

# **Appendix D-21**

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Mohave Ground Squirrel Results  
2006

# Mohave Ground Squirrel Trapping Results

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## FIELD SURVEY METHODS

We conducted our surveys according to the following recommended guidelines.

CALIFORNIA DEPARTMENT OF FISH AND GAME  
MOHAVE GROUND SQUIRREL SURVEY GUIDELINES  
(January 2003)

1. Visual surveys to determine Mohave ground squirrel activity and habitat quality shall be undertaken the period of 15 March through 15 April. All potential habitat on a project site shall be visually surveyed during daylight hours by a biologist who can readily identify the Mohave ground squirrel and the white-tailed antelope squirrel (*Ammospermophilus leucurus*).
2. If visual surveys do not reveal presence of the Mohave ground squirrel on the project site, standard small-mammal trapping grids shall be established in potential Mohave ground squirrel habitat. The number of grids will depend on the amount of potential habitat on the project site, as determined by the guidelines presented in paragraphs 4 and 5 of these guidelines.
3. For linear projects (for example, highways, pipelines, or electric transmission lines), each sampling grid shall consist of 100 Sherman live-traps (or equivalent; the minimum length of any trap is 12 inches) arranged in a rectangular pattern, 4 traps wide by 25 traps long, with traps spaced 35 meters apart along each of the four trap lines. At a minimum, one sampling grid of this type shall be established in each linear mile, or fraction thereof, of potential Mohave ground squirrel habitat along the project corridor.
4. For all other types of projects, one sampling grid consisting of 100 Sherman live-traps (or equivalent; the minimum length of any trap is 12 inches) shall be established for each 80 acres, or fraction thereof, of potential Mohave ground squirrel habitat on the project site. The traps shall be arranged in a 10 x 10 grid, with 35-meter spacing between traps.
5. Each sampling grid shall be trapped for a minimum five consecutive days, unless a Mohave ground squirrel is captured before the end of the five-day term on the grid or on another grid on the project site. If no Mohave ground squirrel is captured on a sampling grid on the project site in the first five-consecutive-day term, each sampling grid shall be sampled for a SECOND five-consecutive-day term. Trapping may be stopped before the end of the second term if a Mohave ground squirrel is captured on any sampling grid on the project site. If no Mohave ground squirrel is captured during the second five-consecutive-day term, each sampling grid shall be sampled for a THIRD five-consecutive-day term. The FIRST trapping term shall begin and be completed in the period of 15 March through 30 April. If a SECOND term is required, it shall begin at least two weeks after the end of the first term, but shall begin no earlier than 01 May, and shall be completed by 31 May. If a THIRD term is required, it shall begin at least two weeks after the end of the second term, but shall begin no earlier than 15 June, and shall be completed by 15 July. All trapping shall be conducted during appropriate weather conditions, avoiding periods of high wind, precipitation, and low temperatures (<50°F or 10°C).
6. For projects requiring two or more sampling grids, capture of a Mohave ground squirrel on any grid will establish presence of the species on the project site. Trapping may be stopped on all grids on the project site at that time. For linear projects, very large project sites, project sites characterized by fragmented or highly-heterogeneous habitats, or in other special circumstances, continued trapping may be necessary.
8. A maximum 100 traps shall be operated by each qualified biologist. Each trap shall be covered with a cardboard A-frame or equivalent non-metal shelter to provide shade. Trap and shelter orientation shall be on a north-south axis. All traps shall be opened within one hour of sunrise and may be closed beginning one hour before sunset. Traps shall be checked at least once every four hours to minimize heat stress to captured animals. When traps are open, temperature shall be measured at a location within the sampling grid, in the shade, and one foot (approx. 0.3 meters) above the ground at least once every hour. Traps shall be closed when the ambient air temperature at one foot above the ground in the shade exceeds 90°F (32°C). Trapping



### First Sampling Term

DATE	TIME	TEMP °F	CAPTURES		Cloud Cover		Wind speed (Km/hr)/Dir.	
			AGS	MGS	AM	PM	AM	PM
4./10/06	0700	48	15	0	5%	90%	10-15sw	0-5sw
	1600	58						
4/11/06	0700	49	15	0	80%	95%	0-5sw	0-5sw
	1800	64						
4/12/06	0700	55	18	0	1%	1%	0-5w	0-5sw
	1800	77						
4/13/06	0715	54	27	0	10%	10%	0-5w	0-5w
	1745	78						
4/14/06	0715	62	14	0	100%	70%	10-15sw	10-15sw
	1615	69						

### Second Sampling Term

DATE	TIME	TEMP °F	CAPTURES		Cloud Cover		Wind speed (Km/hr)/Dir.	
			AGS	MGS	AM	PM	AM	PM
5/16/06	0630	79	4	0	30%	15%	0-5sw	
	1100	90+						
5/17/06	0615	77	11	0	40%	50%	5-10w	0-5w
	1300	90+						
5/18/06	0630	75	11	0	1%	0%	0-5e	0-5w
	1100	90+						
5/19/06	0630	75	15	0	0%	1%	5-10sw	10-15sw
	1300	90+						
5/20/06	0615	78	16	0	5%	5%	0-5w	10-15s
	1430	86						

### Third Sampling Term

DATE	TIME	TEMP °F	CAPTURES		Cloud Cover		Wind speed (mi/hr)/Dir.	
			AGS	MGS	AM	PM	AM	PM
7/4/06	0520	71	10	0	1%		5-10w	
	1045	90+						
7/5/06	0543	75	10	0	0%		0-5w	
	1100	90+						
7/6/06	0545	71	17	0	0%		5-10w	
	1126	90+						
7/7/06	0542	68	13	0	0%		5-10w	
	1055	90+						
7/8/06	0537	75	8	0	0%		0-5nw	
	0942	90						

## REFERENCES AND LITERATURE CITED

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