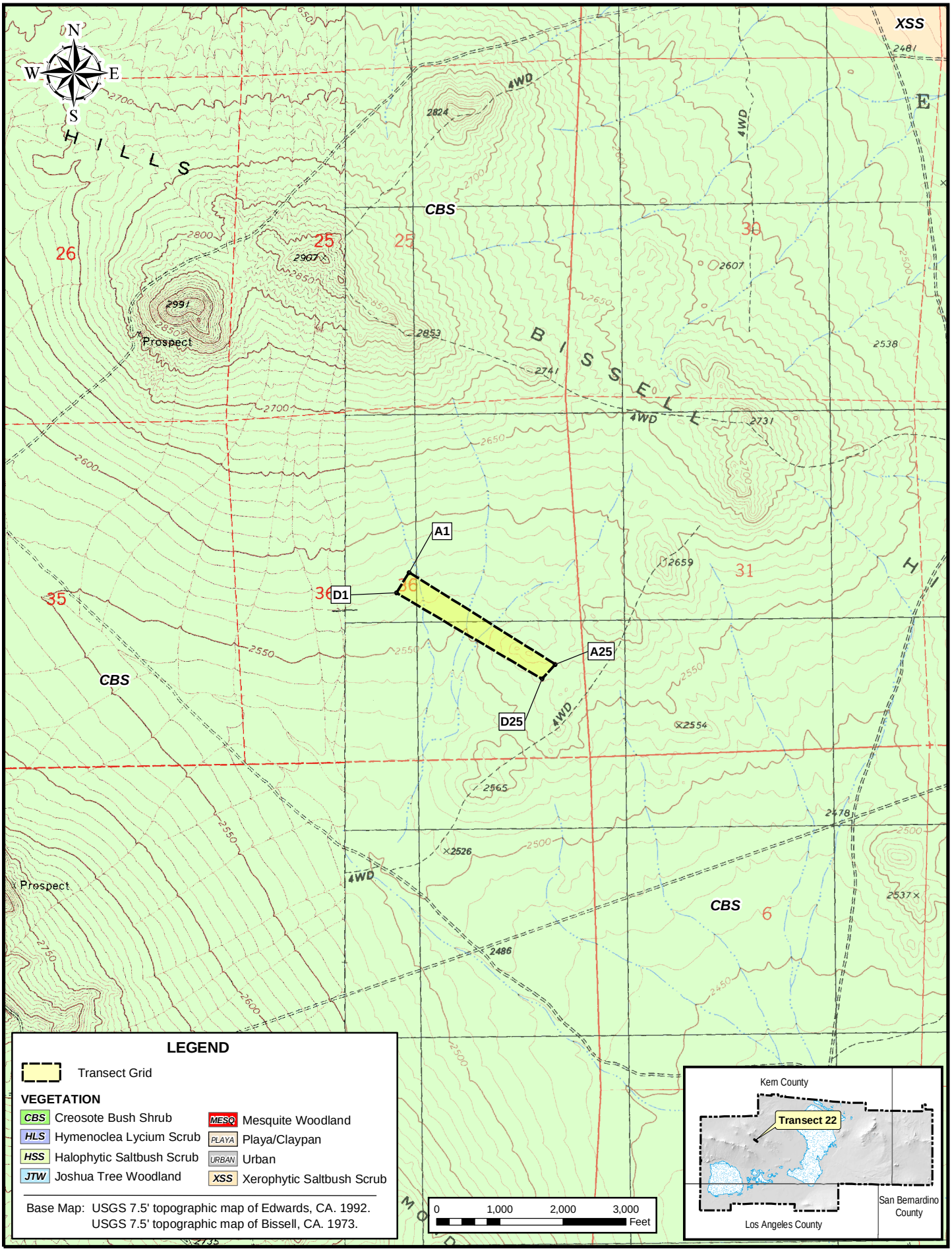

Figure A-3 Mojave Ground Squirrel Survey Transect 22 Location

Grid 22

Looking from 0m to 840m

Looking from 630m (Trap 18) to 0m

Mohave Ground Squirrel (MGS) Survey and Trapping Form

PART IB - GRID INFORMATION

Project Name: Edwards AFB MGS Survey **Grid #:** 22

Property Owner: US Air Force

UTM Coordinates of grid corners (NAD 83)

NW corner (D1)		NE corner (A1)		SE corner (A25)		SW corner (D25)	
Easting	Northing	Easting	Northing	Easting	Northing	Easting	Northing
408820	3864341	408882	3864438	409579	3863989	409517	3863921

PART II - GENERAL HABITAT DESCRIPTION

Vegetation

dominant perennials creosote (*Larrea tridentata*); burro bush (*Ambrosia dumosa*); goldenheads (*Acamptopappus sphaerocephalus*)

other perennials Nevada ephedra (*Ephedra nevadensis*); spiny hopsage (*Grayia spinosa*); Mojave cottonthorn (*Tetradymia stenolepis*); Joshua tree (*Yucca brevifolia*)

dominant annuals red-stemmed filaree (*Erodium cicutarium*)*; red brome (*Bromus madritensis* ssp. *rubens*)**; Fremont pincushion (*Chaenactis fremontii*); goldfields (*Lasthenia californica*)

other annuals dodder (*Cuscuta californica*); *Phacelia* sp.; fiddleneck (*Amsinckia tessellata*)

Disturbances older off-road tracks

Land Forms (i.e. mesa, bajada, washes) Hills

Soils Description sandy loam with some gravel

Elevatior 2,560 feet (780 meters) **Slope** 0-2%

*Non-native species **Non-native; Invasive weed

Mohave Ground Squirrel (MGS) Survey and Trapping Form

PART III - WEATHER GRID 22

Day	Date	Air Temperature (°F)				Cloud Cover				Wind Speed (mph)			
		Maximum	Time	Minimum	Time	Maximum	Time	Minimum	Time	Maximum	Time	Minimum	Time
1	05/09/05	69	1110	60	1740	95%	1740	70%	1110	20	1403	2	1740
2	05/10/05	67	1446	48	0620	20%	0620	1%	1348	35	1722	2	0705
3	05/11/05	84	1126	55	0735	2%	1355	0%	0640	15	1821	0	0640
4	05/12/05	90	1430	50	0620	15%	1430	0%	0620	5	1835	0	0620
5	05/13/05	59	0726	52	0542	80%	0542	60%	0726	1	0726	0	0542

Edwards Air Force Base MGS Trapping Data
GRID 22

DATE	TRAP #	SPECIES	RECAP	SEX	A/SA/J	REPRO
05/09/05	B22	AMLE		M	A	
05/10/05	C13	AMLE		M	A	Scrotal
05/10/05	B15	AMLE		M	A	
05/11/05	D15	AMLE		F	A	Lactating
05/11/05	B17	AMLE		F	A	Lactating
05/11/05	D16	AMLE		F	J	
05/11/05	B15	AMLE	X			
05/12/05	A7	AMLE		F	J	
05/12/05	A12	AMLE		F	J	
05/13/05	A7	AMLE		F	J	

Legend

AMLE = white-tailed antelope ground squirrel (*Ammospermophilus leucuru*

A = adult
SA = subadult
J = juvenile

Appendix A-4

Grid 23

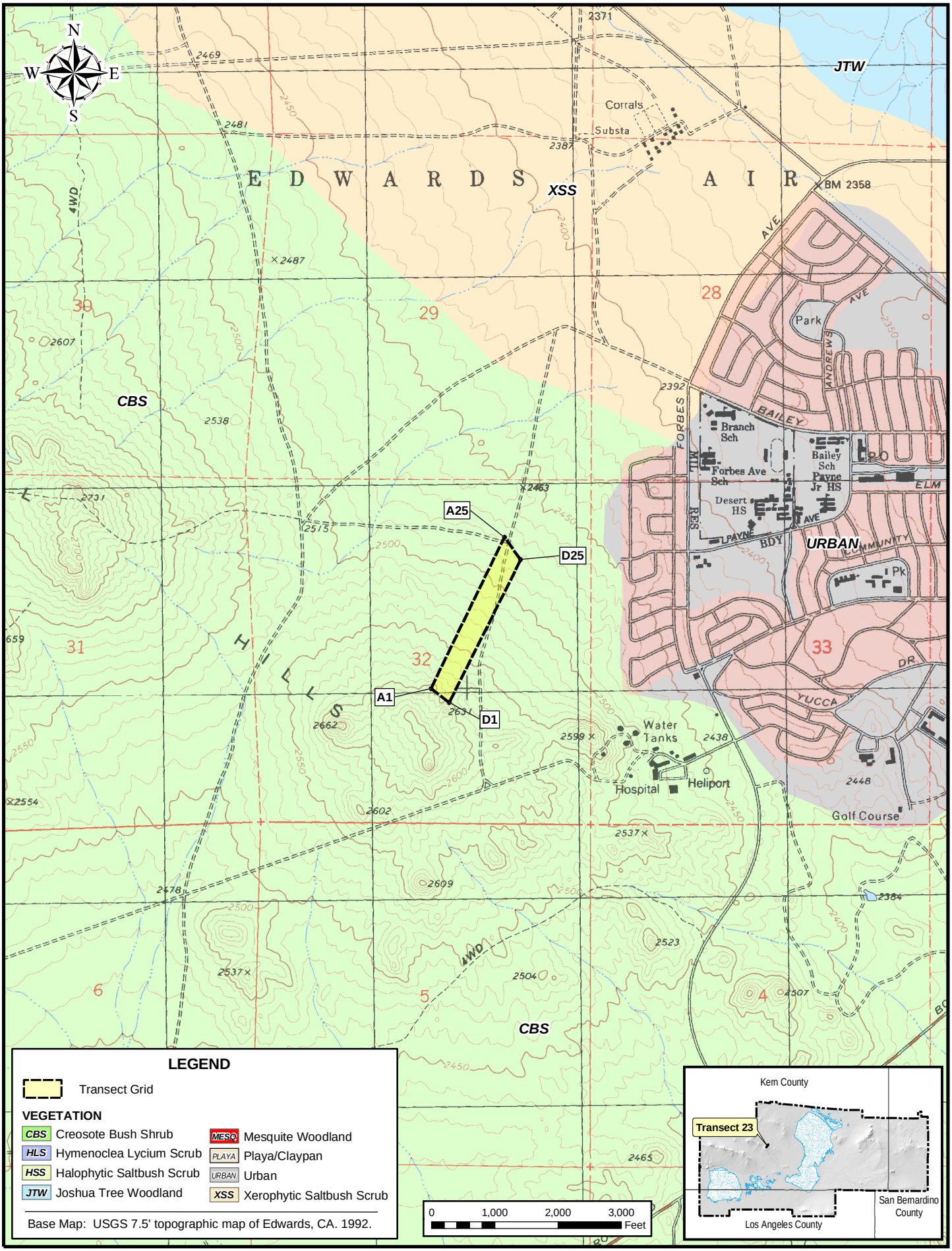

Figure A-4 Mojave Ground Squirrel Survey Transect 23 Location

Grid 23

Looking from 0m to 840m

Looking from 840m to 0m

Mohave Ground Squirrel (MGS) Survey and Trapping Form

PART IB - GRID INFORMATION

Project Name: Edwards AFB MGS Survey **Grid #:** 23

Property Owner: US Air Force

UTM Coordinates of grid corners (NAD 83)

NW corner (A25)		NE corner (D25)		SE corner (D1)		SW corner (A1)	
Easting	Northing	Easting	Northing	Easting	Northing	Easting	Northing
412565	3864942	412642	3864833	412292	3864148	412204	3864216

PART II - GENERAL HABITAT DESCRIPTION

Vegetation

dominant perennials: goldenheads (*Acamptopappus sphaerocephalus*); creosote (*Larrea tridentata*); spiny hopsage (*Grayia spinosa*); cheesebush (*Hymenoclea salsola*); burro bush (*Ambrosia dumosa*); Anderson's boxthorn (*Lycium andersonii*); *Tetradymia* sp.; goldenbush (*Ericameria cooperi*)

other perennials: California buckwheat (*Eriogonum facsiculatum*); Nevada ephedra (*Ephedra nevadensis*)

dominant annuals: *Lasthenia californica*; fiddleneck (*Amsinckia tessellata*)*; red-stemmed filaree (*Erodium cic*.)*; *Astragalus* sp.; red brome (*Bromus madritensis* ssp. r*ubens*)**; pine bluegrass (*Poa secunda*); Mediterranean grass (*Schismus barbatus*)**; Parry's phacelia (*Phacelia parryi*)

other annuals: *Pectocarya* sp.; sandblossoms (*Linanthus parryae*); Fremont's pincushion (*Chaenactis fremontii*); *Mirabilis* sp.; Mojave aster (*Xylorhiza tortifolia*); cream cups (*Platystemon californicus*); *Cymopterus* sp.

Disturbances Several well-used dirt roads on the grid

Land Forms (i.e. mesa, bajada, washes) Bajada

Soils Description Sandy/Loamy (gravelly component)

Elevation 2,550 feet (780 meters) **Slope** 0-3%

*Non-native **Non-native; Invasive weed

Mohave Ground Squirrel (MGS) Survey and Trapping Form

PART III - WEATHER GRID 23

Day	Date	Air Temperature (°F)				Cloud Cover				Wind Speed (mph)			
		Maximum	Time	Minimum	Time	Maximum	Time	Minimum	Time	Maximum	Time	Minimum	Time
1	04/18/05	65	1420	42	0655	0%	0655	0%	1730	15	1730	1	0655
2	04/19/05	65	1745	42	0700	0%	0700	0%	1745	15	1745	2	0700
3	04/20/05	54	0715	69	1730	0%	0715	0%	1730	10	1730	0	0715
4	04/21/05	77	1700	60	0700	0%	0700	0%	1430	2	0700	0	0810
5	04/22/05	77	1230	50	0600	95%	0600	95%	1230	2	0600	0	1230

Edwards Air Force Base MGS Trapping Data
GRID 23

DATE	TRAP #	SPECIES	RECAP	SEX	WT (g)	A/SA/J	REPRO
04/19/05	D4	AMLE		F	94	A	Pregnant
04/20/05	D5	AMLE		F	52	J	
04/20/05	B23	AMLE		M	99	A	Scrotal
04/20/05	A23	SPBE		M		A	
04/21/05	A24	SPBE					

Legend
AMLE = white-tailed antelope ground squirrel (*Ammospermophilus leucurus*)
SPBE = California ground squirrel (*Spermophilus beechyi*)

A = adult
SA = subadult
J = juvenile

Appendix A-5

Grid 29

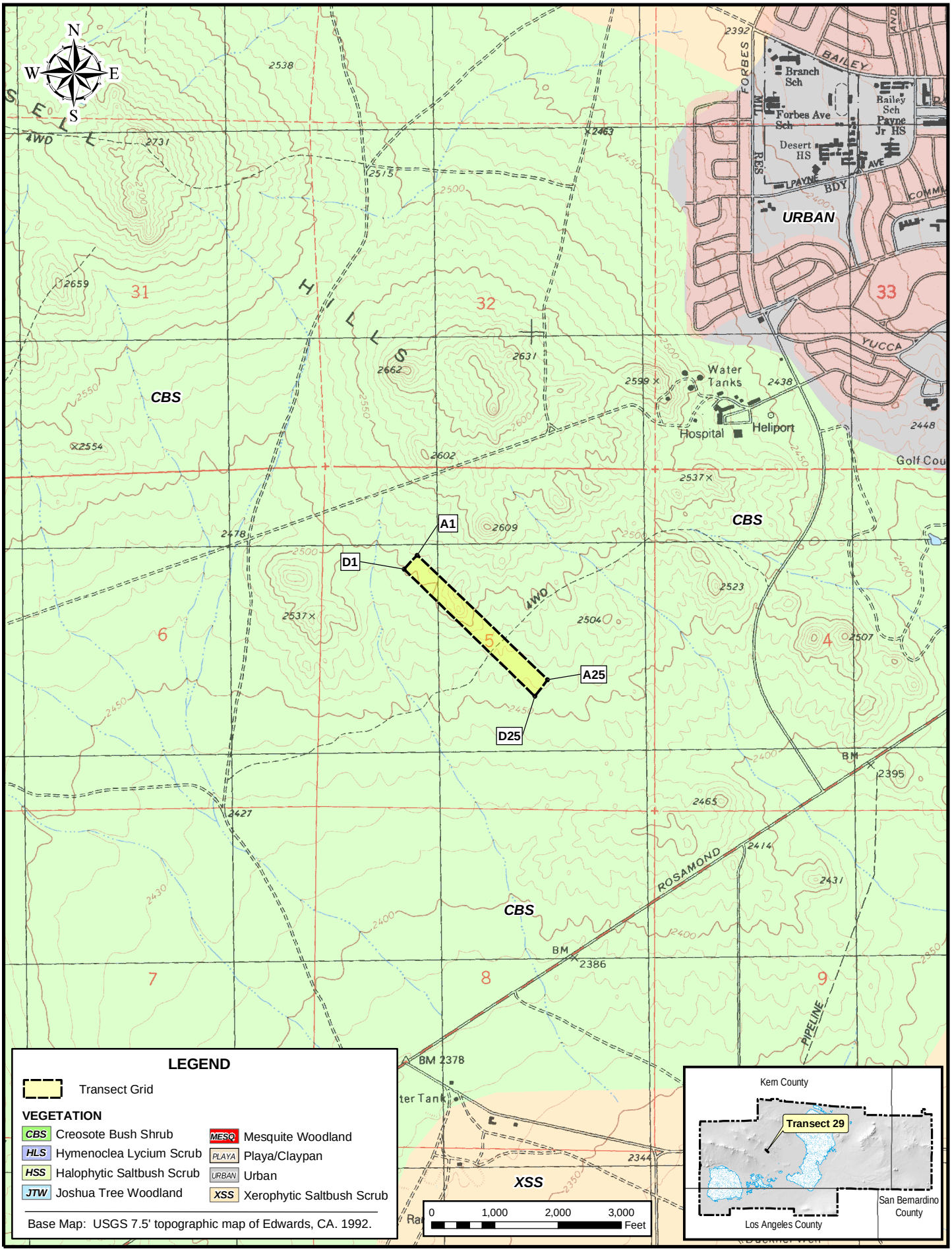

Figure A-5 Mojave Ground Squirrel Survey Transect 29 Location

Grid 29

Looking from 0m to 840m

Looking from 840m to 0m

Mohave Ground Squirrel (MGS) Survey and Trapping Form

PART IB - GRID INFORMATION

Project Name: Edwards AFB MGS Survey **Grid #:** 29

Property Owner: US Air Force

UTM Coordinates of grid corners (NAD 83)

