BIOLOGICAL SURVEY REPORT

APN 007-043-041 & 042
LANCASTER, CALIFORNIA

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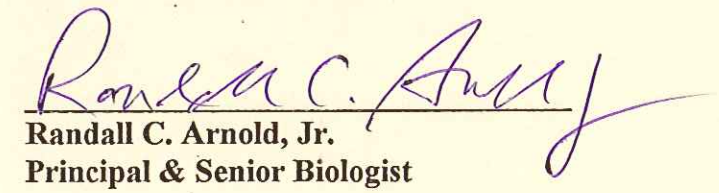
I hereby certify that the findings and conclusions presented in this report are accurate to the best of my knowledge.



Randall C. Arnold, Jr.
Principal & Senior Biologist

SUMMARY

Biological surveys were conducted on a site located in Lancaster, California to evaluate the site for the presence of desert tortoise (*Gopherus agassizii*), Mohave ground squirrel (*Spermophilus mohavensis*), burrowing owl (*Athene cunicularia*), sharp-shinned hawk (*Accipiter striatus*), and loggerhead shrike (*Lanius ludovicianus*). Surveys for these species were conducted as per guidelines established by U.S. Fish and Wildlife Service (USFWS) and/or California Department of Fish and Game (CDFG). This report provides a summary of the results of the surveys. Results of the surveys for these species are part of the baseline data necessary for consideration of the proposed project by the City of Lancaster and other regulatory agencies.

PROJECT LOCATION AND DESCRIPTION

The property site is approximately 26.6-acres in size and is located at the southwest corner of Avenue K and 30th Street East in Lancaster, California (Township 7 North, Range 11 West, Section 30) (Figures 1 and 2, Appendix A). The site is an old agricultural field and appears to have been utilize for production of various crops. The site supports a limited number of native plant species. Houses are located immediately north and east of the site, and vacant lands border the property on the south and west. The elevation of the site is about 2,425 feet, and the site is relatively flat with no prominent ridges on the property.

METHODOLOGIES

Desert Tortoise: Recent documentation from the U.S. Bureau of Land Management, USFWS, and CDFG were consulted to determine to what extent tortoises have been observed in the area. In addition, survey reports prepared by RCA Associates, Inc. for other projects in the area were reviewed prior to commencement of the field surveys. Following the literature review, the site was visited by biologists from RCA Associates, Inc. (Randy Arnold and Patti Moore) on December 29, 2004. Surveys for desert tortoises require the use of parallel transects separated by 10-meters in order to provide 100 percent coverage of a site. Transects were walked in a north-south direction until the entire site had been thoroughly checked for tortoises and tortoise sign (burrows, tracks, scats, etc.). Surveys were also conducted in the zone of influence (i.e., surrounding area) (ZOI) where possible. Specifically, ZOI surveys were conducted at intervals of 100, 300, and 600 feet (Private property and existing houses in the area preventing the ZOI surveys from being extended out to 4800 feet.). Weather conditions consisted of temperatures in the mid 50's (early AM) , wind speeds of about 10 MPH, and about 5 percent cloud coverage.

While conducting the tortoise surveys, particular emphasis was given to viewing the bases of bushes and other perennial plants, since tortoises tend to burrow into small hills and banks such as those at the base of woody plants. Any depressions or suspect burrows were closely scrutinized.

In addition, field notes were taken regarding native plant assemblages on the site, and the presence or absence of suitable tortoise foraging habitat was identified. The tortoise survey was conducted during a time when tortoises are inactive; however, a search by a qualified biologist will reveal evidence of the presence or absence of tortoises on the site and in the surrounding area. A survey combined with identification of the habitat on and surrounding a property will further reveal the status of the tortoise on a site and give a good indication of the potential for future use of the site by tortoises. See Appendix B for general information on the desert tortoise.

Mohave Ground Squirrel: The site was surveyed for the presence of winterfat and spiny hop-sage since these plants are frequently utilized by the Mohave ground squirrel. Although, CDFG now typically requires live-trapping surveys to definitively determine presence or absence, the presence or absence of these two plants does provide some indication whether a site is likely to be inhabited by Mohave ground squirrels. See Appendix B for background information on the Mohave ground squirrel.

Burrowing Owl: Survey protocol requires surveys to be performed from two hours before sunset to one hour after, or from one hour before sunrise to two hours after. Therefore, surveys were conducted at sunrise, during which transects were walked throughout the property until the entire site had been surveyed for owls. Survey protocol requires that the centerlines of the transects be no more than 30 meters apart to allow for 100 percent visual coverage. Due to the sparse vegetation on the site, 30-meter widths were sufficient to provide total coverage of the site.

