

Appendix C: Biological Resources

**GENERAL BIOLOGY
FOR A 103-ACRE SITE NORTH OF THE
MILLIKEN SANITARY LANDFILL,
ONTARIO, CALIFORNIA**

Prepared for:

**Solid Waste Management Division
County of San Bernardino
222 West Hospitality Lane, 2nd Floor
San Bernardino, CA 92415-0017**

Prepared by:

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November 4, 2005

Biological Surveys

The property north of the Milliken Sanitary Landfill is located within critical habitat for the Delhi Sands Giant Flower-Loving Fly (*Rhaphiomidas terminatus abdominalis*), a federally endangered species.

Additional species of concern include the Burrowing Owl and the San Diego horned toad lizard, both listed as a "California Special Concern Species." The Burrowing Owl is a migratory bird also protected by the international treaty under the Migratory Bird Treaty Act of 1918, protected by State law under the California Fish and Game Code (CDFG Code No. 3513 and 3503.5), and is listed as a Federal Special Concern species.

A series of surveys to determine the presence or absence of the Delhi Sands Giant Flower-Loving Fly (DSF) was conducted per protocol developed by the U.S. Fish and Wildlife Service (USFWS). Per a report prepared in October 2004, DSF were not found to be present on the property after completing the protocol surveys (Osborne, October 15, 2004. *Second Year Focused Survey for Delhi Sands Flower-Loving Fly on a 103-acre Site North of the Milliken Sanitary Landfill, Ontario, California*).

Surveys for San Bernardino Kangaroo Rat (SBKR), another federally-endangered species, and Burrowing Owl were conducted in April 2005. SBKR was not found to be present on the site. However, several Burrowing Owls, possibly breeding/nesting on the property were discovered in several distinct locations (Tom Dodson & Associates, April 2005. *Focused Surveys for San Bernardino Kangaroo Rat and Burrowing Owl for a 103-acre Parcel North of Milliken Sanitary Landfill, City of Ontario, San Bernardino County, California*).

All of the above species have been known to thrive in sandy environments. The Milliken Landfill property has not been cleared of vegetation by the County. There are very few sections of the property that are void of, or have little, vegetation. The dense vegetation may be a factor in the absence of the DSF, SBKR, and the specific locations for the Burrowing Owl.

As of April 2005, it is the County's understanding that a new protocol survey for DSF may be required prior to development. The buyer/developer needs to satisfy itself as to the what, if any protocol, is required prior to development. Further, the Burrowing Owl may require relocation prior to development, grading or weed abatement. Again, the buyer/developer needs to satisfy itself as to all protocols for the noted species (and any other species), including but not limited to any additional survey and relocation requirements prior to development, grading, and weed abatement.

The County makes no guarantees that other endangered or threatened species or plants, or species or plants of concern, not studied in the above mentioned reports are not present on site. Further, the County makes no guarantees the State and/or Federal status of the above-studied species, or any others included or omitted from the above-mentioned reports, will not change by the time of sale or development. The buyer/developer needs to satisfy itself what, if any, biological evaluation in accordance with all State and Federal guidelines is necessary prior to weed abatement, grading maintenance, and final development.

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I hereby certify that the statements furnished above and in the attached exhibits present that data and information required for this biological evaluation, and that the facts, statements, and information presented are true and correct to the best of my knowledge and belief.



**Kendall H. Osborne
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Date

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- Osborne, K. H. 2003. Focused Survey for the Delhi Sands Giant Flower-loving Fly (*Rhaphiomidas terminatus abdominalis*) on a 103-acre site north of the Milliken Sanitary landfill, Ontario, California. Prepared for the Solid Waste Management Division County of San Bernardino.
- Osborne, K. H. 2004. Second Year Focused Survey for the Delhi Sands Giant Flower-loving Fly (*Rhaphiomidas terminatus abdominalis*) on a 103-acre site north of the Milliken Sanitary landfill, Ontario, California. Prepared for the Solid Waste Management Division County of San Bernardino.
- Osborne, K. H. 2005. Third Year Focused Survey for the Delhi Sands Giant Flower-loving Fly (*Rhaphiomidas terminatus abdominalis*) on a 103-acre site north of the Milliken Sanitary landfill, Ontario, California. Prepared for the Solid Waste Management Division County of San Bernardino.
- Tom Dodson and Associates. 2005. Focused Surveys for San Bernardino Kangaroo Rat (*Dipodomys merriami parvus*) (SBKR) and Burrowing Owl (*Athene cunicularia*) for a 103-Acre Parcel North of Milliken Sanitary Landfill, City of Ontario, San Bernardino County, California. Prepared for Lilburn Corp., San Bernardino, California.