NW corner (D25)		NE corner (A25)		SE corner (A1)		SW corner (D1)	
Easting	Northing	Easting	Northing	Easting	Northing	Easting	Northing
412377	3862464	412438	3862544	411816	3863150	411753	3863083

PART II - GENERAL HABITAT DESCRIPTION

Vegetation

dominant perennials: creosote (*Larrea tridentata*); burro bush (*Ambrosia dumosa*); goldenbush (*Ericameria cooperi); Tetradymia* (sp.)

other perennials: spiny hopsage (*Grayia spinosa*); winterfat (*Krascheninnikovia lanata*); cheesebush (*Hymenoclea salsola*); goldenheads (*Acamptopappus sphaerocephalus*); Anderson's boxthorn (*Lycium andersonii*); Nevada ephedra (*Ephedra nevadensis*); cholla (*Opuntia ramosissima*); California buckwheat (*Eriogonum fascic*.)

dominant annuals: red-stemmed filaree (*Erodium cicutarium*)*; *Astragalus* sp.; goldfields (*Lasthenia californica*); red brome (*Bromus madritensis* ssp. *rubens*)**

other annuals: *Phacelia* sp.; fiddleneck (*Amsinckia tessellata*)*; Mojave aster (*Xylorhiza tortifolia*) *Cymopterus* sp.; blue dicks (*Dichelostemma capitatum*); wishbone plant (*Mirabilis bigelovii*); *Gilia* sp.; pincushion (*Chaenactis fremontii*)

Disturbances older off-road tracks and one older road

Land Forms (i.e. mesa, bajada, washes) Bajada on two sides of small ridge

Soils Description Gravelly sand to rocky

Elevation 2,480 feet (765 meters) **Slope** 5-20%

*Non-native species **Non-native; Invasive weed

Mohave Ground Squirrel (MGS) Survey and Trapping Form

PART III - WEATHER GRID 29

Day	Date	Air Temperature (°F)				Cloud Cover				Wind Speed (mph)			
		Maximum	Time	Minimum	Time	Maximum	Time	Minimum	Time	Maximum	Time	Minimum	Time
1	04/18/05	65	1420	42	0655	0%	0655	0%	1730	15	1730	1	0655
2	04/19/05	65	1745	42	0700	0%	0700	0%	1745	15	1745	2	0700
3	04/20/05	54	0715	69	1730	0%	0715	0%	1730	10	1730	0	0715
4	04/21/05	77	1700	60	0700	0%	0700	0%	1430	2	0700	0	0810
5	04/22/05	77	1230	50	0600	95%	0600	95%	1230	2	0600	0	1230

Edwards Air Force Base MGS Trapping Data
GRID 29

DATE	TRAP #	SPECIES	RECAP	SEX	A/SA/J	REPRO
04/18/05	D10	AMLE		F	A	Lactating
04/18/05	B4	AMLE		M	A	Scrotal
04/19/05	C13	AMLE		M	A	Scrotal
04/20/05	C5	AMLE		F	A	
04/20/05	B11	CNTI				
04/21/05	D11	AMLE		F	J	
04/21/05	C12	AMLE	X			
04/22/05	B5	CNTI				

Legend

AMLE = white-tailed antelope ground squirrel (*Ammospermophilus leucurus*)
CNTI = western whiptail (*Cnemidophorus tigris*)

A = adult
SA = subadult
J = juvenile

Appendix A-6

Grid 45

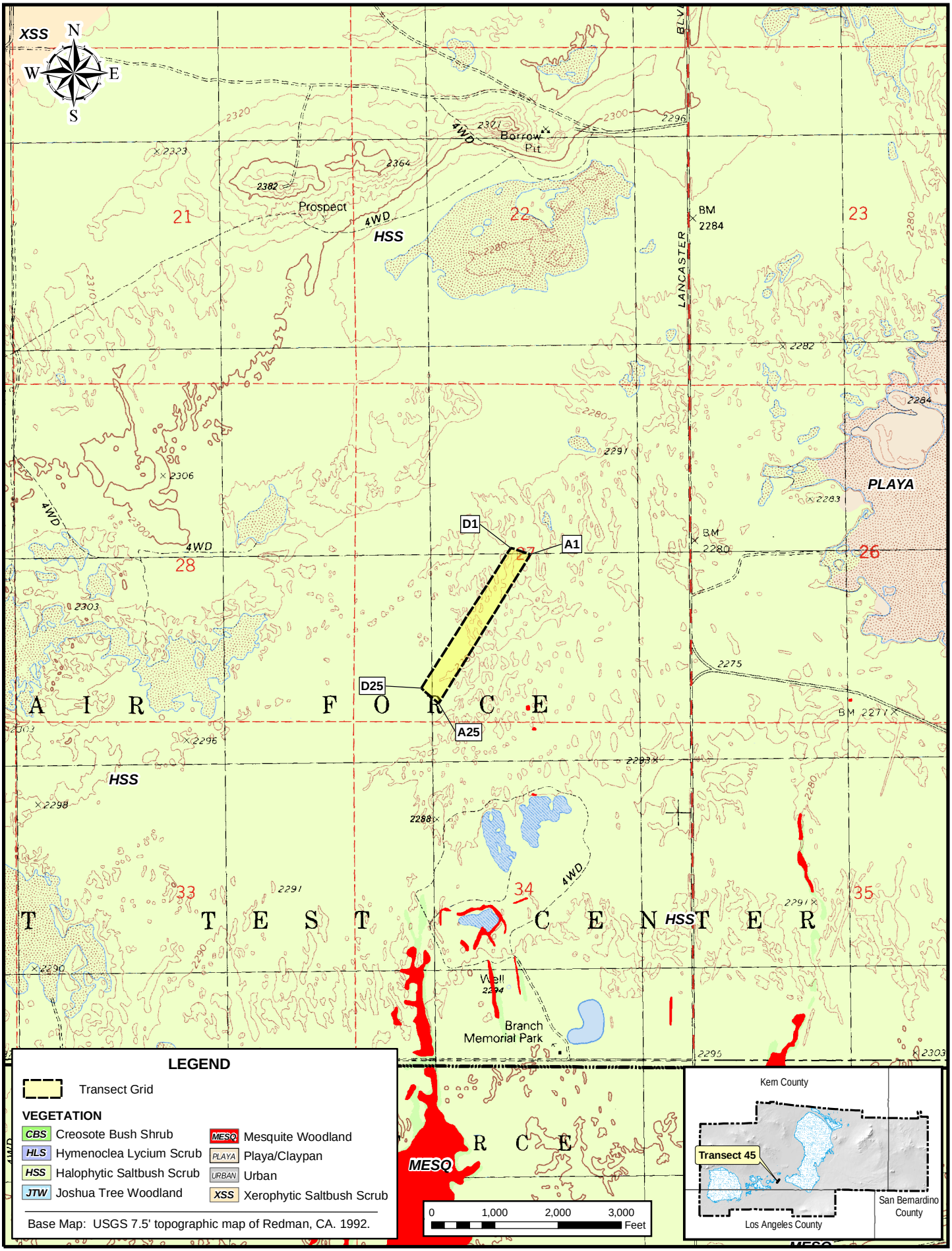

Figure A-6 Mojave Ground Squirrel Survey Transect 45 Location

Grid 45

Looking from 0m to 840m

Looking from 840m to 0m

Mohave Ground Squirrel (MGS) Survey and Trapping Form

PART IB - GRID INFORMATION

Project Name: Edwards AFB MGS Survey **Grid #:** 45

Property Owner: US Air Force

UTM Coordinates of grid corners (NAD 83)

NW corner (D1)		NE corner (D25)		SE corner (A25)		SW corner (A1)	
Easting	Northing	Easting	Northing	Easting	Northing	Easting	Northing
415304	3856223	414868	3855554	414950	3855480	415397	3856193

PART II - GENERAL HABITAT DESCRIPTION

Vegetation

dominant perennials *Atriplex* sp.

other perennials Johsua tree (*Yucca brevifolia*); Nevada ephedra (*Ephedra nevadensis*); goldenheads (*Acamptopappus sphaerocephalus*); *Happlopappus* sp.

dominant annuals Mediterranean grass (*Schismus barbatus*)**

Disturbances older off-road roads and tracks

Land Forms (i.e. mesa, bajada, washes) Playas

Soils Description sandy except in playa areas

Elevation 2,280 feet (695 meters) **Slope** 0-1%

**Non-native; Invasive weed

Mohave Ground Squirrel (MGS) Survey and Trapping Form

PART III - WEATHER GRID 45

Day	Date	Air Temperature (°F)				Cloud Cover				Wind Speed (mph)			
		Maximum	Time	Minimum	Time	Maximum	Time	Minimum	Time	Maximum	Time	Minimum	Time
1	04/18/05	65	1420	42	0655	0%	0655	0%	1730	15	1730	1	0655
2	04/19/05	65	1745	42	0700	0%	0700	0%	1745	15	1745	2	0700
3	04/20/05	54	0715	69	1730	0%	0715	0%	1730	10	1730	0	0715
4	04/21/05	77	1700	60	0700	0%	0700	0%	1430	2	0700	0	0810
5	04/22/05	77	1230	50	0600	95%	0600	95%	1230	2	0600	0	1230

Edwards Air Force Base MGS Trapping Data
GRID 45

DATE	TRAP #	SPECIES	RECAP	SEX	A/SA/J	REPRO
04/18/05	B18	AMLE		M	A	Scrotal
04/19/05	B18	AMLE		M	A	Scrotal
04/19/05	B16	AMLE		M	A	Scrotal
04/20/05	B16	AMLE		F	A	Pregnant
04/20/05	D25	AMLE		M	A	Scrotal
04/22/05	A20	AMLE		M	A	Scrotal
04/22/05	A18	AMLE		M	J	

Legend

AMLE = white-tailed antelope ground squirrel (*Ammospermophilus leucurus*)

A = adult
SA = subadult
J = juvenile

Appendix A-7

Grid 48

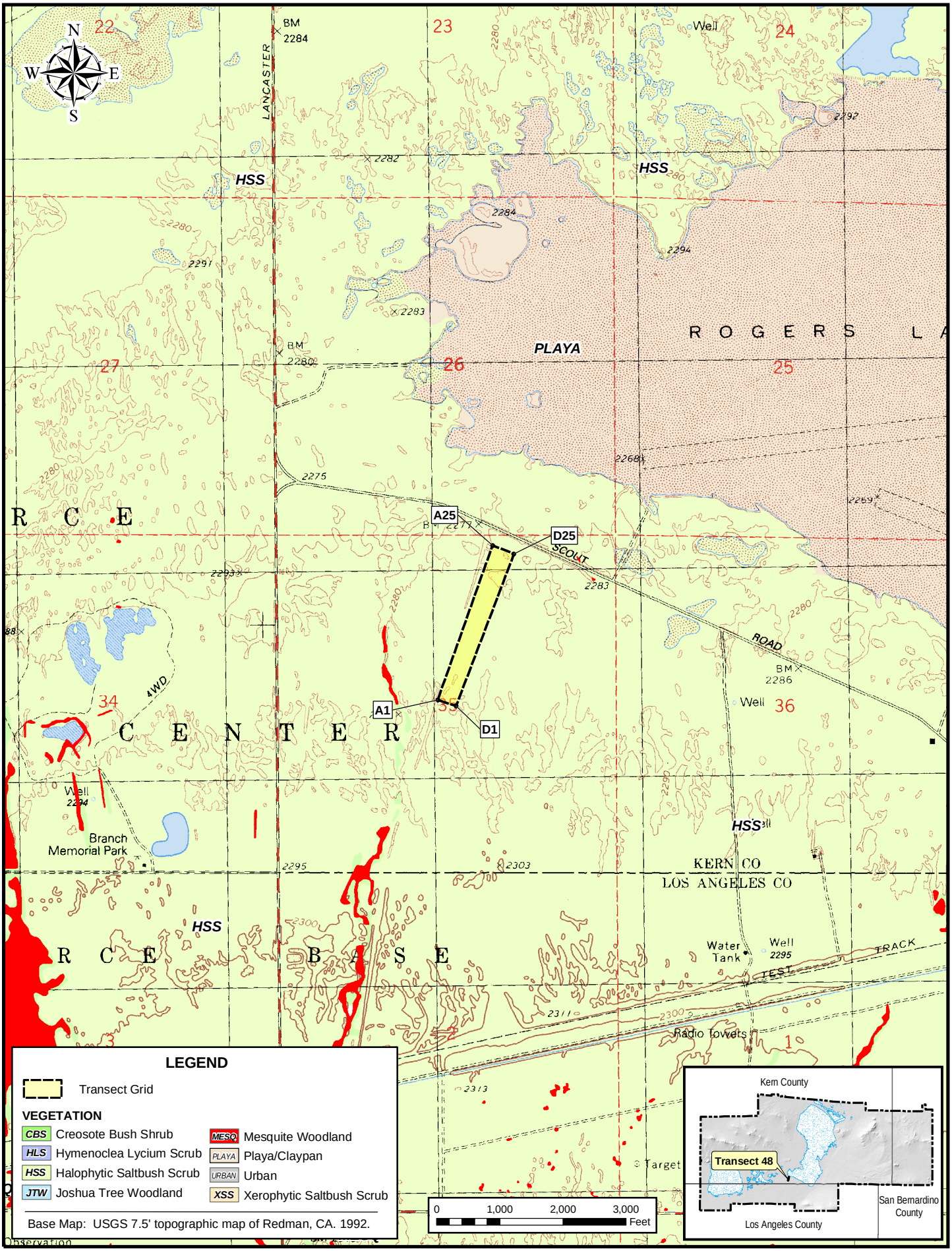

Figure A-7 Mojave Ground Squirrel Survey Transect 48 Location

Grid 48

Looking from 0m to 840m

Looking from 840m to 0m

Mohave Ground Squirrel (MGS) Survey and Trapping Form

PART IB - GRID INFORMATION

Project Name: Edwards AFB MGS Survey **Grid #:** 48

Property Owner: US Air Force

UTM Coordinates of grid corners (NAD 83)

NW corner (A25)		NE corner (D25)		SE corner (D1)		SW corner (A1)	
Easting	Northing	Easting	Northing	Easting	Northing	Easting	Northing
417209	3855314	417309	3855273	417024	3854543	416938	3854575

PART II - GENERAL HABITAT DESCRIPTION

Vegetation

dominant perennials *Atriplex* sp.

other perennials Anderson's boxthorn (*Lycium andersonii*); Nevada ephedra (*Ephedra nevadensis*); Joshua tree (*Yucca brevifolia*)

dominant annuals Mediterranean grass (*Schismus barbatus*)**; California goldfields (*Lasthenia californica*); fiddleneck (*Amsinckia tessellata*)

other annuals leaf-covered saltweed (*Atriplex phyllostegia*); red brome (*Bromus madritensis* ssp. *rubens*)**; *Coreopsis*; Fremont's pincushion (*Chaenactis fremontii*); red-stemmed filaree (*Erodium cicutarium*)*; Gilia

Disturbances none

Land Forms (i.e. mesa, bajada, washes) Flat with playas

Soils Description sandy except in playa areas

Elevation 2,280 feet (695 meters) **Slope** 0%

*Non-native species **Non-native; Invasive weed

Mohave Ground Squirrel (MGS) Survey and Trapping Form

PART III - WEATHER GRID 48

Day	Date	Air Temperature (°F)				Cloud Cover				Wind Speed (mph)			
		Maximum	Time	Minimum	Time	Maximum	Time	Minimum	Time	Maximum	Time	Minimum	Time
1	04/04/05	63	1235	59	0815	15%	1235	5%	1415	12	1415	8	1415
2	04/05/05	82	1400	57	0930	0%	0815	0%	1630	10	1630	0	0630
3	04/06/05	84	1530	50	0800	60%	1100	15%	0800	7	1100	2	0630
4	04/07/05	73	1100	52	0600	98%	1415	2%	0750	27	1415	2	0600
5	04/08/05	70	1430	45	0730	80%	1430	0%	1105	16	1430	5	0630