Surveys were also conducted in areas surrounding the site out to a distance of about 150 meters (~500 feet) as per CDFG protocol to identify burrows or owls outside the project area. While conducting the surveys, emphasis was placed on evaluating any burrows (e.g., coyote, fox, ground squirrel, etc.) since burrowing owls typically utilize burrows which have been dug by other animals.

Sharp-shinned Hawk and Loggerhead Shrike: Surveys for these bird species were conducted in conjunction with those surveys performed for the desert tortoise, Mohave ground squirrel, and burrowing owl. The sharp-shinned hawk occurs primarily in mixed woodland habitats, which are absent from the site; although, it is occasionally seen in the High Desert area. Loggerhead shrikes typically hunt over open terrain and are occasionally seen in the Lancaster area perched on utility lines or other perches.

RESULTS - LITERATURE REVIEW

A review of existing data for the region indicates that the desert tortoise, Mohave ground squirrel, burrowing owl, sharp-shinned hawk and loggerhead shrike are known to occur in the general area. The desert tortoise is listed as a threatened species by CDFG and USFWS; whereas, the Mohave ground squirrel is listed as threatened by California and a special concern species by USFWS. The burrowing owl, sharp-shinned hawk, and loggerhead shrike are listed as a

California special concern species. The burrowing owl and loggerhead shrike are also classified as Federal special concern species. All five species have been documented in the High Desert; however, population levels are expected to be very low based on existing data.

RESULTS - FIELD SURVEYS

Descriptions of the vegetation and wildlife which occur on the site are provided below. Field notes are also provided in Appendix B.

Vegetation: The site has been disturbed by past agricultural activities; consequently, the site supports few native plant species. Dominant perennials included Russian thistle (*Salsola tragus*), and mustard (*Descurania pinnata*). Annuals included erodium (*Erodium* sp.), and Bermuda grass (*Cynodon dactylon*). Winterfat (*Kraschenikovia lanata*) and spiny hop-sage (*Grayia spinosa*) plants were not observed on the site.

General Wildlife: Antelope ground squirrels (*Ammospermophilus leucurus*) and California ground squirrels (Spermophilus beecheyi) were the only mammals observed during the field surveys; however, coyotes (*Canis latrans*) and Merriam's kangaroo rats (*Dipodomys merriami*) are likely to occur in the area. Ravens (*Corvus corax*) and American robins (Turdus migratorius) were the only birds observed. Reptiles likely to occur on the site include the side-blotched lizards (*Uta stansburiana*) and western whiptail lizards (*Cnemidophorus tigris*).

Desert Tortoise: No desert tortoises, or tortoise sign (e.g., burrows, tracks, scats) were observed on the property or in the surrounding area (i.e., zone of influence) (Table 1, Appendix A). The site is located in an area where tortoise population levels are expected to be low to moderate with only a few tortoises occurring in the general area, if any at all (NDDB 2004). In addition, past agricultural activities have significantly altered the habitat further reducing the potential for tortoises occurring on the site in the future.

Mohave Ground Squirrel: Winterfat and spiny hop-sage plants were not observed on the site, and as noted above, the site has been significantly disturbed by past agricultural activities. Based on the absence of plants typically utilized by the Mohave ground squirrel and the low quality habitat available for the species, it is the opinion of RCA Associates the site does not support populations of the species. In addition, the nearest documented sighting is about four miles southeast of the site (T6N, R11W, Section 3) (NDDB 2004).

Burrowing Owl: Surveys for the burrowing owl were conducted on December 29, 2004 to determine if suitable habitat for the species was present and if occupiable burrows were available for the owl. These surveys were conducted at sunrise in order to provide 100 percent coverage of the site. The distance between the transects was reduced were necessary to provide total coverage of the site. No burrowing owls were observed during the December 29, 2004 survey, nor were any occupiable burrows observed either on the site or in the surrounding area out to a distance of about 500 feet.

However, the species has been observed within about one mile of the site (T7N, R11W, Section 20) (NDDB 2004), and could potentially occur on the site in the future. Therefore, the City and CDFG may require pre-construction surveys prior to ground disturbance activities to ensure the species has not moved on to the site since the December 2004 surveys. Mitigation measures may also be required for the owl if the species is observed on the site during future surveys. These potential mitigations are outlined in the following section.

Sharp-shinned Hawk and Loggerhead Shrike: Neither the sharp-shinned hawk or loggerhead shrike were observed on the site, and there are no documented sightings of either species within the Lancaster East quadrangle (NDDB 2004). The sharp-shinned hawk occurs primarily in mixed woodland habitats, usually close to open areas where the species may forage. The site does not support any woodland areas nor are there any dense stands of trees adjacent to the site. Loggerhead shrikes are a relatively common resident and/or winter visitors to the High Desert, and the species has been observed in the general area. The species typically prefers open habitats with scattered shrubs, trees, and other potential perch sites (e.g., posts, utility lines, fences, etc.).

CONCLUSIONS AND MITIGATIONS

Desert Tortoise: Desert tortoises do not occur on the property site or within the immediate area (i.e., zone of influence) as determined by field surveys conducted on December 29, 2004, and it is very unlikely that tortoises will move onto the site in the near future due to the low population levels in the immediate, and the low quality habitat present on the site. No mitigations are recommend for this species at this time; however, if the species is observed during future development activities CDFG and USFWS should be contacted to discuss potential mitigations.

Sharp-shinned hawk and Loggerhead Shrike: Sharp-shinned hawks and loggerhead shrikes were not observed on the property site or within the immediate area, and no mitigations are recommended for these species at this time. However, the mobility of these species does not preclude them from occurring on the site in the future. If these species are detected on the site during future surveys, CDFG should be contacted to discuss suitable mitigation measures for these two species.

Mohave Ground Squirrel: The site does not supports native vegetation, and winterfat and spiny hop-sage plants were not observed during the field surveys. In addition, the site has been utilized for agricultural activities in the past, and the on-site habitat has been significantly altered. It is the opinion of RCA Associates the site does not support populations of the Mohave ground squirrel or potential habitat.

Burrowing Owl: The surveys conducted on the site and in the surrounding area did not identify any owls or occupiable burrows. However, the species has been recently observed within about one miles of the site; therefore, pre-construction surveys may be required as per City and CDFG requirements. The pre-construction surveys should be conducted no more than 30-days prior to

ground disturbing activities. If ground disturbing activities are delayed for more than 30-days, additional surveys may be required.

If owls are observed on the site during future surveys, mitigations which may be required to reduce impacts to less than significant may include the following:

(1) Occupied burrows should not be disturbed during the nesting season (February 1 through August 31) unless a qualified biologist approved by the Department verifies through non-invasive methods either: (1) the birds have not begun egg-laying and incubation; or (2) that juveniles from the occupied burrows are foraging independently and are capable of independent survival;

(2) To off-set the loss of foraging and burrow habitat on the project site, a minimum of 6.5 acres of burrowing owl habitat per pair or unpaired birds should be acquired and permanently protected;

(3) Existing unsuitable burrows should be enhanced or new burrows created at a ratio of 2:1 on the protected lands site; and

(4) The project proponent should provide funding for long-term management and monitoring of the protected land. A monitoring plan for the protected land should be required which includes success criteria, remedial measures, and annual reports to CDFG.

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Zeiner, D.C. 1990. California Wildlife. California Department of Fish and Game. Sacramento. 732 pp.

APPENDIX A

Figures and Tables
(Note: Zone of influence surveys were conducted out to ~600 feet.)