Edwards Air Force Base MGS Trapping Data
GRID 48

DATE	TRAP #	SPECIES	RECAP	SEX	A/SA/J	REPRO
04/04/05	A14	AMLE		M	A	Scrotal
04/06/05	A25	AMLE		F	A	Pregnant
04/06/05	D4	AMLE		M	A	Scrotal
04/07/05	B7	AMLE		M	A	Scrotal
04/07/05	D25	AMLE		M	A	Scrotal

Legend

AMLE = white-tailed antelope ground squirrel (*Ammospermophilus leucurus*)

A = adult
SA = subadult
J = juvenile

Appendix A-8

Grid 52

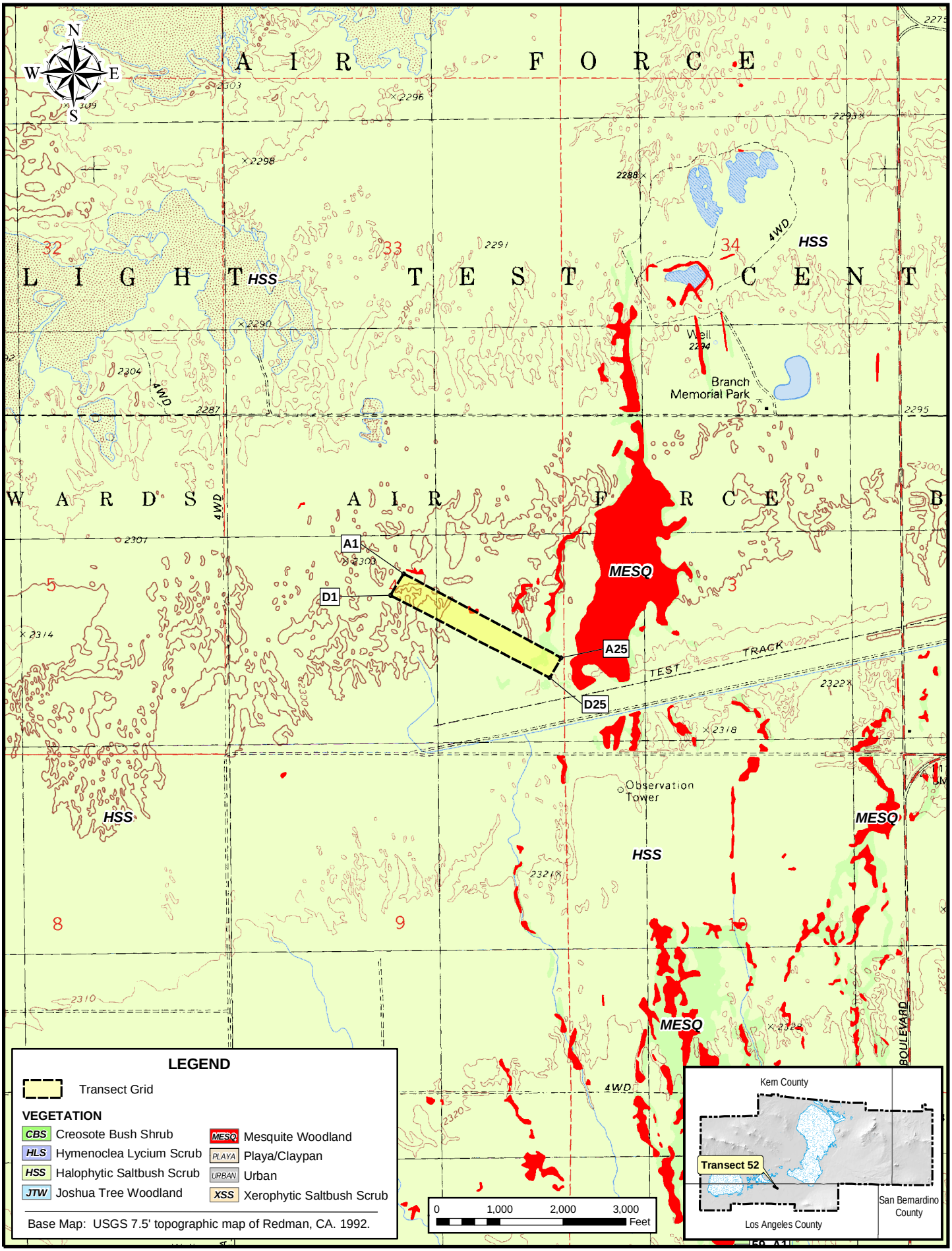

Figure A-8 Mojave Ground Squirrel Survey Transect 52 Location

Grid 52

Looking from 0m to 840m

Looking from 840m to 0m

Mohave Ground Squirrel (MGS) Survey and Trapping Form

PART IB - GRID INFORMATION

Project Name: Edwards AFB MGS Survey **Grid #:** 52

Property Owner: US Air Force

UTM Coordinates of grid corners (NAD 83)

NW corner (A1)		NE corner (A25)		SE corner (D25)		SW corner (D1)	
Easting	Northing	Easting	Northing	Easting	Northing	Easting	Northing
413761	3853013	414515	3852601	414459	3852505	413698	3852910

PART II - GENERAL HABITAT DESCRIPTION

Vegetation

dominant perennials Honey mesquite (*Propsopis);* Joshua Tree (*Yucca brevifolia*); *Atriplex* sp.

other perennials

dominant annuals fiddleneck (*Amsinckia tessellata*)

other annuals *Phacelia* sp.

Disturbances Historic dumping; homestead; old fence-line

Land Forms (i.e. mesa, bajada, washes) Some large playas; many of small playas

Soils Description Sandy except in playas

Elevation 2,260 feet (690 meters) **Slope** 0%

Mohave Ground Squirrel (MGS) Survey and Trapping Form

PART III - WEATHER GRID 52

Day	Date	Air Temperature (°F)				Cloud Cover				Wind Speed (mph)			
		Maximum	Time	Minimum	Time	Maximum	Time	Minimum	Time	Maximum	Time	Minimum	Time
1	4/18/05	65	1420	42	0655	0%	0655	0%	1730	15	1730	1	0655
2	04/19/05	65	1745	42	0700	0%	0700	0%	1745	15	1745	2	0700
3	04/20/05	54	0715	69	1730	0%	0715	0%	1730	10	1730	0	0715
4	04/21/05	77	1700	60	0700	0%	0700	0%	1430	2	0700	0	0810
5	04/22/05	77	1230	50	0600	95%	0600	95%	1230	2	0600	0	1230

Edwards Air Force Base MGS Trapping Data
GRID 52

DATE	TRAP #	SPECIES	RECAP	SEX	A/SA/J	REPRO
04/18/05	A8	AMLE		M	A	Scrotal
04/18/05	A8	AMLE		M	A	Scrotal
04/20/05	B8	AMLE		F	A	Lactating
04/20/05	D21	AMLE		F	A	
04/20/05	C7	AMLE		M	A	Scrotal
04/20/05	C25	AMLE		M	A	Scrotal
04/20/05	C25	AMLE		M	A	

Legend

AMLE = white-tailed antelope ground squirrel (*Ammospermophilus leucurus*)

A = adult
SA = subadult
J = juvenile

Appendix A-9

Grid 54

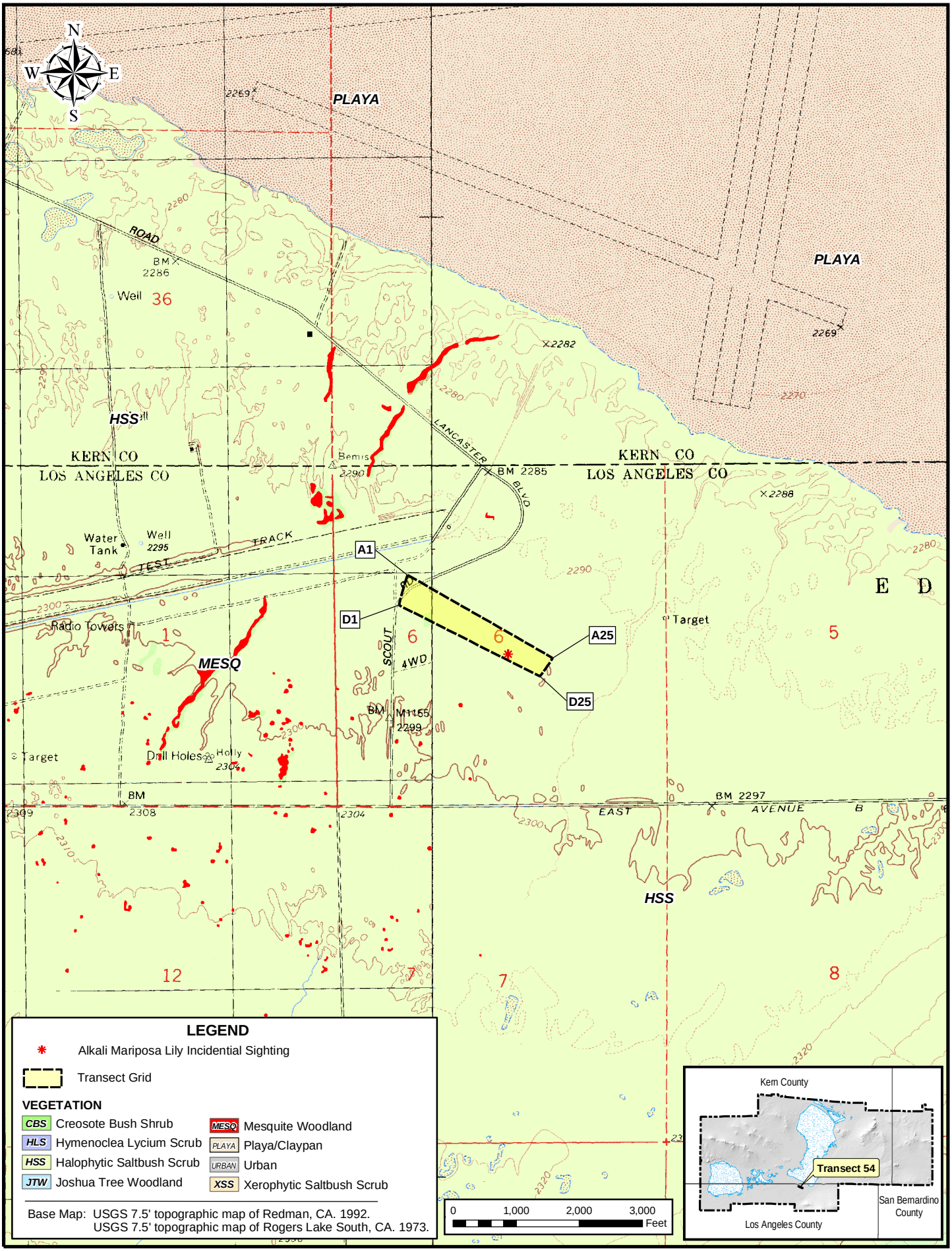

Figure A-9 Mojave Ground Squirrel Survey Transect 54 Location

Grid 54

Looking from 0m to 840m

Looking from 840m to 0m

Mohave Ground Squirrel (MGS) Survey and Trapping Form

PART IB - GRID INFORMATION

Project Name: Edwards AFB MGS Survey **Grid #:** 54

Property Owner: US Air Force

UTM Coordinates of grid corners (NAD 83)

NW corner (A1)		NE corner (A25)		SE corner (D25)		SW corner (D1)	
Easting	Northing	Easting	Northing	Easting	Northing	Easting	Northing
419775	3853185	420470	3852777	420408	3852690	419733	3853040

PART II - GENERAL HABITAT DESCRIPTION

Vegetation

dominant perennials Joshua trees (*Yucca brevifolia*); *Atriplex* sp.

other perennials

dominant annuals fiddleneck (*Amsinckia tessellata*); red-stemmed filaree (*Erodium cicutarium*)*;

red brome (*Bromus madritensis* ssp. *rubens*)**

other annuals mariposa lily (*Calochortus* sp.)

Disturbances Paved road on west end; dirt track bisects site

Land Forms (i.e. mesa, bajada, washes) Small playas

Soils Description Sandy except on playa areas

Elevation 2,280 feet (695 meters) **Slope** 0%

*Non-native species **Non-native; Invasive weed

Mohave Ground Squirrel (MGS) Survey and Trapping Form

PART III - WEATHER GRID 54

Day	Date	Air Temperature (°F)				Cloud Cover				Wind Speed (mph)			
		Maximum	Time	Minimum	Time	Maximum	Time	Minimum	Time	Maximum	Time	Minimum	Time
1	04/04/05	63	1235	59	0815	15%	1235	5%	1415	12	1415	8	1415
2	04/05/05	82	1400	57	0930	0%	0815	0%	1630	10	1630	0	0630
3	04/06/05	84	1530	50	0800	60%	1100	15%	0800	7	1100	2	0630
4	04/07/05	73	1100	52	0600	98%	1415	2%	0750	27	1415	2	0600
5	04/08/05	70	1430	45	0730	80%	1430	0%	1105	16	1430	5	0630

Edwards Air Force Base MGS Trapping Data
GRID 54

DATE	TRAP #	SPECIES	RECAP	SEX	A/SA/J	REPRO
04/04/05	C9	AMLE		M	A	Scrotal
04/05/05	C22	AMLE		F	A	Lactating
04/05/05	B25	AMLE		F	A	Lactating
04/05/05	B5	AMLE		M	A	Scrotal
04/05/05	C22	AMLE		M	A	Scrotal
04/05/05	C9	AMLE		M	A	Scrotal
04/05/05	A1	AMLE		M	A	Scrotal
04/06/05	A10	AMLE		F	A	Lactating
04/06/05	D7	AMLE		F	A	Pregnant
04/06/05	C5	AMLE		M	A	Scrotal
04/06/05	C1	AMLE		M	A	Scrotal
04/06/05	A8	AMLE		M	A	Scrotal
04/06/05	B25	AMLE		M	A	Scrotal
04/06/05	A5	AMLE		M	A	Scrotal
04/06/05	C18	AMLE			A	
04/06/05	A10	AMLE	X			
04/07/05	B16	AMLE		F	A	Lactating
04/07/05	A14	AMLE		M	A	Scrotal
04/07/05	B14	AMLE	X			
04/07/05	B6	AMLE	X			
04/08/05	D7	AMLE		M	A	Scrotal
04/08/05	C5	AMLE	X			

Legend

AMLE = white-tailed antelope ground squirrel (*Ammospermophilus leucurus*)

A = adult
SA = subadult
J = juvenile

Appendix A-10

Grid 59

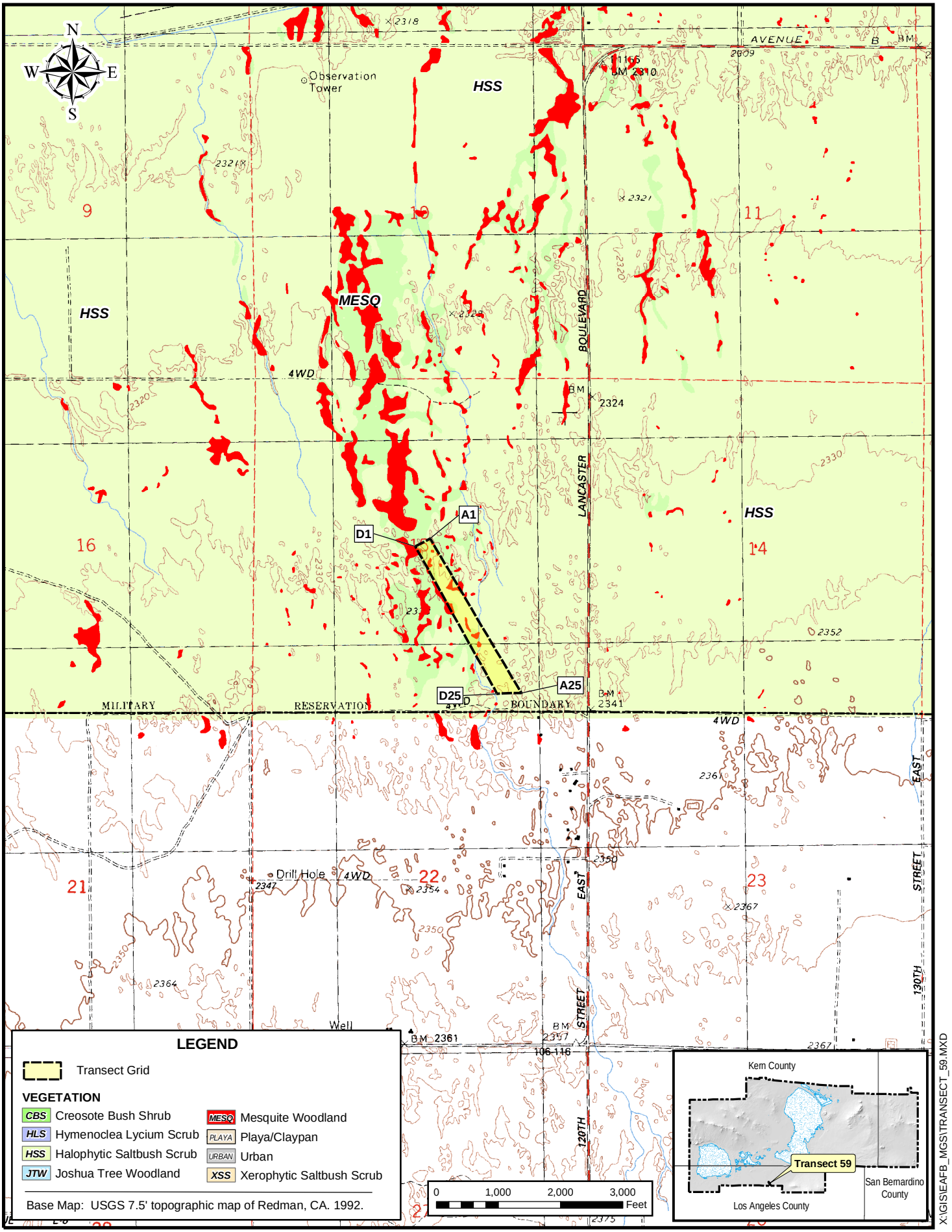

Figure A-10 Mojave Ground Squirrel Survey Transect 59 Location

Grid 59

Looking from 0m to 840m

Looking from 840m to 0m

Mohave Ground Squirrel (MGS) Survey and Trapping Form

PART IB - GRID INFORMATION

Project Name: Edwards AFB MGS Survey **Grid #:** 59

Property Owner: US Air Force

UTM Coordinates of grid corners (NAD 83)