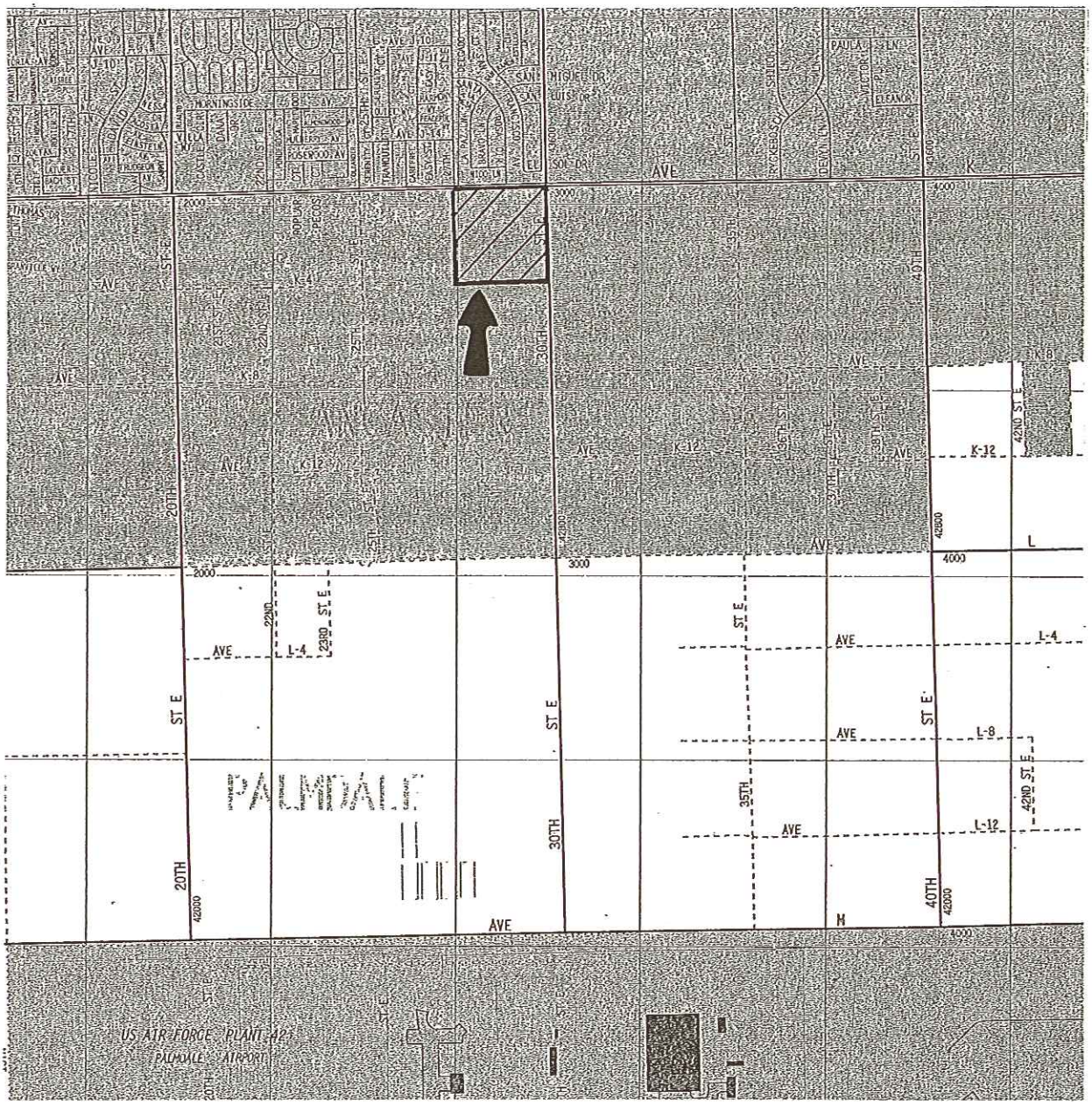

FIGURE 1

VICINITY MAP
N.T.S.
(Source: Thomas Bros. maps, 2003)