NW corner (A25)		NE corner (A1)		SE corner (D1)		SW corner (D25)	
Easting	Northing	Easting	Northing	Easting	Northing	Easting	Northing
415828	3848954	415388	3849715	415316	3849677	415708	3848951

PART II - GENERAL HABITAT DESCRIPTION

Vegetation

dominant perennials: Honey mesquite

other perennials: winterfat (*Krascheninnikovia lanata*); Joshua tree (*Yucca brevifolia*); shadescale (*Atriplex canescens*)

dominant annuals: woolly sunflower; red-stemmed filaree (*Erodium cicutarium*)*; fiddleneck (*Amsinckia tessellata*); red brome (*Bromus madritensis* ssp. *rubens*)**

other annuals: lacy phacelia (*Phacelia tanacetifolia*); silver puff (*Uropappus lindleyi*); desert dandelion (*Malacothrix californica*); bunch grass; *Astragalus* sp.

Disturbances none

Land Forms (i.e. mesa, bajada, washes) Clay pans and small sandy dunes

Soils Description Hard clay pans and sandy dunes

Elevation 2,310 feet (705 meters) **Slope** 0-12%

*Non-native species **Non-native; Invasive weed

Mohave Ground Squirrel (MGS) Survey and Trapping Form

PART III - WEATHER GRID 59

Day	Date	Air Temperature (°F)				Cloud Cover				Wind Speed (mph)			
		Maximum	Time	Minimum	Time	Maximum	Time	Minimum	Time	Maximum	Time	Minimum	Time
1	04/04/05	63	1235	59	0815	15%	1235	5%	1415	12	1415	8	1415
2	04/05/05	82	1400	57	0930	0%	0815	0%	1630	10	1630	0	0630
3	04/06/05	84	1530	50	0800	60%	1100	15%	0800	7	1100	2	0630
4	04/07/05	73	1100	52	0600	98%	1415	2%	0750	27	1415	2	0600
5	04/08/05	70	1430	45	0730	80%	1430	0%	1105	16	1430	5	0630

Edwards Air Force Base MGS Trapping Data
GRID 59

DATE	TRAP #	SPECIES	RECAP	SEX	A/SA/J	REPRO
04/06/05	C2	AMLE		F	A	Pregnant
04/07/05	A15	AMLE		F	A	Pregnant

Legend

AMLE = white-tailed antelope ground squirrel (*Ammospermophilus leucurus*)

A = adult
SA = subadult
J = juvenile

Appendix A-11

Grid 60

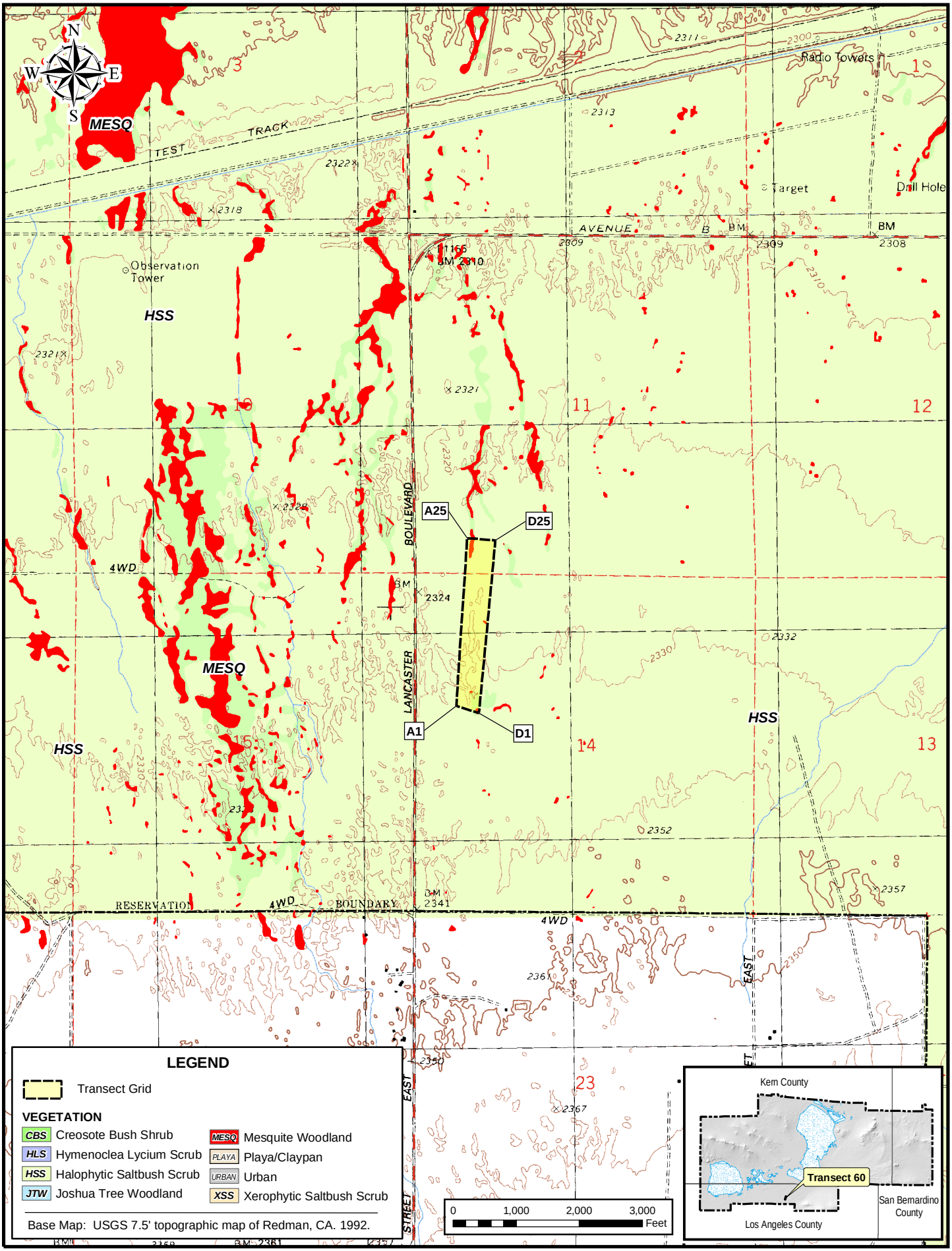

Figure A-11 Mojave Ground Squirrel Survey Transect 60 Location

Grid 60

Looking from 0m to 840m

Looking from 840m to 0m

Mohave Ground Squirrel (MGS) Survey and Trapping Form

PART IB - GRID INFORMATION

Project Name: Edwards AFB MGS Survey **Grid #:** 60

Property Owner: US Air Force

UTM Coordinates of grid corners (NAD 83)

NW corner (A25)		NE corner (D25)		SE corner (D1)		SW corner (A1)	
Easting	Northing	Easting	Northing	Easting	Northing	Easting	Northing
416427	3850653	416562	3850642	416473	3849811	416366	3849847

0 Point: E: 416417 N: 3849827 500 Point: E: 416420 N: 3850308

PART II - GENERAL HABITAT DESCRIPTION

Vegetation

dominant perennials *Atriplex* sp.; honey mesquite; Joshua tree (*Yucca brevifolia*)

other perennials mule fat (*Baccharis salicifolia*)

dominant annuals fiddleneck (*Amsinckia tessellata*); red brome (*Bromus madritensis* ssp. *rubens*)**;

goldfields (*Lasthenia californica*); red-stemmed filaree (*Erodium cicutarium*)*

other annuals suncups; lupines

Disturbances old homestead, fencing

Land Forms (i.e. mesa, bajada, washes) Small claypans; Homestead Fences; Washes

Soils Description Sandy

Elevation 2,330 feet (710 meters) **Slope** 0-3%

*Non-native species **Non-native; Invasive weed

Mohave Ground Squirrel (MGS) Survey and Trapping Form

PART III - WEATHER GRID 60

Day	Date	Air Temperature (°F)				Cloud Cover				Wind Speed (mph)			
		Maximum	Time	Minimum	Time	Maximum	Time	Minimum	Time	Maximum	Time	Minimum	Time
1	04/04/05	63	1235	59	0815	15%	1235	5%	1415	12	1415	8	1415
2	04/05/05	82	1400	57	0930	0%	0815	0%	1630	10	1630	0	0630
3	04/06/05	84	1530	50	0800	60%	1100	15%	0800	7	1100	2	0630
4	04/07/05	73	1100	52	0600	98%	1415	2%	0750	27	1415	2	0600
5	04/08/05	70	1430	45	0730	80%	1430	0%	1105	16	1430	5	0630

Edwards Air Force Base MGS Trapping Data
GRID 60

DATE	TRAP #	SPECIES	RECAP	SEX	A/SA/J	REPRO
04/04/05	B3	AMLE		F	A	
04/05/05	A25	AMLE		F	A	Pregnant
04/05/05	D15	AMLE		M	A	Scrotal
04/06/05	A1	AMLE		F	A	
04/06/05	B4	AMLE		M	A	
04/06/05	A6	AMLE		M	A	
04/07/05	C18	AMLE		M	A	Scrotal
04/08/05	D23	AMLE		M	A	Scrotal
04/08/05	B16	AMLE		M	A	Scrotal

Legend

AMLE = white-tailed antelope ground squirrel (*Ammospermophilus leucurus*)

A = adult
SA = subadult
J = juvenile

Appendix B

Raw Mohave Ground Squirrel Survey and Trapping Forms – 2005

Grid 9

Mohave Ground Squirrel (MGS) Survey and Trapping Form

PART IB - GRID INFORMATION

Project Name: EAFB MGS 2005 Grid #: 9

Property Owner: EAFB

photos: yes

UTM Coordinates of grid corners (NAD 83)

NW corner		NE corner		SE corner		SW corner	
Easting	Northing	Easting	Northing	Easting	Northing	Easting	Northing
0416840	3869627	0417179	3868941	0417078	3868929	0416748	3869585

PART II - GENERAL HABITAT DESCRIPTION

Vegetation

dominant perennials: Acamptopappus sphaerocephalus; Acnatherum speciosum; Tetradymia axillaris; Hymenoclea; Larrea tridentata; Ambrosia dumosa; Grayia spinosa

other perennials: Ephedra; Krascheninnikovia lanata; Opuntia (cholla - 6' tall)

dominant annuals: Astragalus didymocarpus; Lanthenia; Amsinckia; Phacelia; Erodium cicutarium

other annuals: Platystemon californicus

Disturbances: A few pipeline roads East ½ w/ erosion

Land Forms (i.e. mesa, bajada, washes): Uneven

Soils Description: Rocky;

Elevation _____ Slope _____

Mohave Ground Squirrel (MGS) Survey and Trapping Form

PART III - WEATHER

Project Name: EAFB

Property Owner: US Air Force

Data Taken by: K. Simon

DATE	TIME	TEMP °F	WIND SPEED mph	CLOUD COVER %	NOTES
05/09/05	1110	69°	5-18 mph	70%	
	1403	66°	5-20	70%	
	1500	64°	8-13	80%	large dark cloud overhead
	1740	60°	2-12	95%	starting to rain
5/10/05	0620	48°	5-10	20%	
	0705	54°	2-12	8%	
	0953	59	4-8	5%	
	1056	64	5-13	5%	
	1348	64	5-20	1%	
	1446	67	10-20	1%	
	1722	59	25-35	4%	Yikes-it's windy!
	1822	57	25-35	5%	
5/11/05	0640	56	0-1	0% hazy	
	0735	55	0-2		
	0807	55	0-2		
	1020	68	2-4		
	1126	84	0-1		
	1355	84	0-1	2% hazy	
	1510	77	1-6		
	1821	73	3-15	0% hazy	
5/12/05	0620	50	0-1	0% hazy	
	0726	58	0-1		
	0838	70	0-1		
	1038	81	0-1	5% hazy	
	1430	90	0-3	15%	

DATE	TIME	TEMP °C	WIND SPEED	CLOUD COVER %	NOTES
5/12/05	1530	90	0-3	15%	
	1732	89	1-3	15%	
	1835	84	2-5	10%	
5/13/05	0542	52	0-1	80%	
	0726	59	0-1	60%	

Edwards AFB MGS Trapping

DATE	GRID	INVESTIGATOR(S)	M. Allaback
5/9/05	9	ASSISTANT(S)	~~alone~~ C. Murphy

TIMES	start temp	✓	START	END	NOTES
OPENING			~0620	~0700	opened by Caleb + DL ~~or others~~
CHECK #1	68°F		1015	1110	windy, scattered very light showers
CHECK #2	75°		1412	1458	
CHECK #3	60	✓	1745	1815	closed w/ Caleb
CHECK #4					

Use the ✓ to indicate when the traps were closed

SPECIES	TIME	TRAP #	SEX	WT (g)	A/SA/J	REPRO	COMMENTS	RECAP?
AGS	1025	D1	M	—	J	No		
AGS	1056	B11	M	—	A	No		
AGS	1101	B22	M	—	A	No		
AGS	1416	D1	F	—	A	Lac		
AGS	1428	C24	F	—	A	No		
AGS	1449	D25	F	—	A	LAC		

Post-it® Fax Note 7671

To Don Mitchell	Date 5/12/05 # of pages ▸ 5
	From M. Allaback
Co./Dept.	Co.
Phone #	Phone #
Fax #	Fax #

Edwards AFB MGS Trapping

DATE	GRID	INVESTIGATOR(S)	M. Allaback
5/10/05	9	ASSISTANT(S)	None

TIMES	start temp	✓	START	END	NOTES
OPENING	45°F		0610	0648	windy early
CHECK #1	64°		1010	1108	
CHECK #2	73°		1410	1445	
CHECK #3	62°		1752	1835	
CHECK #4					

Use the ✓ to indicate when the traps were closed

SPECIES	TIME	TRAP #	SEX	WT (g)	A/SA/J	REPRO	COMMENTS	RECAP?
AGS	1021	D6	M	—	A	No		
	1059	B24	M	—	J	—		
	1417	D9	M	—	A	No		

Edwards AFB MGS Trapping

DATE	GRID	INVESTIGATOR(S)	M. Allabaugh
5/11/05	9	ASSISTANT(S)	C. Murphy

TIMES	start temp	✓	START	END	NOTES
OPENING	?		~0630	0730	Caleb opens
CHECK #1	71°F		1025	1105	
CHECK #2	86°F		1423	1512	
CHECK #3	78°	✓	1745	1830	S. Montgomery will monitor this grid on 5/12 & 5/13/05
CHECK #4					

Use the ✓ to indicate when the traps were closed

SPECIES	TIME	TRAP #	SEX	WT (g)	A/SA/J	REPRO	COMMENTS	RECAP?
AGS	1029	D2	♀	—	J	—		
CA ground squirrel	1429	D3	—	—	J	—		
AGS	1433	D11	♀	—	J	—		
AGS	1443	B25	♂	—	J	—		
AGS	1447	A17	♀	—	J	—		
AGS	1450	A14	♂	—	A	No		

Edwards AFB MGS Trapping

DATE	GRID	INVESTIGATOR(S)	Steve M., (Mark A/L)
5/12/05	9	ASSISTANT(S)	~~Steve M.~~, ~~[illegible]~~ Caleb

TIMES	✓	START	END	NOTES
OPENING	✓	0545?	0630	
CHECK #1	✓	1045	1200	~~76~~F, hi thin, 0-2mph
CHECK #2	✓	1415	1520	~~86.5~~F, 2-5mph, 15% hi thin
CHECK #3	✓	1740	1840	~~70~~F, 3-8mph, hazy 100%
CHECK #4				

Use the ✓ to indicate when the traps were closed

SPECIES	TRAP #	SEX	WT (g)	A/SA/J	REPRO	COMMENTS
Check #1						
AGS	A18	♀		J	lactat.	
Spermophilus	A8	♂		SA	scr.	
AGS	B25	♀		J	nonipp, imperf.	
Check #2						
AGS	A18			A	lactat.	
AGS	D25	♀		J		
AGS	C7	♂		A	scrot.	
AGS	B25					recap
Check #3						
AGS	A18	♀		J	nip. sm.	imperf.

Edwards AFB MGS Trapping

DATE	GRID	INVESTIGATOR(S)	
5/13/05	9	ASSISTANT(S)	Caleb

TIMES	✓	START	END	NOTES
OPENING	✓	—	0645	
CHECK #1	✓	1050 →		3-7 mph, 95% within, 77°
CHECK #2 (p/u grid)	✓	1510	1645	3-7 mph, 100% within, 82°
CHECK #3				
CHECK #4				

Use the ✓ to indicate when the traps were closed

SPECIES	TRAP #	SEX	WT (g)	A/SA/J	REPRO	COMMENTS
~~1st check~~						
~~gr. beech~~	~~A9~~	—		~~SA~~		
AGM	D25	♀		A	nip sm	
~~2nd check~~						
~~p. beech~~	A10			SA		recap
~~West Wkp~~	~~D6~~					
~ 10 Chemid. tigris captured over 2 days - generally not recorded						

Grid 14

Mohave Ground Squirrel (MGS) Survey and Trapping Form

PART IB - GRID INFORMATION

Project Name: Edwards AFB **Grid #:** 14

Property Owner: US Air Force

UTM Coordinates of grid corners (NAD 83)

A1 ~~NW~~ corner		A25 ~~NE~~ corner		D25 ~~SE~~ corner		D1 ~~SW~~ corner	
Easting	Northing	Easting	Northing	Easting	Northing	Easting	Northing
0412263	3867762	0412199	3867647	0411501	3868125	0411559	3868199

PART II - GENERAL HABITAT DESCRIPTION

Vegetation

dominant perennials A. canescens, G. spinosa, goldenbush, burrobush

other perennials

dominant annuals

other annuals

Land Forms (i.e. mesa, bajada, washes) bajada

Soils Description sandy

Elevation _____ **Slope** 0-3%

Disturbances: transect is near the entrance to OHV Area 2. Entrance road goes through grid + a few older single tracks on site. Low level of trash - probably blown over from nearby dump area.

Mohave Ground Squirrel (MGS) Survey and Trapping Form

PART III - WEATHER

Project Name: EAFB

Property Owner: US Air Force

Data Taken by: K. Simon

DATE	TIME	TEMP °F	WIND SPEED mph	CLOUD COVER %	NOTES
05/09/05	1110	69°	5-18 mph	70%	
	1403	66°	5-20	70%	
	1500	64°	8-13	80%	large dark cloud overhead
	1740	60°	2-12	95%	starting to rain
5/10/05	0620	48°	5-10	20%	
	0705	54°	2-12	8%	
	0953	59	4-8	5%	
	1056	64	5-13	5%	
	1348	64	5-20	1%	
	1446	67	10-20	1%	
	1722	59	25-35	4%	Yikes-it's windy!
	1822	57	25-35	5%	
5/11/05	0640	56	0-1	0% hazy	
	0735	55	0-2		
	0807	55	0-2		
	1020	68	2-4		
	1126	84	0-1		
	1355	84	0-1	2% hazy	
	1510	77	1-6		
	1821	73	3-15	0% hazy	
5/12/05	0620	50	0-1	8% hazy	
	0726	58	0-1		
	0838	70	0-1		
	1038	81	0-1	5% hazy	
	1430	90	0-3	15%	

DATE	TIME	TEMP °C	WIND SPEED	CLOUD COVER %	NOTES
5/12/05	1530	90	0-3	15%	
	1732	89	1-3	15%	
	1835	84	2-5	10%	
5/13/05	0542	52	0-1	80%	
	0726	59	0-1	60%	

Edwards AFB MGS Trapping

DATE	GRID	INVESTIGATOR(S) K. Simon
09 May 2005	14	ASSISTANT(S)

TIMES	✓	START	END	NOTES
OPENING		0645	0750	
CHECK #1		1015	1109	
CHECK #2		1405	1454	
CHECK #3	✓	1650	1740	
CHECK #4				

Use the ✓ to indicate when the traps were closed

SPECIES	TRAP #	SEX	WT (g)	A/SA/J	REPRO	COMMENTS
AMLE	D10	F		A		1106
	C1	M		A	Scrotal	1410
Check #3 – no captures						

Edwards AFB MGS Trapping

DATE	GRID	INVESTIGATOR(S)
10 May 2005	14	K-Simon
		ASSISTANT(S)

TIMES	✓	START	END	NOTES
OPENING		0608	0703	peanut butter nocturnal mix trails from A15 → A7
CHECK #1		0955	1050	
CHECK #2		1350	1445	
CHECK #3	✓	1725	1820	
CHECK #4				

Use the ✓ to indicate when the traps were closed

SPECIES	TRAP #	SEX	WT (g)	A/SA/J	REPRO	COMMENTS
whiptail	C17					
AMLE	D13	F		A	lactating	
	D10	F		A	"	
	D8	F		A	"	
	D3	M		A		1355
	C1	F		A	lactating	1357
X	D12			A		1435
	D10	M		A	scrotal	floas 1437
	D9	F		A	lactating	1438

Edwards AFB MGS Trapping

DATE	GRID	INVESTIGATOR(S)
11 May 2005	14	K. Simon
		ASSISTANT(S)

TIMES	✓	START	END	NOTES
OPENING		0640	0742	
CHECK #1		1023	1125	put a snap pea in each trap
CHECK #2		1404	1506	
CHECK #3	✓	1732	1820	
CHECK #4				

Use the ✓ to indicate when the traps were closed

SPECIES	TRAP #	SEX	WT (g)	A/SA/J	REPRO	COMMENTS
AMLE	D3	F		A	lactating	1026
	B14	F		A	lactating	1053
X	C9					1104
X	C10					1445
	C16	F		A	lactating	1449
	D18	F		A	lactating	1451
	B12	escaped - not marked				1745
	C6	F		A	pregnant	1753
X	C10					1757

Edwards AFB MGS Trapping

DATE	GRID	INVESTIGATOR(S)
12 May 2005	14	K. Simon
		ASSISTANT(S)

TIMES	✓	START	END	NOTES
OPENING		0640	0735	
CHECK #1		1040	1142	
CHECK #2		1430	1528	
CHECK #3	✓	1735	1833	
CHECK #4				

Use the ✓ to indicate when the traps were closed

SPECIES		TRAP #	SEX	WT (g)	A/SA/J	REPRO	COMMENTS
AMLE	X	D3					1048
		A9	F		A	lactating	1056
		A11	escaped - not marked				1058
		B14	M		A	scrotal	1110
		C10	M		A	Scrotal	1120
		B14	M		A	Scrotal	1454
	X	C10					1507
	X	D10					1527
	X	C10					1810

Edwards AFB MGS Trapping

DATE	GRID	INVESTIGATOR(S)
13 May 2005	14	K. Simon
		ASSISTANT(S) D. Mitchell

TIMES	✓	START	END	NOTES
OPENING		0640	0735	
CHECK #1		1035	1132	
CHECK #2	✓	1502	1635	
CHECK #3				
CHECK #4				

Use the ✓ to indicate when the traps were closed

SPECIES	TRAP #	SEX	WT (g)	A/SA/J	REPRO	COMMENTS
AMLE X	D7					1039
AMLE	D13	F		A	lactating	1551
AMLE X	C1					1555

Grid 22

Mohave Ground Squirrel (MGS) Survey and Trapping Form

PART IB - GRID INFORMATION

Project Name: EAFB **Grid #:** 22

Property Owner: USAF

UTM Coordinates of grid corners (NAD 83)

NW corner		NE corner		SE corner		SW corner	
Easting	Northing	Easting	Northing	Easting	Northing	Easting	Northing
408820	3864341	408882	3864438	409579	3863989	409517	3863921

PART II - GENERAL HABITAT DESCRIPTION

Vegetation

dominant perennials: Larrea tridentata, Ambrosia dumosa, Acamptopappus sphaerocephalus

other perennials: Ephedra nevadensis, Grayia spinosa, Tetradymia stenolepis, Yucca brevifolia

dominant annuals: Erodium cicutarium, Lasthenia californica, Bromus rubens, Chaenactis fremontii

other annuals: Cuscuta californica, Phacelia, Amsinkia

Land Forms (i.e. mesa, bajada, washes): hills

Soils Description

Elevation **Slope**

Mohave Ground Squirrel (MGS) Survey and Trapping Form

PART III - WEATHER

Project Name: EAFB

Property Owner: US Air Force

Data Taken by: K. Simon

DATE	TIME	TEMP °F	WIND SPEED mph	CLOUD COVER %	NOTES
05/09/05	1110	69°	5-18 mph	70%	
	1403	66°	5-20	70%	
	1500	64°	8-13	80%	large dark cloud overhead
	1740	60°	2-12	95%	starting to rain
5/10/05	0620	48°	5-10	20%	
	0705	54°	2-12	8%	
	0953	59	4-8	5%	
	1056	64	5-13	5%	
	1348	64	5-20	1%	
	1446	67	10-20	1%	
	1722	59	25-35	4%	Yikes-it's windy!
	1822	57	25-35	5%	
5/11/05	0640	56	0-1	0% hazy	
	0735	55	0-2		
	0807	55	0-2		
	1020	68	2-4		
	1126	84	0-1		
	1355	84	0-1	2% hazy	
	1510	77	1-6		
	1821	73	3-15	0% hazy	
5/12/05	0620	50	0-1	8% hazy	
	0726	58	0-1		
	0838	70	0-1		
	1038	81	0-1	5% hazy	
	1430	90	0-3	15%	

DATE	TIME	TEMP °C	WIND SPEED	CLOUD COVER %	NOTES
5/12/05	1530	90	0-3	15%	
	1732	89	1-3	15%	
	1835	84	2-5	10%	
5/13/05	0542	52	0-1	80%	
	0726	59	0-1	60%	

Edwards AFB MGS Trapping

DATE	GRID	INVESTIGATOR(S)	
5/9/05	22	ASSISTANT(S)	~~[illegible]~~

TIMES	✓	START	END	NOTES
OPENING		0640	0745	
CHECK #1		1020	1120	
CHECK #2		1400	1500	
CHECK #3	✓	1715	1815	← Sprinkle
CHECK #4				

Use the ✓ to indicate when the traps were closed

SPECIES	TRAP #	SEX	WT (g)	A/SA/J	REPRO	COMMENTS
AGS	B22	M		A	N	

Edwards AFB MGS Trapping

DATE	GRID	INVESTIGATOR(S)
5/10/05	22	D. LAABS
		ASSISTANT(S)

TIMES	✓	START	END	NOTES
OPENING		0600	0700	
CHECK #1		1000	1100	
CHECK #2		1345	1445	
CHECK #3	✓	1730	1830	
CHECK #4				

Use the ✓ to indicate when the traps were closed

SPECIES	TRAP #	SEX	WT (g)	A/SA/J	REPRO	COMMENTS
AOS	C13	M		A	Y	
AOS	B15	M		A	N	

Edwards AFB MGS Trapping

DATE	GRID	INVESTIGATOR(S)
5/11/05	22	D. LAABS
		ASSISTANT(S)

TIMES	✓	START	END	NOTES
OPENING		0630	0730	
CHECK #1		1030	1130	
CHECK #2		1430	1530	
CHECK #3	✓	1730	1830	
CHECK #4				

Use the ✓ to indicate when the traps were closed

SPECIES	TRAP #	SEX	WT (g)	A/SA/J	REPRO	COMMENTS
AOS	D15	F		A	Y	
AGS	B17	F		A	Y	
AGS	D16	J		F	N	
AGS	B15	[illegible]				RECAP

Edwards AFB MGS Trapping

DATE	GRID	INVESTIGATOR(S)
5/12/05	22	ASSISTANT(S)

TIMES	✓	START	END	NOTES
OPENING		0645	0745	
CHECK #1		1045	1145	
CHECK #2		1445	1545	
CHECK #3	✓	1730	1830	
CHECK #4				

Use the ✓ to indicate when the traps were closed

SPECIES	TRAP #	SEX	WT (g)	A/SA/J	REPRO	COMMENTS
AOS	A7	F		J	N	
AOS	A12	F		J	N	

Edwards AFB MGS Trapping

DATE	GRID	INVESTIGATOR(S)
5/13/05	22	D. LAABS
		ASSISTANT(S)

TIMES	✓	START	END	NOTES
OPENING		0645	0745	
CHECK #1		1045	1145	
CHECK #2	✓	1410	1600	← 90°
CHECK #3				
CHECK #4				

Use the ✓ to indicate when the traps were closed

SPECIES	TRAP #	SEX	WT (g)	A/SA/J	REPRO	COMMENTS
AOS	A7	F		J	N	

Grid 23

Mohave Ground Squirrel (MGS) Survey and Trapping Form

PART IB - GRID INFORMATION

Project Name: EAFB MGS 2005 Grid #: 23

Property Owner: EAFB

UTM Coordinates of grid corners (NAD 83)

NW corner		NE corner		SE corner		SW corner	
Easting	Northing	Easting	Northing	Easting	Northing	Easting	Northing
0412642	3864885	0412642	3864833	0412292	3864148	0412204	3864216

PART II - GENERAL HABITAT DESCRIPTION

Vegetation

dominant perennials: Acamptopappus sphaerocephalus; Larrea tridentata; Grayia spinosa; Ericameria cooperi; Hymenoclea salsola; Ambrosia dumosa; Lycium andersonii; Tetradymia

other perennials: Eriogonum fasciculatum; Ephedra

dominant annuals: Lasthenia; Amsinckia; Erodium cicutarium; Astragalus (tiny, blue) sp. Phacelia (violet) parryi; Schismus barb.; Poa secunda; Bromus madrit

other annuals: Pectocarya sp.; Linanthus parryi (?); Chaenactis sp.; Mirabilis sp. Taylorhiza tortifolia; Platystemon californicus; Chaenactis sp.; Cymopterus sp (very uncommon)

Land Forms (i.e. mesa, bajada, washes): Bajada - several dirt roads on this grid

Soils Description: Sandy/loamy (gravelly component)

Elevation: ~2550 Slope: Moderate Gentle facing +/- N

1 photo from center/ends of grid → Done

Mohave Ground Squirrel (MGS) Survey and Trapping Form

PART III - WEATHER

Project Name: Edwards MGS

Property Owner: US Air Force

Data Taken by: K. Simon

DATE	TIME	TEMP °F	WIND SPEED mph	CLOUD COVER %	NOTES
4/18/05	0655	42	1-3	0% hazy	
	1000	53	5-10		
	1420	62	7-12		
	1730	65	10-15		
4/19/05	0700	42	2-8	0% hazy	
	1045	49	5-10		
	1500	59	5-12		
	1745	62	5-15		
4/20/05	0715	54	0-4	0% hazy	
	0835	55	2-5		
	1315	68	2-8		
	1730	69	3-10		
4/21/05	0700	60	0-2	0% hazy	
	0810	62	0-2		
	0905	63	0-2		
	1700	77			
	1815	76			
	1210	74			
	1430	76			
4/22/05	0600	50	0-2	95%	
	0700	53			
	1105	74			
	1230	77			

Edwards AFB MGS Trapping

DATE	GRID	INVESTIGATOR(S)	Steve Montgomery
4/13/05	23	ASSISTANT(S)	—

TIMES	✓	START	END	NOTES
OPENING	✓	~0730	~0845	~65°F 1730 → 10-15 mph (9 vets 20+) clear
CHECK #1	✓	1020	1200	
CHECK #2	✓	1420	1555	
CHECK #3	✓	1735	1855	
CHECK #4				

Use the ✓ to indicate when the traps were closed

SPECIES	TRAP #	SEX	WT (g)	A/SA/J	REPRO	COMMENTS
Check #1	No	captures				
Check #2	No	caps				
Check #3	No	caps				

Edwards AFB MGS Trapping

DATE	GRID	INVESTIGATOR(S)
4/19/05	23	N Montgomery
		ASSISTANT(S)

TIMES	✓	START	END	NOTES
OPENING	✓	0700	0800	1800
CHECK #1	✓	1100	1205	
CHECK #2	✓	1400	1515	
CHECK #3	✓	1705	1803	
CHECK #4				

Use the ✓ to indicate when the traps were closed

SPECIES	TRAP #	SEX	WT (g)	A/SA/J	REPRO	COMMENTS
~~ok~~ AMLE	D4	F	94	A	Prg. nipples	- green mark tag head
Recs 142 = No caps.						