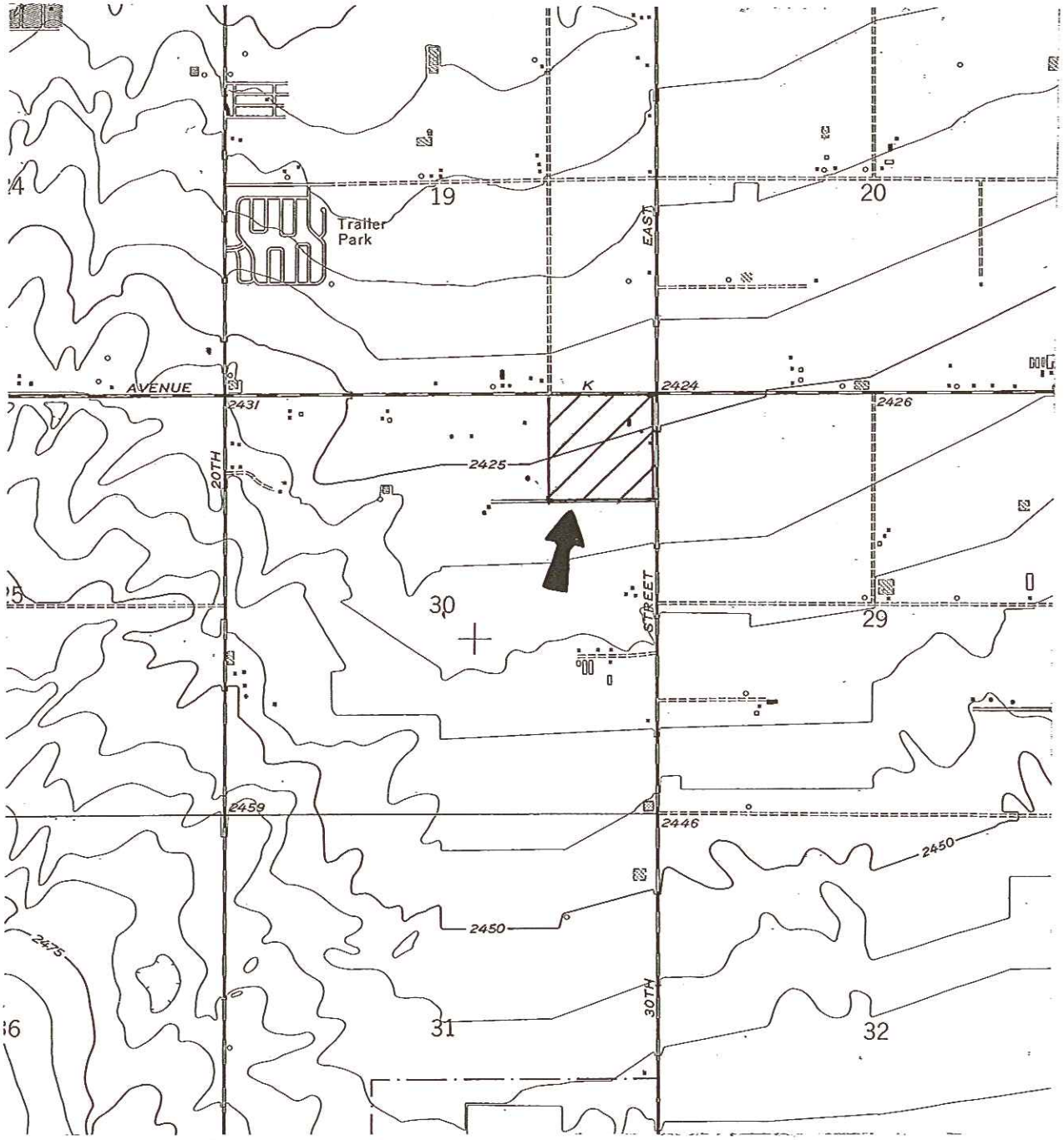

FIGURE 2

LOCATION OF THE SITE
N.T.S.
(Source: USGS Lancaster East, CA Quad., 1958)