Edwards AFB MGS Trapping

DATE	GRID	INVESTIGATOR(S)	S. Montgomery
4/20/05	23	ASSISTANT(S)	—

TIMES	✓	START	END
OPENING	✓	0709	0811
CHECK #1	✓	~~1100~~ 1205	1305
CHECK #2	✓	1800	1900
CHECK #3			
CHECK #4			

NOTES

0704 → 45F
w.spd. ~ 5-10 mph

of dense housing area

this site is ~ 200 m. ~ 300 m. west

Use the ✓ to indicate when the traps were closed

SPECIES	TRAP #	SEX	WT (g)	A/SA/J	REPRO	COMMENTS
CHECK #1						
SP ~~BA~~ (Cal. grd. sq.)	A23	very large likely ♂?		A		released unmarked (no glove for hand trig)
~~No caps~~						
CHECK #2						
Am lev	B23	M	99	A	scrotal	
Am lev.	D5	F	52	j	inactive	repro'd – nipp. trig

Edwards AFB MGS Trapping

DATE	GRID	INVESTIGATOR(S)
4/21/05	23	S. Montgo
		ASSISTANT(S) K. Allison, Dave Cooley, Mark Allabach

TIMES	✓	START	END
OPENING	✓	0700	0750
CHECK #1	✓	1100	~1200
CHECK #2	✓	1700	1805
CHECK #3			
CHECK #4			

NOTES ~0700 → 60F, 0-2 mph

78F, 3-5 mph,

Use the ✓ to indicate when the traps were closed

SPECIES	TRAP #	SEX	WT (g)	A/SA/J	REPRO	COMMENTS
Check #1						
Check #2						
Sporm. beecheyi	A24	—	—		Released	—

Edwards AFB MGS Trapping

DATE	GRID	INVESTIGATOR(S)
4/22/05	22	ASSISTANT(S)

TIMES	✓	START	END	NOTES
OPENING	✓	0700	0805	
CHECK #1	✓	1130	1235	
CHECK #2 + p/u	✓	1500	1630	
CHECK #3				
CHECK #4				

Use the ✓ to indicate when the traps were closed

SPECIES	TRAP #	SEX	WT (g)	A/SA/J	REPRO	COMMENTS
ch #1 No caps						
ch #2 No caps						

Grid 29

Mohave Ground Squirrel (MGS) Survey and Trapping Form

PART IB - GRID INFORMATION

Project Name: EAFB **Grid #:** 29

Property Owner: US Air Force

UTM Coordinates of grid corners (NAD 83)

D25 ~~NW~~ corner		A25 ~~NE~~ corner		A1 ~~SE~~ corner		D1 ~~SW~~ corner	
Easting	Northing	Easting	Northing	Easting	Northing	Easting	Northing
0412377	3862464	0412438	3862544	0411816	386315	0411753	3863083

PART II - GENERAL HABITAT DESCRIPTION

Vegetation

dominant perennials: creosote, burrobush, goldenbush, tetradymia

other perennials: spiny hopsage, winterfat, cheesebush, goldenheads, lycium andersonii, ephedra nevadensis, cholla, buckwheat

dominant annuals: erodium, astragalus, gold fields, peppergrass, brome, gracelia, cymopterus, Mojave aster

other annuals: cymopterus, bluedicks, wishboneplant, Gilia sp., pincushion

Land Forms (i.e. mesa, bajada, washes): bajada on 2 sides of a small ridge

Soils Description: gravelly sand to rocky

Elevation 750m **Slope** 5-20%

Mohave Ground Squirrel (MGS) Survey and Trapping Form

PART III - WEATHER

Project Name: Edwards MGS

Property Owner: US Air Force

Data Taken by: K. Simon

DATE	TIME	TEMP °F	WIND SPEED mph	CLOUD COVER %	NOTES
4/18/05	0655	42	1-3	0% hazy	
	1000	53	5-10		
	1420	62	7-12		
	1730	65	10-15		
4/19/05	0700	42	2-8	0% hazy	
	1045	49	5-10		
	1500	59	5-12		
	1745	62	5-15		
4/20/05	0715	54	0-4	0% hazy	
	0835	55	2-5		
	1315	68	2-8		
	1730	69	3-10		
4/21/05	0700	60	0-2	0% hazy	
	0810	62	0-2		
	0905	63	0-2		
	1700	77			
	1815	76			
	1210	74			
	1430	76			
4/22/05	0600	50	0-2	95%	
	0700	53			
	1105	74			
	1230	77			

Edwards AFB MGS Trapping

DATE	GRID	INVESTIGATOR(S) K. Simon
18 April 2005	29	ASSISTANT(S) E. Whitfield

TIMES	✓	START	END	NOTES
OPENING		0705	0830	
CHECK #1		1015	1110	
CHECK #2		1420	1505	
CHECK #3	✓	1730	1808	
CHECK #4				

Use the ✓ to indicate when the traps were closed

SPECIES	TRAP #	SEX	WT (g)	A/SA/J	REPRO	COMMENTS
AMLE	D10	F		A	lactating	
AMLE	B4	M		A	Scrotal	1750

Edwards AFB MGS Trapping

DATE	GRID	INVESTIGATOR(S) K. Simon
19 April 2005	29	ASSISTANT(S)

TIMES	✓	START	END	NOTES
OPENING		0705	0800	
CHECK #1		1035	1110	
CHECK #2		1415	1506	
CHECK #3	✓	1720	1815	
CHECK #4				

Use the ✓ to indicate when the traps were closed

SPECIES	TRAP #	SEX	WT (g)	A/SA/J	REPRO	COMMENTS
AMLE	C13	M		A	scrotal	fleas

Edwards AFB MGS Trapping

DATE	GRID	INVESTIGATOR(S)	
20 April 2005	29	ASSISTANT(S)	S Montgomery

TIMES	✓	START	END	NOTES
OPENING	✓	0720	0830	1640 → 5-8 mph ~72F
CHECK #1	✓	1210	1305	
CHECK #2	✓	1640	1750	
CHECK #3				
CHECK #4				

Use the ✓ to indicate when the traps were closed

SPECIES	TRAP #	SEX	WT (g)	A/SA/J	REPRO	COMMENTS
AMLE	C5	F		A		1240
chK#2	B11		Cnemidophorus.			W. whiptail Ad

Edwards AFB MGS Trapping

Page ___ of ___

DATE	GRID	INVESTIGATOR(S) K. Simon
21 April 2005	29	ASSISTANT(S)

TIMES	✓	START	END	NOTES
OPENING		0710	0805	
CHECK #1		1215	1310	
CHECK #2	✓	1720	1815	
CHECK #3				
CHECK #4				

Use the ✓ to indicate when the traps were closed

SPECIES	TRAP #	SEX	WT (g)	A/SA/J	REPRO	COMMENTS
Check #1 - no captures						
AMLE X	C12					1740
AMLE	D11	F		J		1755

Edwards AFB MGS Trapping

DATE	GRID	INVESTIGATOR(S)
22 April 2005	29	K. Simon, S. Montgomery
		ASSISTANT(S)

TIMES	✓	START	END	NOTES
OPENING		0608	0710	
CHECK #1		1101	1220	
CHECK #2	✓			
CHECK #3				
CHECK #4				

Use the ✓ to indicate when the traps were closed

SPECIES	TRAP #	SEX	WT (g)	A/SA/J	REPRO	COMMENTS
whiptail	B5					1130

Grid 45

Mohave Ground Squirrel (MGS) Survey and Trapping Form

PART IB - GRID INFORMATION

Project Name: EAFB **Grid #:** 45

Property Owner: USAF

UTM Coordinates of grid corners (NAD 83)

NW corner D1		NE corner D25		SE corner A25		SW corner A1	
Easting	Northing	Easting	Northing	Easting	Northing	Easting	Northing
415304	3856223	414868	3855554	414950	3855480	415397	3856193

PART II - GENERAL HABITAT DESCRIPTION

Vegetation

dominant perennials: Atriplex sp.,

other perennials: Yucca brevifolia, Ephedra nevadensis, Acamptopappus sphaerocephalus, Haplopappus sp.

dominant annuals: Schismus barbatus

other annuals:

Land Forms (i.e. mesa, bajada, washes): Flat / Playas

Soils Description

Elevation **Slope**

Mohave Ground Squirrel (MGS) Survey and Trapping Form

PART III - WEATHER

Project Name: Edwards MGS

Property Owner: US Air Force

Data Taken by: K. Simon

DATE	TIME	TEMP °F	WIND SPEED mph	CLOUD COVER %	NOTES
4/18/05	0655	42	1-3	0% hazy	
	1000	53	5-10		
	1420	62	7-12		
	1730	65	10-15		
4/19/05	0700	42	2-8	0% hazy	
	1045	49	5-10		
	1500	59	5-12		
	1745	62	5-15		
4/20/05	0715	54	0-4	0% hazy	
	0835	55	2-5		
	1315	68	2-8		
	1730	69	3-10		
4/21/05	0700	60	0-2	0% hazy	
	0810	62	0-2		
	0905	63	0-2		
	1700	77			
	1815	76			
	1210	74			
	1430	76			
4/22/05	0600	50	0-2	95%	
	0700	53			
	1105	74			
	1230	77			

Edwards AFB MGS Trapping

DATE	GRID	INVESTIGATOR(S) D. LAABS
4/18/05	45	ASSISTANT(S)

TIMES	✓	START	END	NOTES
OPENING		0700	0800	
CHECK #1		1100	1200	
CHECK #2		1445	1545	
CHECK #3	✓	1730	1830	
CHECK #4				

Use the ✓ to indicate when the traps were closed

SPECIES	TRAP #	SEX	WT (g)	A/SA/J	REPRO	COMMENTS
AGS	B-18	M		A	Y	

Edwards AFB MGS Trapping

DATE	GRID	INVESTIGATOR(S)
4/19/05	45	D. LAABS
		ASSISTANT(S)

TIMES	✓	START	END	NOTES
OPENING		0700	0800	
CHECK #1		1030	1130	
CHECK #2		1430	1530	
CHECK #3	✓	1730	1830	
CHECK #4				

Use the ✓ to indicate when the traps were closed

SPECIES	TRAP #	SEX	WT (g)	A/SA/J	REPRO	COMMENTS
AOS	B-18	M		A	Y	
AGS	B-16	M		A	Y	

Edwards AFB MGS Trapping

DATE	GRID	INVESTIGATOR(S) D.LAABS
4/20/05	45	ASSISTANT(S)

TIMES	✓	START	END	NOTES
OPENING		0630	0730	
CHECK #1		1030	1130	
CHECK #2		1430	1530	
CHECK #3	✓	1730	1830	
CHECK #4				

Use the ✓ to indicate when the traps were closed

SPECIES	TRAP #	SEX	WT (g)	A/SA/J	REPRO	COMMENTS
AGS	D25	M		A	Y	
AGS	B16	F		A	Y	

Edwards AFB MGS Trapping

Page 1 of 1

DATE	GRID	INVESTIGATOR(S) D. LAABS
4/21 kos	45	ASSISTANT(S)

TIMES	✓	START	END	NOTES
OPENING		0630	0730	
CHECK #1		1030	1130	
CHECK #2		1430	1530	
CHECK #3	✓	1730	1830	
CHECK #4				

Use the ✓ to indicate when the traps were closed

SPECIES	TRAP #	SEX	WT (g)	A/SA/J	REPRO	COMMENTS

Edwards AFB MGS Trapping

DATE	GRID	INVESTIGATOR(S) D. LAABS
4/22/05	45	ASSISTANT(S)

TIMES	✓	START	END	NOTES
OPENING		0645	0745	
CHECK #1		1045	1145	
CHECK #2	✓	1445	1700	← Rain
CHECK #3				
CHECK #4				

Use the ✓ to indicate when the traps were closed

SPECIES	TRAP #	SEX	WT (g)	A/SA/J	REPRO	COMMENTS
AGS	A20	M		A	Y	
	A18	M		F	N	

Grid 48

Mohave Ground Squirrel (MGS) Survey and Trapping Form

PART IB - GRID INFORMATION

Project Name: EAFB **Grid #:** 48

Property Owner: USAF

UTM Coordinates of grid corners (NAD 83)

A25 NW corner		D25 NE corner		D1 SE corner		A-1 SW corner	
Easting	Northing	Easting	Northing	Easting	Northing	Easting	Northing
417209	3855314	417309	3855273	417024	3854543	416938	3854575

PART II - GENERAL HABITAT DESCRIPTION

Vegetation

dominant perennials: Atriplex

other perennials: Lycium andersonii, Ephedra nevadensis, Yucca brevifolia,

dominant annuals: Schismus barbatus, Lasthenia californica, Amsinkia tessellata

other annuals: Atriplex phyllostegia, Bromus sp, Cuscopsis, Chaenactis, Erodium, Gilia,

Land Forms (i.e. mesa, bajada, washes): Flat

Soils Description

Elevation 2280' **Slope**

2005

Mohave Ground Squirrel (MGS) Survey and Trapping Form

PART III - WEATHER

Project Name: Edwards AFB

Property Owner: US Air Force

Data Taken by: H. Clark, K. Simon

DATE	TIME	TEMP °C (SOIL/AIR)	WIND SPEED	CLOUD COVER %	NOTES
4/4/05	1235	18/17	9 mph	15	
"	1415	15	8-12	5	
4-5-05	0815	9.3	Ø-1.1	Ø	end check 1
4-5-05	0630	40°F	Ø-1	Ø	Start check 1
5 APR 05	0930	9/14	4	0	
"	1152	12/24	9	0	
"	1400	18/28	10	0	
"	1630	17/24	10	0	
6 APR 05	0630	12/9	2	18	
6 APR 05	0800	14/10	3	15	
"	1100	12/21	7	60	
"	1230	13/28	5	55	
"	1430	17/26	6	55	
"	1530	15/29	4	55	
"	1730	14/27	5	40	
7 APR 05	0600	14/11	2	5	
"	0750	13/14	7	2	
"	1000	12/21	21	10	
"	1100	15/23	22	30	
"	1415	19/22	20-27	98	
"	1512	19/21	22	98	
"	1743	23/19	22	70	
8 APR 05	0630	11/8.9	5-8	1	
"	0750	11/7	12-15	1	
"	1105	13/17	5-15	0	

DATE	TIME	TEMP °C (OIL / AIR)	WIND SPEED	CLOUD COVER %	NOTES
8 APL 05	1205	18/19	8-15	0	
"	1430	19/21	10-16	80	
"	1640	18/21	10-15	80	

Edwards AFB MGS Trapping

Page 1 of 1

DATE	GRID	INVESTIGATOR(S)	D. LAABS
4/4/05	48	ASSISTANT(S)	B. STEIN

TIMES	✓	START	END	NOTES
OPENING		1300	1340	
CHECK #1	✓	1700	1730	
CHECK #2				
CHECK #3				
CHECK #4				

Use the ✓ to indicate when the traps were closed

SPECIES	TIME	TRAP #	SEX	WT (g)	A/SA/J	REPRO	COMMENTS	RECAP
AGS	1710	A-14	M		A	Y		N

Edwards AFB MGS Trapping

Page 1 of 1

DATE	GRID	INVESTIGATOR(S)
4/5/05	48	D. LAABS
		ASSISTANT(S)

TIMES	✓	START	END	NOTES
OPENING		0645	0745	Ø Captures
CHECK #1		1015	1115	
CHECK #2		1330	1430	
CHECK #3	✓	1720	1820	
CHECK #4				

Use the ✓ to indicate when the traps were closed

SPECIES TIME	TRAP #	SEX	WT (g)	A/SA/J	REPRO	COMMENTS RECAP

Edwards AFB MGS Trapping

DATE	GRID	INVESTIGATOR(S)
4/6/05	48	D. LAABS
		ASSISTANT(S)

TIMES	✓	START	END	NOTES
OPENING		0630	0730	
CHECK #1		1015	1120	
CHECK #2		1345	1445	
CHECK #3	✓	1720	1825	
CHECK #4				

Use the ✓ to indicate when the traps were closed

SPECIES	TIME	TRAP #	SEX	WT (g)	A/SA/J	REPRO	COMMENTS	RECAP
AGS	1100	D-4	♂		A	Y		N
AGS	1720	A-25	♀		A	Y		N

Edwards AFB MGS Trapping

Page 1 of 1

DATE	GRID	INVESTIGATOR(S)
4/7/05	48	D. LAABS
		ASSISTANT(S)

TIMES	✓	START	END	NOTES
OPENING		0630	0720	
CHECK #1		1015	1113	
CHECK #2		1330	1430	
CHECK #3	✓	1715	1810	
CHECK #4				

Use the ✓ to indicate when the traps were closed

SPECIES	TIME	TRAP #	SEX	WT (g)	A/SA/J	REPRO	COMMENTS	RECAP
AGS	1035	B-7	♂		A	Y		N
AGS	1430	D.25	♂		A	Y		N

Edwards AFB MGS Trapping

Page 1 of 1

DATE	GRID	INVESTIGATOR(S)
4/8/05	48	D. LAABS
		ASSISTANT(S)

TIMES	✓	START	END	NOTES
OPENING		0645	0745	
CHECK #1		1030	1130	
CHECK #2	✓	1430	1700	← Rain
CHECK #3				
CHECK #4				

Use the ✓ to indicate when the traps were closed

SPECIES	TRAP #	SEX	WT (g)	A/SA/J	REPRO	COMMENTS RECAP

Grid 52

Mohave Ground Squirrel (MGS) Survey and Trapping Form

PART IB - GRID INFORMATION

Project Name: EAFB MGS HQA **Grid #:** 52

Property Owner: EAFB

Photo's Yes

UTM Coordinates of grid corners (NAD 83)

NW corner		NE corner		SE corner		SW corner	
Easting	Northing	Easting	Northing	Easting	Northing	Easting	Northing
0413761	3853013	0414515	3852601	0414459	3852505	0413698	3852910

PART II - GENERAL HABITAT DESCRIPTION

Vegetation

dominant perennials mesquite, joshua tree, atriplex

other perennials sage

dominant annuals amsinkia (sp?),

other annuals phacelia,

Disturbances historic dumping, homestead, old fence-line.

Land Forms (i.e. mesa, bajada, washes) some large playas, lots of small playas

Soils Description sandy except in playas

Elevation 2259' (according to etrex GPS) **Slope** flat

Mohave Ground Squirrel (MGS) Survey and Trapping Form

PART III - WEATHER

Project Name: Edwards MGS

Property Owner: US Air Force

Data Taken by: K. Simon

DATE	TIME	TEMP °C	WIND SPEED mph	CLOUD COVER %	NOTES
4/18/05	0655	42	1-3	0% hazy	
	1000	53	5-10		
	1420	62	7-12		
	1730	65	10-15		
4/19/05	0700	42	2-8	0% hazy	
	1045	49	5-10		
	1500	59	5-12		
	1745	62	5-15		
4/20/05	0715	54	0-4	0% hazy	
	0835	55	2-5		
	1315	68	2-8		
	1730	69	3-10		
4/21/05	0700	60	0-2	0% hazy	
	0810	62	0-2		
	0905	63	0-2		
	1700	77			
	1815	76			
	1210	74			
	1430	76			
4/22/05	0600	50	0-2	95%	
	0700	53			
	1105	74			
	1230	77			

Edwards AFB MGS Trapping

DATE	GRID	INVESTIGATOR(S)	M. Allaback
4/18/05	52	ASSISTANT(S)	C. Murphy

TIMES	start temp	✓	START	END	NOTES
OPENING	55		0710	0820	SCR = scrotal
CHECK #1	69		1110	1149	
CHECK #2	70		1443	1515	
CHECK #3	64	✓	1732	1808	
CHECK #4					

Use the ✓ to indicate when the traps were closed

SPECIES	TIME	TRAP #	SEX	WT (g)	A/SA/J	REPRO	COMMENTS	RECAP?
AGS	1145	A8	M	—	A	SCR		
AGS	1801	A8	M		A	SCR		

Post-It® Fax Note 7671

To KATHY SIMON	Date 4/26/05 # of pages ▸ 7
Co./Dept.	From M. Allaback
Phone #	Co.
Fax #	Phone # 831 662 3938
	Fax #

Edwards AFB MGS Trapping

DATE	GRID	INVESTIGATOR(S)
4/19/05	52	M. Allabaugh
		ASSISTANT(S): None

TIMES	start temp	✓	START	END	NOTES
OPENING	42°F		0625	0658	→Run to open; park ½ mile from grid
CHECK #1	58		1030	1132	
CHECK #2	67		1440	1530	
CHECK #3	64	✓	1740	1830	
CHECK #4					

Use the ✓ to indicate when the traps were closed

SPECIES	TIME	TRAP #	SEX	WT (g)	A/SA/J	REPRO.	COMMENTS	RECAP?
							Ø captures today	

Edwards AFB MGS Trapping

DATE	GRID	INVESTIGATOR(S)	M. Allabaugh
4/20/05	52	ASSISTANT(S)	NONE

TIMES	start temp	✓	START	END	NOTES
OPENING	33°		0638	0728	→ Did not run (must use boots); fresh bait each trap; 46° @ 0738
CHECK #1	64		1033	1129	
CHECK #2	76		1438	1536	
CHECK #3	73	✓	1732	1826	Traps in or along large playas; ~~||||~~ ~~||||~~ ~~||||~~ / = 16%
CHECK #4					

Use the ✓ to indicate when the traps were closed

SPECIES	TIME	TRAP #	SEX	WT (g)	A/SA/J	REPRO	COMMENTS	RECAP?
AGS	1111	B8	F	—	A	LAC		
AGS	1453	C7	M	—	A	SCROTAL		
AGS	1501	D21	F	—	A	NO		
AGS	1504	C25	M	—	A	SCR		
AGS	1750	C25	M	—	A	NO		

Edwards AFB MGS Trapping

DATE	GRID	INVESTIGATOR(S)	M. Allnback
4/21/05	52	ASSISTANT(S)	NONE

TIMES	start temp	✓	START	END	NOTES
OPENING	32°		0635	0718	46° @ 0740
CHECK #1	64°		1032	1120	
CHECK #2	80°		1435	1518	
CHECK #3	80°	✓	1735	1830	
CHECK #4					

Use the ✓ to indicate when the traps were closed

SPECIES TIME	TRAP #	SEX	WT (g)	A/SA/J	REPRO	COMMENTS RECAP?
						Ø captures

Edwards AFB MGS Trapping

DATE	GRID	INVESTIGATOR(S) · M. Allaback
4/22/05	52	ASSISTANT(S) None

TIMES	start temp	✓	START	END	NOTES
OPENING	46°		0645	0730	No wind
CHECK #1	70°		1055	1155	
CHECK #2	64	✓	1500	1700	strong wind, light rain
CHECK #3					
CHECK #4					

Use the ✓ to indicate when the traps were closed

SPECIES TIME	TRAP #	SEX	WT (g)	A/SA/J	REPRO	COMMENTS RECAP?
						6 captures

Grid 54

Mohave Ground Squirrel (MGS) Survey and Trapping Form

PART IB - GRID INFORMATION

Project Name: EAFB MGS 2005 **Grid #:** 54

Property Owner: Edwards Air Force Base (EAFB) Photos Taken Yes (ends of grid)

UTM Coordinates of grid corners (NAD 83)

NW corner		NE corner		SE corner		SW corner	
Easting	Northing	Easting	Northing	Easting	Northing	Easting	Northing
0419775	3853185	0420470	3852777	0420408	3852690	0419733	3853040

PART II - GENERAL HABITAT DESCRIPTION

Vegetation

dominant perennials: Joshua trees (East end), atriplex

other perennials:

dominant annuals: amsinkia, erodium, red brome,

other annuals: Mariposa lily

Disturbances: Paved Road W end, dirt track ~ bisects site

Land Forms (i.e. mesa, bajada, washes): small playas

Soils Description: sandy

Elevation: 2276' (according to Etrex GPS) **Slope:** flat

2005

Mohave Ground Squirrel (MGS) Survey and Trapping Form

PART III - WEATHER

Project Name: Edwards AFB

Property Owner: US Air Force

Data Taken by: H. Clark, K. Simon

DATE	TIME	TEMP °C SOIL/AIR	WIND SPEED	CLOUD COVER %	NOTES
4/4/05	1235	18/17	9 mph	15	
"	1415	15	8-12	5	
4-5-05	0815	9.3	Ø-1.1	Ø	end check 1
4-5-05	0630	40°F	Ø-1	Ø	Start check 1
5 APR 05	0930	9/14	4	0	
"	1152	12/24	9	0	
"	1400	18/28	10	0	
"	1630	17/24	10	0	
6 APR 05	0630	12/9	2	18	
6 APR 05	0800	14/10	3	15	
"	1100	12/21	7	60	
"	1230	13/28	5	55	
"	1430	17/26	6	55	
"	1530	15/29	4	55	
"	1730	14/27	5	40	
7 APR 05	0600	14/11	2	5	
"	0750	13/14	7	2	
"	1000	12/21	21	10	
"	1100	15/23	22	30	
"	1415	19/22	20-27	98	
"	1512	19/21	22	98	
"	1743	23/19	22	70	
8 APR 05	0630	11/8.9	5-8	1	
"	0730	11/7	12-15	1	
"	1105	13/17	5-15	0	

DATE	TIME	TEMP °C (DIL / AIR)	WIND SPEED	CLOUD COVER %	NOTES
8 APL 05	1205	18 / 19	8-15	0	
"	1430	19 / 21	10-16	80	
"	1640	18 / 21	10-15	80	

Edwards AFB MGS Trapping

DATE	GRID	INVESTIGATOR(S)
04 April 2005	54	D. Laabs, M. Allaback
		ASSISTANT(S) D. Mitchell

TIMES	✓	START	END	NOTES
OPENING		0915	1130	
CHECK #1		1415	1550	
CHECK #2 CLOSE	✓	1725	1800	
CHECK #3				
CHECK #4				

Use the ✓ to indicate when the traps were closed

SPECIES	TRAP #	SEX	WT (g)	A/SA/J	REPRO	COMMENTS
AGS 1520	C9	♂		A	SCR	SLIGHTLY BLOOD FR FOOT

Edwards AFB MGS Trapping

DATE	GRID	INVESTIGATOR(S)	M. Allback
4/5/05	54	ASSISTANT(S)	Ø

TIMES	Start Temp	✓	START	END	NOTES
OPENING	40°F		0655	0730	RAN TO OPEN ALL TRAPS in 35 min
CHECK #1	60°F		1040	1122	AGS = Antelope ground squirrel
CHECK #2	74°F		1411	1518	SCR = Sceloporus
CHECK #3	73°F	✓	1732	1823	LAC = Lactating
CHECK #4					

Use the ✓ to indicate when the traps were closed

SPECIES	TIME	TRAP #	SEX	WT (g)	A/SA/J	REPRO	COMMENTS RECAP
AGS	1055	C22	F	—	A	LAC?	swollen nipples, not preg
AGS	1450	B5	M	—	A	SCR	
AGS	1515	C22	M	—	A	SCR	
AGS	1753	C9	M	—	A	SCR	
AGS	1810	B25	F	—	A	LAC?	swollen nipples, not preg
AGS	1822	A1	M	—	A	SCR	

Edwards AFB MGS Trapping

DATE	GRID	INVESTIGATOR(S)	M. Allaback
4/6/05	54	ASSISTANT(S)	—

TIMES	Start Temp	✓	START	END	NOTES
OPENING	38° F		0629	0704	Run to open; add fresh bait
CHECK #1	61°		1029	1114	
CHECK #2	80°		1422	1511	
CHECK #3	81°	✓	1712	1804	
CHECK #4					

Use the ✓ to indicate when the traps were closed

SPECIES	TIME	TRAP #	SEX	WT (g)	A/SA/J	REPRO	COMMENTS	RECAP
AGS	1048	C18	—	—	A	—		
AGS	1054	C5	M	—	A	SCR		
AGS	1057	C1	M	—	A	SCR		
AGS	1102	A10	F	—	A	LAC?	swollen Nips	
AGS	1430	D7	F	—	A	PREG		
AGS	1450	A8	M	—	A	SCR		
AGS	1452	A10	F	—				✓
AGS	1500	B25	M	—	A	SCR		
AGS	1800	A5	M	—	A	SCR		

Edwards AFB MGS Trapping

DATE	GRID	INVESTIGATOR(S)	M. Allaback
4/7/05	54	ASSISTANT(S)	—

TIMES	start temp	✓	START	END	NOTES
OPENING	46°F		0611	0640	Run to open
CHECK #1	71°		1011	1059	
CHECK #2	72°		1411	1509	20-30 mph wind
CHECK #3	60°		1742	1830	
CHECK #4					

Use the ✓ to indicate when the traps were closed

SPECIES	TIME	TRAP #	SEX	WT (g)	A/SA/J	REPRO	COMMENTS	RECAP
AGS	1043	A14	M	—	A	SCR		
AGS	1502	B14	M	—	A	SLR	healthy individual from Day 1	✓
AGS	1507	B6	—	—	A	—		✓
AGS	1809	B16	F	—	A	LACP	swollen nips	

Edwards AFB MGS Trapping

Page 1 of 1

DATE	GRID	INVESTIGATOR(S)	M. Allback
4/8/05	54	ASSISTANT(S)	—

TIMES	Start Temp	✓	START	END	NOTES
OPENING	40°		0624	0709	Run to open; windy already
CHECK #1	58°		1030	1120	
CHECK #2	69°	✓	1500	1630	
CHECK #3					
CHECK #4					

Use the ✓ to indicate when the traps were closed

SPECIES	TIME	TRAP #	SEX	WT (g)	A/SA/J	REPRO	COMMENTS	RECAP
AGS	1035	D7	M	—	A	SCR		
AGS	1542	C5	—	—	—	—		✓

Grid 59

Mohave Ground Squirrel (MGS) Survey and Trapping Form

PART IB - GRID INFORMATION

Project Name: Edwards AFB **Grid #:** 59

Property Owner: US Air Force

UTM Coordinates of grid corners (NAD 83)

A25 ~~NW~~ corner #5		A25 ~~NE~~ corner #6		D1 ~~SE~~ corner #4		D25 ~~SW~~ corner #3	
Easting	Northing	Easting	Northing	Easting	Northing	Easting	Northing
0415828	3848954	0415388	3849715	0415316	3849677	0415708	3848951

PART II - GENERAL HABITAT DESCRIPTION

Vegetation

dominant perennials: sage, mesquite

other perennials: winterfat, Joshua tree, A. canescens

dominant annuals: woolly sunflower, erodium, amsinkia, brome

other annuals: lacy Phacelia, silver puff, desert dandelion, bunch grass, astragalus

Land Forms (i.e. mesa, bajada, washes): clay pans + small sandy dunes

Soils Description: hard clay pan and sandy dunes

Elevation: 700 meters **Slope**: 0 - 15%

2005

Mohave Ground Squirrel (MGS) Survey and Trapping Form

PART III - WEATHER

Project Name: Edwards AFB

Property Owner: US Air Force

Data Taken by: H. Clark, K. Simon

DATE	TIME	TEMP °C SOIL/AIR	WIND SPEED	CLOUD COVER %	NOTES
4/4/05	1235	18/17	9 mph	15	
"	1415	16	8-12	5	
4-5-05	0815	9.3	Ø-1.1	Ø	end check 1
4-5-05	0630	40°F	Ø-1	Ø	Start check 1
5 APR 05	0930	9/24	4	0	
"	1152	12/24	9	0	
"	1400	18/28	10	0	
"	1630	17/24	10	0	
6 APR 05	0630	12/9	2	18	
6 APR 05	0800	14/10	3	15	
"	1000	12/21	7	60	
"	1230	18/28	5	55	
"	1430	17/26	6	55	
"	1530	15/29	4	55	
"	1730	14/27	5	40	
7 Apr 05	0600	14/11	2	5	
"	0750	18/14	7	2	
"	1000	12/21	21	10	
"	1100	15/23	22	30	
"	1415	19/22	20-27	98	
"	1512	19/21	22	98	
"	1743	23/19	22	70	
8 APR 05	0630	11/8.9	5-8	1	
"	0730	11/7	12-15	1	
"	1105	13/17	5-15	0	

DATE	TIME	TEMP °C (OIL / AIR)	WIND SPEED	CLOUD COVER %	NOTES
8 APL 05	1205	18 / 19	8-15	0	
"	1430	19 / 21	10-16	70	
"	1640	18 / 21	10-15	80	

Edwards AFB MGS Trapping

DATE	GRID	INVESTIGATOR(S)
04 April 2005	59	K. Simon, H. Clark
		ASSISTANT(S) D. Mitchell, B. Stein

TIMES	✓	START	END	NOTES
OPENING		0900	1100	
CHECK #1		1315	1350	
CHECK #2	✓	1745	1815	
CHECK #3				
CHECK #4				

Use the ✓ to indicate when the traps were closed

SPECIES	TRAP #	SEX	WT (g)	A/SA/J	REPRO	COMMENTS
Check #1 - no captures						
Check #2 - no captures						
~~Check #3 - no captures~~						

Edwards AFB MGS Trapping

DATE	GRID	INVESTIGATOR(S) K. Simon
05 April 2005	59	ASSISTANT(S)

TIMES	✓	START	END	NOTES
OPENING		0700	0755	
CHECK #1		1050	1140	
CHECK #2		1415	1502	
CHECK #3	✓	1720	1820	
CHECK #4				

Use the ✓ to indicate when the traps were closed

SPECIES	TRAP #	SEX	WT (g)	A/SA/J	REPRO	COMMENTS
Check #1 - no captures						
Check #2 - no captures						
Check #3 - no captures						

Edwards AFB MGS Trapping

DATE	GRID	INVESTIGATOR(S)
06 April 2005	59	K. Simon
		ASSISTANT(S)

TIMES	✓	START	END	NOTES
OPENING		0700	0805	
CHECK #1		1055	1155	
CHECK #2		1440	1530	
CHECK #3	✓	1720	1830	
CHECK #4				

Use the ✓ to indicate when the traps were closed

SPECIES	TRAP #	SEX	WT (g)	A/SA/J	REPRO	COMMENTS
AMLE	C2	F		A	pregnant	@1102
Check #2 - no captures						
Check #3 - no captures						