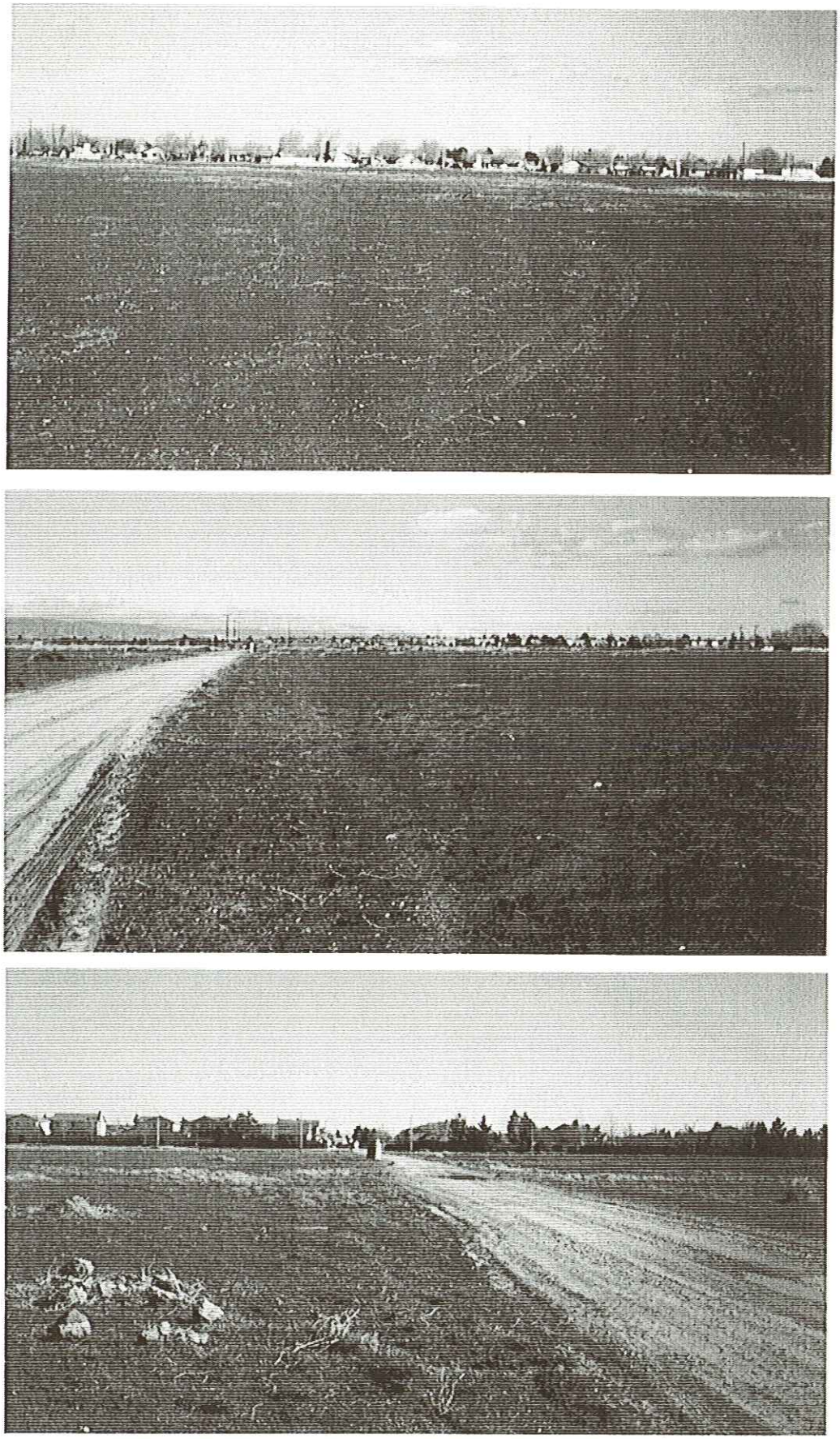

FIGURE 3
PHOTOGRAPH OF THE SITE

TABLE 1

M/D/Y
Date 12-29-04
Transect No. 1-34
State California
County —
City Lancaster
Recorder RA/DM
Address —
Project Name —
Type of Project —
Quad Name Lancaster East
Scale 7½'
Site Name —
T 7N R 11W Sec 30
¼ Sec NE ¼¼ Sec NE
UTM Zone —
Northing —
Easting —
Parcel No. 007-043-04 1-04.

DESERT TORTOISE HANDBOOK 1992:
FORM FOR PRESENCE-OR-ABSENCE AND CLEARANCE SURVEYS

Project Site |X| Zone of Influence | | — ft from Project Site
Transect Length: ~1000 ft Width: (30 ft) Other — ft Time —
Weather: Airtemp at: 5 cm ~50 °F Surface — °C Cloud cover 5 %
Rainfall 0 in Wind speed 10 MPH Rainfall in last 30 days ~1.0 in
Land Form (e.g., mesa, bajada, wash) Desert Plain
% Slope: high — low x Aspect N Elevation ~2425 ft
Soils Sandy alluvial / Disced
Vegetation: dominant perennials Russian thistle, mustard
dominant annuals Erodium, Bermuda grass
Adjacent Land Use: up to 1 mi Houses (north & east), vacant lands
Soils Sandy alluvial
Vegetation mixed shrub

Corrected Sign	Live Tortoises Adult/Juv.	TOTAL NUMBER OF Shelter Sites Pallet/Burrow/Den Active/Inactive [1]	Scats [2]	Shell Remains [3]
0	A= 0 J= 0	0	A= 0 J= 0 Unk= 0 M= 0 F= 0 Unk= 0	

Tracks	Eggshell Fragments	Drinking Sites	Courtship Rings	Other	Neotoma Middens w/sign	: w/o sign
0	0	0	0	0	0	: 0

SIGNS OF HUMAN DISTURBANCE - NUMBER AND TYPES SEEN

Tire Tracks	Human Footprints	Dog Sign	Trash	Dump Sites	Shotgun/ Rifle Shells	Blading	Ravens	Other
~30 0 HU	III	III	0	0	0	0	II	0

Zone of Influence

M/D/Y
Date 12-29-04
Transect No. 100
State California
County LA
City Lancaster
Recorder RA/BM/VA
Address —
Project Name —
Type of Project —
—
Quad Name Lancaster East
Scale 7½'
Site Name —
T 7N R 11W Sec 30
¼ Sec NE ¼¼ Sec —
UTM Zone —
Northing —
Easting —
Parcel No. 007-043-041/042

DESERT TORTOISE HANDBOOK 1992:
FORM FOR PRESENCE-OR-ABSENCE AND CLEARANCE SURVEYS

Project Site | | Zone of Influence |X| 100 ft from Project Site
Transect Length: 2200 ft Width: 30 ft Other — ft Time —
Weather: Airtemp at: 5 cm ~50 °F Surface — °C Cloud cover 5 %
Rainfall 0 in Wind speed Mod Rainfall in last 30 days ~1.0 in
Land Form (e.g., mesa, bajada, wash) Desert Plain
% Slope: high — low 1 Aspect N Elevation ~2425 ft
Soils Sandy alluvial
Vegetation: dominant perennials Creosote bush, Russian thistle,
dominant annuals Erodium, grasses, fiddleneck
Adjacent Land Use: up to 1 mi Homes, Vacant land
Soils Sandy alluvial
Vegetation mixed shrubs

Corrected Sign	Live Tortoises Adult/Juv.	TOTAL NUMBER OF Shelter Sites Pallet/Burrow/Den Active/Inactive [1]	Scats [2]	Shell Remains [3]
0	A= 0 J= 0	0		A= 0 J= 0 Unk= 0 M= 0 F= 0 Unk= 0

Tracks	Eggshell Fragments	Drinking Sites	Courtship Rings	Other	Neotoma Middens w/sign : w/o sign
0	0	0	0	0	0

SIGNS OF HUMAN DISTURBANCE - NUMBER AND TYPES SEEN

Tire Tracks	Human Footprints	Dog Sign	Trash	Dump Sites	Shotgun/ Rifle Shells	Blading	Ravens	Other
~35 off	1	III	0	0	0	0	III	0

Zone of Influence

M/D/Y
Date 12-29-04
Transect No. 300'
State California
County LA
City Lancaster
Recorder RA/SM/VR
Address —
Project Name —
Type of Project —
—
Quad Name Lancaster East
Scale 7½'
Site Name —
T 7N R 11W Sec 30
¼ Sec NE ¼¼ Sec —
UTM Zone —
Northing —
Easting —
Parcel No. 007-043-041/042

DESERT TORTOISE HANDBOOK 1992:
FORM FOR PRESENCE-OR-ABSENCE AND CLEARANCE SURVEYS

Project Site | | Zone of Influence |X| 300 ft from Project Site
Transect Length: ~2500 ft Width: 30 ft Other — ft Time —
Weather: Airtemp at: 5 cm ~50 °F Surface — °C Cloud cover 5 %
Rainfall 0 in Wind speed Calm Rainfall in last 30 days ~1.0 in
Land Form (e.g., mesa, bajada, wash) Desert Plain
% Slope: high — low 1 Aspect N Elevation ~2925 ft
Soils Sandy alluvial
Vegetation: dominant perennials Creosote bush, Russian thistle,
dominant annuals erodium, grasses, fiddleneck
Adjacent Land Use: up to 1 mi Houses, vacant land
Soils Sandy alluvial
Vegetation mixed shrub

Corrected Sign	Live Tortoises Adult/Juv.	TOTAL NUMBER OF Shelter Sites Pallet/Burrow/Den Active/Inactive [1]	Scats [2]	Shell Remains [3]
0	A= 0 J= 0	0	A= 0 J= 0 Unk= 0 M= 0 F= 0 Unk= 0	

Tracks	Eggshell Fragments	Drinking Sites	Courtship Rings	Other	Neotoma Middens w/sign	:w/o sign
0	0	0	0	0	0	: 0

SIGNS OF HUMAN DISTURBANCE - NUMBER AND TYPES SEEN

Tire Tracks	Human Footprints	Dog Sign	Trash	Dump Sites	Shotgun/ Rifle Shells	Blading	Ravens	Other
~25 OHV	0	0	0	0	0	0	0	0

Zone of Influence

M/D/Y
Date 12-29-04
Transect No. 600
State California
County LA
City Lancaster
Recorder RA/BM/VR
Address —
Project Name —
Type of Project —
—
Quad Name Lancaster East
Scale 7½'
Site Name —
T 7N R 11W Sec 30
¼ Sec NE ¼¼ Sec —
UTM Zone —
Northing —
Easting —
Parcel No. 007-043-041/042

DESERT TORTOISE HANDBOOK 1992:
FORM FOR PRESENCE-OR-ABSENCE AND CLEARANCE SURVEYS

Project Site | | Zone of Influence |X| 600 ft from Project Site
Transect Length: ~4000 ft Width: 30 ft Other — ft Time —
Weather: Airtemp at: 5 cm ~50°F Surface — °C Cloud cover 5 %
Rainfall 0 in Wind speed Light Rainfall in last 30 days ~1.0 in
Land Form (e.g., mesa, bajada, wash) Desert Plain
% Slope: high — low 1 Aspect N Elevation ~2925 ft
Soils Sandy alluvial
Vegetation: dominant perennials Creosote bush, Russian thistle,
dominant annuals erodium, grasses, fiddleneck
Adjacent Land Use: up to 1 mi Homes, vacant land
Soils Sandy alluvial
Vegetation mixed shrub