Edwards AFB MGS Trapping

DATE	GRID	INVESTIGATOR(S) K. Simon
07 April 2005	59	ASSISTANT(S)

TIMES	✓	START	END	NOTES
OPENING		0655	0745	
CHECK #1		1030	1110	
CHECK #2		1410	1505	
CHECK #3	✓	1745	1820	
CHECK #4				

Use the ✓ to indicate when the traps were closed

SPECIES	TRAP #	SEX	WT (g)	A/SA/J	REPRO	COMMENTS
AMLE	A15	F		A	pregnant	1102
Check #2 - no captures						
Check #3 - no captures						

Edwards AFB MGS Trapping

DATE	GRID	INVESTIGATOR(S) K-Simon
08 April 2005	59	ASSISTANT(S)

TIMES	✓	START	END	NOTES
OPENING		0645	0750	
CHECK #1		1030	1120	
CHECK #2	✓	1430	1800	
CHECK #3				
CHECK #4				

Use the ✓ to indicate when the traps were closed

SPECIES	TRAP #	SEX	WT (g)	A/SA/J	REPRO	COMMENTS
Check #1 – no captures						
Check #2 – no captures						

Grid 60

Mohave Ground Squirrel (MGS) Survey and Trapping Form

PART IB - GRID INFORMATION

Project Name: Edwards AFB **Grid #:** G0

Property Owner: US Air Force

500 pt 416420E 3850308 N OPT. 416417E 3849827 N

UTM Coordinates of grid corners (NAD 83)

NW corner		NE corner		SE corner		SW corner	
Easting	Northing	Easting	Northing	Easting	Northing	Easting	Northing
416427	3850653	416562	3850642	416473	3849811	416366	3849847

PART II - GENERAL HABITAT DESCRIPTION

Vegetation Halophytic Phase Saltbush Scrub & Mesquite woodland

dominant perennials Saltbush, mesquite, ~~[illegible]~~, rabbitbush
Atriplex, Joshua tree

other perennials Lule fat

dominant annuals Fiddleneck, Lana spp. or brome; Goldfields, erodium
cicutarium;

other annuals Suncups, lupin

Land Forms (i.e. mesa, bajada, washes) SMALL CLAYPANS, HOMESTEAD FENCES
washes, Mesquite woodland

Soils Description Sandy

Elevation _____ **Slope** 0-3%

2005

Mohave Ground Squirrel (MGS) Survey and Trapping Form

PART III - WEATHER

Project Name: Edwards AFB

Property Owner: US Air Force

Data Taken by: H. Clark, K. Simon

DATE	TIME	TEMP °C SOIL/AIR	WIND SPEED	CLOUD COVER %	NOTES
4/4/05	1235	18/17	9 mph	15	
"	1415	16	8-12	5	
4-5-05	0815	9.3	Ø-1.1	Ø	end check 1
4-5-05	0630	40°F	Ø-1	Ø	Start check 1
5 APR 05	0930	9/14	4	0	
"	1152	12/24	9	0	
"	1400	18/28	10	0	
"	1630	17/24	10	0	
6 APR 05	0630	12/9	2	18	
6 APR 05	0800	14/10	3	15	
"	1100	12/21	7	60	
"	1230	13/28	5	55	
"	1430	17/26	6	55	
"	1530	15/29	4	55	
"	1730	14/27	5	40	
7 APR 05	0600	14/11	2	5	
"	0750	13/14	7	2	
"	1000	12/21	21	10	
"	1100	15/23	22	30	
"	1415	19/22	20-27	98	
"	1512	19/21	22	98	
"	1743	23/19	22	70	
8 APR 05	0630	11/8.9	5-8	1	
"	0730	11/7	12-15	1	
"	1105	13/17	5-15	0	

SOIL AIR

DATE	TIME	TEMP °C	WIND SPEED	CLOUD COVER %	NOTES
8 APL 05	1205	18/19	8-15	0	
"	1430	19/21	10-16	80	
"	1640	18/21	10-15	80	

Edwards AFB MGS Trapping

DATE	GRID	INVESTIGATOR(S)
04 April 2005	60	K. Simon, H. Clark
		ASSISTANT(S) D Mitchell, B. Stein

TIMES	✓	START	END	NOTES
OPENING		0830	1000	
CHECK #1		1235	1315	
CHECK #2	✓	1730	1755	
CHECK #3				
CHECK #4				

Use the ✓ to indicate when the traps were closed

SPECIES	TRAP #	SEX	WT (g)	A/SA/J	REPRO	COMMENTS
AMLE	B3	F		A	NV	

Edwards AFB MGS Trapping

DATE	GRID	INVESTIGATOR(S) HOWARD CLARK
5 APRIL 05	60	ASSISTANT(S)

TIMES	✓	START	END	NOTES
OPENING		0630	0800	
CHECK #1		1030	1130	
CHECK #2		1415	1515	
CHECK #3	✓	1700	1800	
CHECK #4				

Use the ✓ to indicate when the traps were closed

SPECIES	TRAP #	SEX	WT (g)	A/SA/J	REPRO	COMMENTS
AMLE	A25	F		A		TEATS PROTRUDE
"	D15	M		A	SCRO	

Edwards AFB MGS Trapping

DATE	GRID	INVESTIGATOR(S)
6 APR 05	60	HOWARD CLARK
		ASSISTANT(S)

TIMES	✓	START	END	NOTES
OPENING		0630	0900	
CHECK #1		1100	1200	
CHECK #2		1430	1530	
CHECK #3		1730	1830	
CHECK #4				

Use the ✓ to indicate when the traps were closed

SPECIES	TRAP #	SEX	WT (g)	A/SA/J	REPRO	COMMENTS
AMLE	A1	F		A	NON	
"	A4	M		A	NON	
"	A6	M		A	NON	

Edwards AFB MGS Trapping

DATE	GRID	INVESTIGATOR(S)	HOWARD CLARK
7 APR 05	60	ASSISTANT(S)	BRAD HALEY (OBSERVER)

TIMES	✓	START	END	NOTES
OPENING		0600	0730	SAW SPINY LIZARD & MOJAVE GREEN ON GRID.
CHECK #1		1030	1100	
CHECK #2		1400	1500	
CHECK #3		1745	1850	
CHECK #4				

Use the ✓ to indicate when the traps were closed

SPECIES	TRAP #	SEX	WT (g)	A/SA/J	REPRO	COMMENTS
AMLE	C18	M		A	SCRO	

Edwards AFB MGS Trapping

DATE	GRID	INVESTIGATOR(S)	HOWARD CLARK
8 APL 05	60	ASSISTANT(S)	BRAD IDACEY (OBSERVER)

TIMES	✓	START	END	NOTES
OPENING		0630	0730	
CHECK #1		1105	1205	
CHECK #2		1430	1640	
CHECK #3				
CHECK #4				

Use the ✓ to indicate when the traps were closed

SPECIES	TRAP #	SEX	WT (g)	A/SA/J	REPRO	COMMENTS
AMLE	D23	M		A	SCRO	
"	B16	M		A	SCRO	

Appendix C

Incidental Sensitive Species Sightings

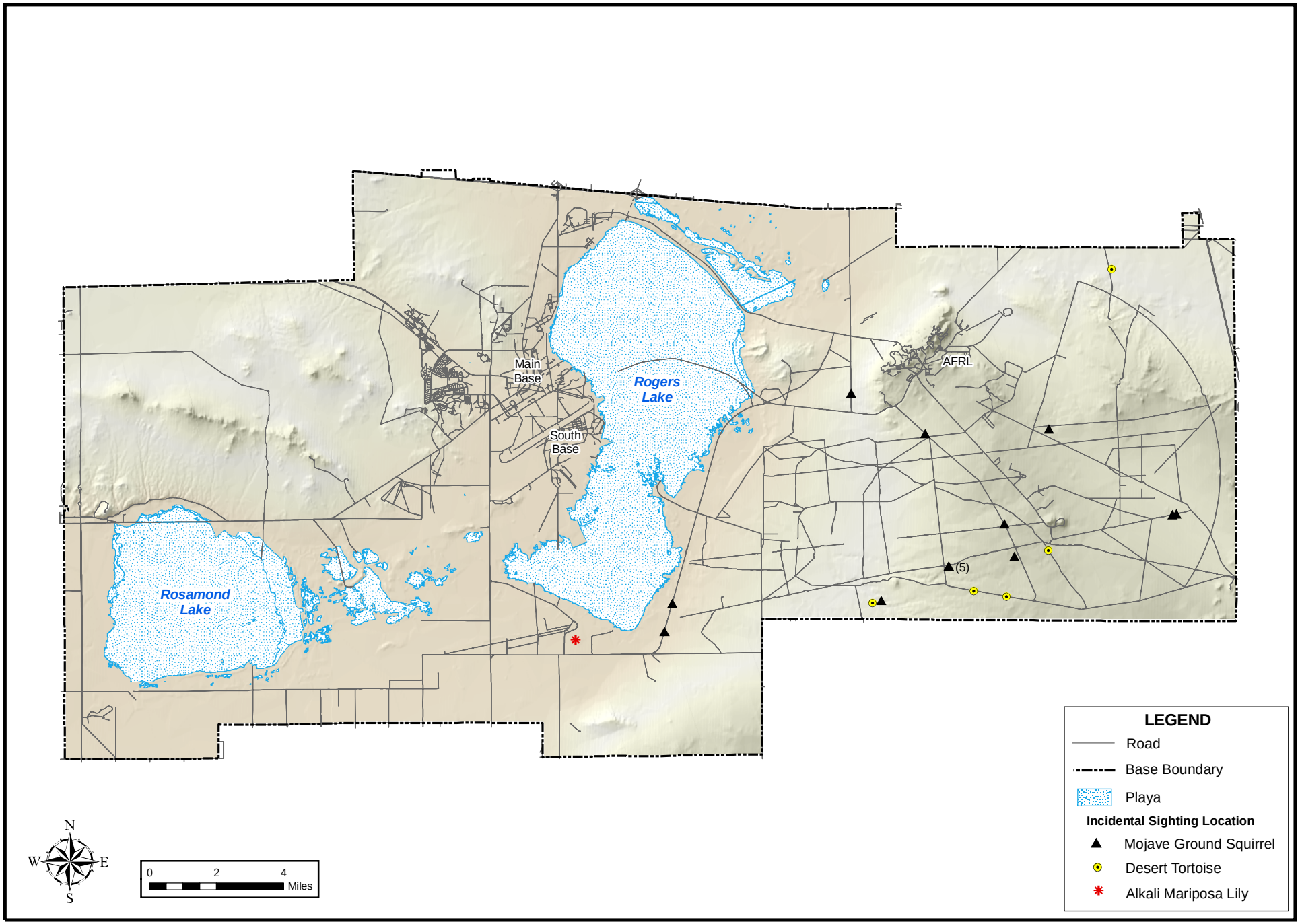

Figure C-1 Incidental Sensitive Species Sightings

Table C-1
Edwards AFB
Observations - Incidental Sensitive Species

Date	Observer	SC	Comments	Grid	Location (UTM NAD 83)		
					Easting	Northing	Error
5/12/2005	KBS	BUOW	On N. fence line of gravel pit		412166	3868058	5
5/13/2005	DRM	CHOC	1.4 Mile E. of Jackrabbit				
5/13/2005	SJM	GAWI	Ad/ Center, on dirt rd; MGS grid 9				
5/13/2005	DRM	GHOW	~80 M East of Grid 49 OM stake	49			
5/12/2005	DM	GOAG	Basking in sun on dirt road; male ~11 in.		442960	3856876	7 m
5/12/2005	NK	GOAG	~14" length; Male; on Rd.		439364	38549736	
5/9/2005	DRM; CM ; NK; DM	GOAG	2; Adult PR; Male~12 in.; Female~10 in. (healthy); South Range Road		440937	3854688	
5/13/2005	DRM	GOAG	Palette and fresh scat ~ 250 M Grid 49 West trap line	49	434993	3854251	
6/3/2005	DM	GOAG	Observed off transect on way back to car	6	446305	3870552	
4/4/2005	MA	LCTH	Singing @ 1730 (Grid 54)	54	419770	3853254	15 ft
4/5/2005	KBS	LOSH	Pair observed on MGS grid #59 near trap D19	39	415616	3849142	4
6/4/2005	DRM	LOSH	At 500m	3	440144	3870255	
5/13/2005	DRM	MAFL	K2 Rd. 1 mile North of Photo Res.				
4/4/2005	DRM	MALI	Location taken by Allaback on 4/5 ~ 50 M diameter	54	420255	3852799	15 ft
4/20/2005	MA	PRFA	Circling and vocalizing	52	413809	3852862	22 ft.
5/10/2005	MA	SAHE	1.5 M North of Rich/ Mercury intersection				
	UNK.	SEOW	Nest (?); From the large Yucca (SW) of the foundation; Bearing 244* (declination 0*); tall yucca with 3 branches; Westerly-most on eadge of valley; orange flagging on small yucca 40 M South of target	49	434993	3854251	
6/4/2005	DRM; DM	SPMO	New; Male; SA; Non Repro; CBS/JTW-Wintefat occasional	30	443039	3862927	
5/11/2005	DRM; KBS	SPMO	New; Female; A; Repro; Lactating	46	438163	3856015	
5/13/2005	DRM; KBS	SPMO	New; Unk; Juv; Photos Taken	46	438163	3856015	
5/13/2005	DRM; KBS	SPMO	New; Female; Juv; Non Repro; 71.5 grams	46	438163	3856015	
5/13/2005	KBS	SPMO	Crossing Rich Rd.		433579	3864492	5
5/9/2005	DRM; CM; NK; DM	SPMO	Numerous vocalizations ~ 80-150 M (Grid 46)	46	438163	3856015	
5/13/2005	DRM; KBS	SPMO	New; Male; juv; Non Repro	46	438163	3856015	
5/13/2005	DRM	SPMO	Along road; into Downfall; more than one individual		437114	3862532	6m
5/13/2005	DRM	SPMO	Observed - at least 2 juv.		441328	3857030	
5/13/2005	DRM	SPMO	Vocalization @ Grid 49 OM stake 1830 hrs	49	434993	3854251	
5/12/2005	KBS	SPMO	Lactating Female		438169	3856155	
5/13/2005	SJM	SPMO	Juv		438175	3856144	
5/14/2005	DL	SPMO	Juv		438185	3856148	
6/3/2005	DRM	SPMO	Vocalization		449111	3858559	5
6/6/2005	DRM; KLM	SPMO	Adult (1); Mercury Blvd.; HPSS/JTW; Crossed Road		424895	3854506	
6/7/2005	DRM; KLM	SPMO	Juv. MGS (2); B4 Rd. 0916; CBS/JTW-Winterfat		440861	3858161	
6/22/2005	DRM	SPMO	2.1 Miles north of Mercury/Rich Rd. intersection on Rich Rd.				
5/12/2005	DM	SPMO	hit on road; MGS vocalization heard on both sides of the road		424514	3853168	6 m
	UNK.	SPMO			448941	3858517	
4/18/2005	MA	SWHA	~1/2 mile North of Grid 52; fly-by	52	413736	3853787	15 ft
5/11/2005	CM	TATA	Potential den or foraging location		437604	3860894	14 ft.
5/11/2005	CM	TATA	Potential den (plugged burrow with claw marks)		437536	3860907	14 ft.
4/6/2005	MA	TATA	Numerous foraging burrows from last night (Grid 54)		420394	3852786	14 ft.
5/11/2005	DRM	TATA	Adult; Running east from E. Berm K-2 Road		437697	3858609	
4/18/2005	MA	TRBL	Flying over Branch Mem Dr.; Numerous foraging flocks (35-40 inds	52	414363	3852684	15 ft.

TABLE C-1 LEGEND

Species - Incidental Sensitive Species		
SN	**CN**	**Species Code**
Athene cunicularia	burrowing owl	BUOW
Chionactis occipitalis	Western shovelnose	CHOC
Gambelia wislizenii	Leopard Lizard	GAWI
Bubo virginianus	great horned owl	GHOW
Gopherus agassizii	desert tortoise	GOAG
Toxostoma lecontei	Le Conte's thrasher	LCTH
Lanius ludovicianus	loggerhead shrike	LOSH
Masticohpus flagellum	coachwhip snake	MAFL
Calochortus striatus	Alkali Mariposa Lily	MALI
Falco mexicanus	prarie falcon	PRFA
Salvadora hexalepis	patchnose snake	SAHE
Asio flammeus	Short eared owl	SEOW
Spermophilus mohavensis	Mohave Ground Squirrel	SPMO
Buteo swainsoni	Swainson's hawk	SWHA
Taxidea taxus	American badger	TATA
Agelaius tricolor	Tricolored blackbird	TRBL

Surveyors		
FN	**LN**	**Initials**
Caleb	Murphy	CM
David	Laabs	DL
Danielle	Muir	DM
Don	Mitchell	DRM
Kathy	Buescher-Simon	KBS
Kristen	Mobraaten	KLM
Mark	Allaback	MA
Nick	Kautzman	NK
Steve	Montgomery	SJM
Unknown		UNK