Corrected Sign	Live Tortoises Adult/Juv.	TOTAL NUMBER OF Shelter Sites Pallet/Burrow/Den Active/Inactive [1]	Scats [2]	Shell Remains [3]
0	A= 0 J= 0	0	A= 0 J= 0 Unk= 0 M= 0 F= 0 Unk= 0	

Tracks	Eggshell Fragments	Drinking Sites	Courtship Rings	Other	Neotoma Middens w/sign : w/o sign
0	0	0	0	0	0

SIGNS OF HUMAN DISTURBANCE - NUMBER AND TYPES SEEN

Tire Tracks	Human Footprints	Dog Sign	Trash	Dump Sites	Shotgun/ Rifle Shells	Blading	Ravens	Other
~40 dirt bike	0	1	0	1	0	0	11	0

APPENDIX B

Background Data

BACKGROUND INFORMATION

Desert Tortoise

The desert tortoise is the largest reptile in the arid southwest United States. It historically occupied a range that included a variety of desert communities in southeastern California, southern Nevada, western and southern Arizona, southwestern Utah, and through Sonora and northern Sinoloa, Mexico. Today populations are largely fragmented and studies indicate a steady and dramatic decline over most of its former range. Additionally, because tortoises have long been prized as pets, collecting of wild tortoises has further reduced the population. Wildlife biologists estimate that between 1880 and 1970, five to eight million tortoises were taken from the desert by collectors.

Recently, a highly contagious respiratory disease has infected tortoise populations, primarily in the western Mojave Desert region. While the disease seems to be mostly widespread in the western Mojave, cases have been documented in numerous widely scattered areas throughout the wider Mojave range of the tortoise. In one area of the western Mojave, the infection rate among individual tortoises increased from 9 to 52 percent based on surveys conducted between 1988 and 1989. Isolated cases are believed to have the potential to cause widespread infection over a short time period.

Given the continued habitat loss and the rapid decline in numbers of tortoises brought about by the disease, the U.S. Fish and Wildlife Service exercised its emergency authority and determined tortoise populations north and west of the Colorado River to be an endangered species under the Endangered Species Act of 1973, as amended. The emergency rule was published in the Federal Register on August 4, 1989, and remained in effect until April 1, 1990. On April 2, 1990, the U.S. Fish and Wildlife Service officially listed the desert tortoise as a threatened species under the Endangered Species Act of 1973, as amended.

Mohave Ground Squirrel

The Mohave ground squirrel has been listed by the California Department of Fish & Game as a threatened species, thereby giving the animal protection under the California Endangered Species Act. The species is known to occur in the western Mohave Desert in portions of four counties including Inyo, Kern, San Bernardino, and Los Angeles (Clark, D 1991).

The distribution of the Mohave ground squirrel is quite limited as compared to the distribution of other ground squirrel species (Hall, R. 1981 in Clark, D. 1991). The Mohave ground squirrel is found in several habitat types throughout the Mojave Desert including creosote bush scrub, saltbush scrub, and Joshua tree woodland communities. Degradation and destruction of the species' habitat and isolation of individual populations appear to be the primary factors in the species' decline (Clark, D. 1991).

Burrowing Owl

The burrowing owl is a yearlong resident of open, dry grassland and desert habitats. The species was formerly common throughout central and southern California; however, the species has seen a significantly reduction over the last few decades due to development activities, farming activities, predation by dogs and cats, and habitat destruction (Zeiner 1990). Conversion of grassland and desert habitats to agricultural fields and residential developments have apparently contributed to the greatest amount of habitat destruction in recent decades. The reduction in population levels was noted as early as the 1940s. Burrowing owls primarily prey upon insects; although, small mammals, lizards, birds, and carrion makeup a portion of the owls diet (Zeiner 1990). Burrowing owls typically utilize abandoned rodent burrows for roosting and nesting.

Sharp-shinned Hawk

The sharp-shinned hawk is a somewhat common migrant and winter resident throughout California and is found in some areas of the Mohave Desert where suitable habitat is present CFG 1990). The species typically occurs in dense stands of trees relatively close to open areas. It breeds in ponderosa pine forest and in riparian woodlands, and often forages at the edges of woodlands, hedgerows, brushy pastures and shorelines where migrating birds are found. Typically uses all types of habitats during the winter except for alpine, open prairies, and bare desert areas (CFG 1990).

Loggerhead Shrike

The loggerhead shrike is a relatively common and winter resident throughout California where it occurs in open habitats with scattered shrubs and trees (CFG 1990). Does not occur in heavily urbanized areas, but does occasionally in croplands (CFG 1990). In California, breeds from March to May and nests in densely foliage shrubs or trees.