7.0 FIGURES

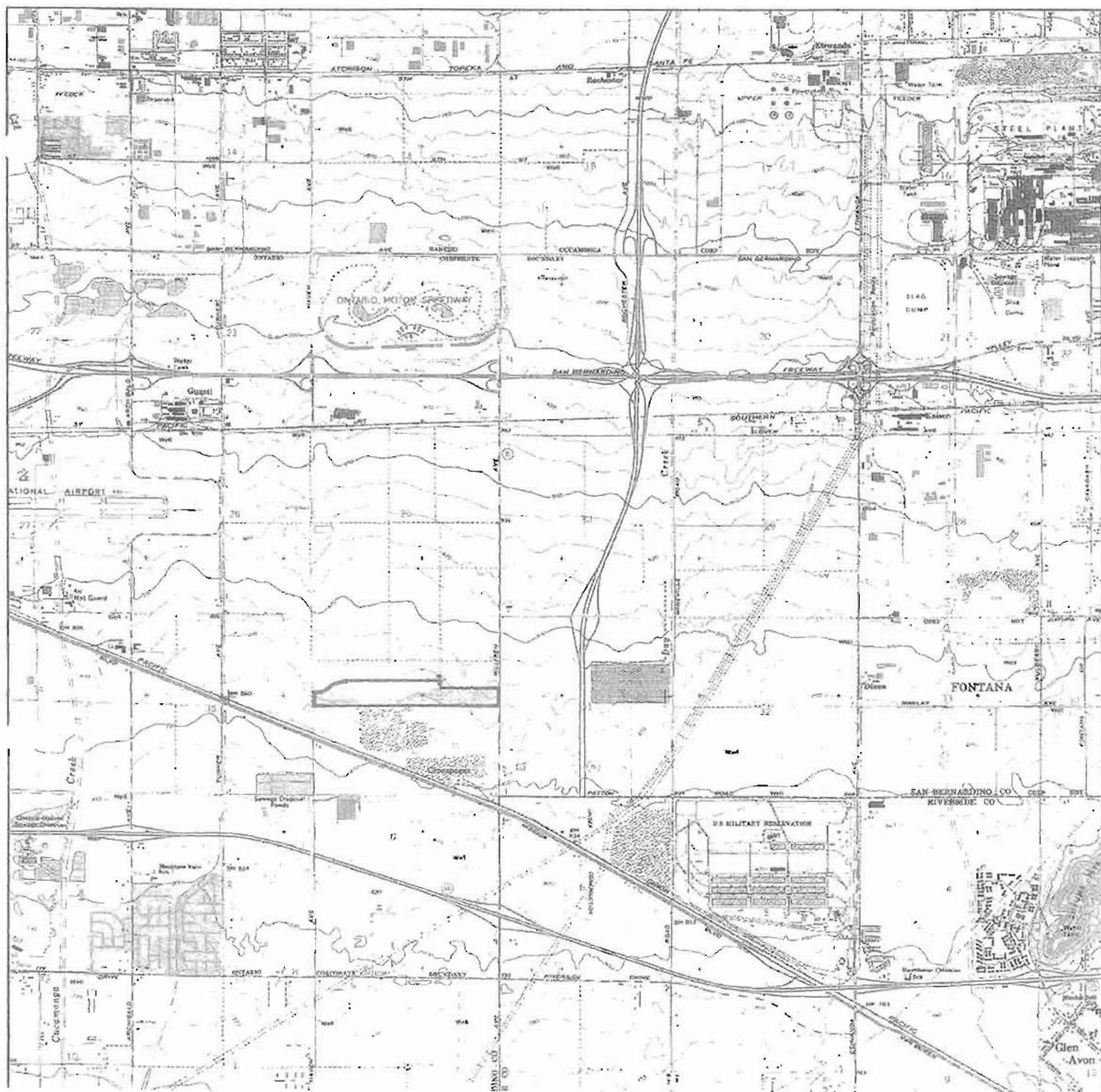


Figure 1. General vicinity of study site, Guaste, California USGS 7.5" quadrangle at 50%. 103-acre site is outlined in black and highlighted in yellow.

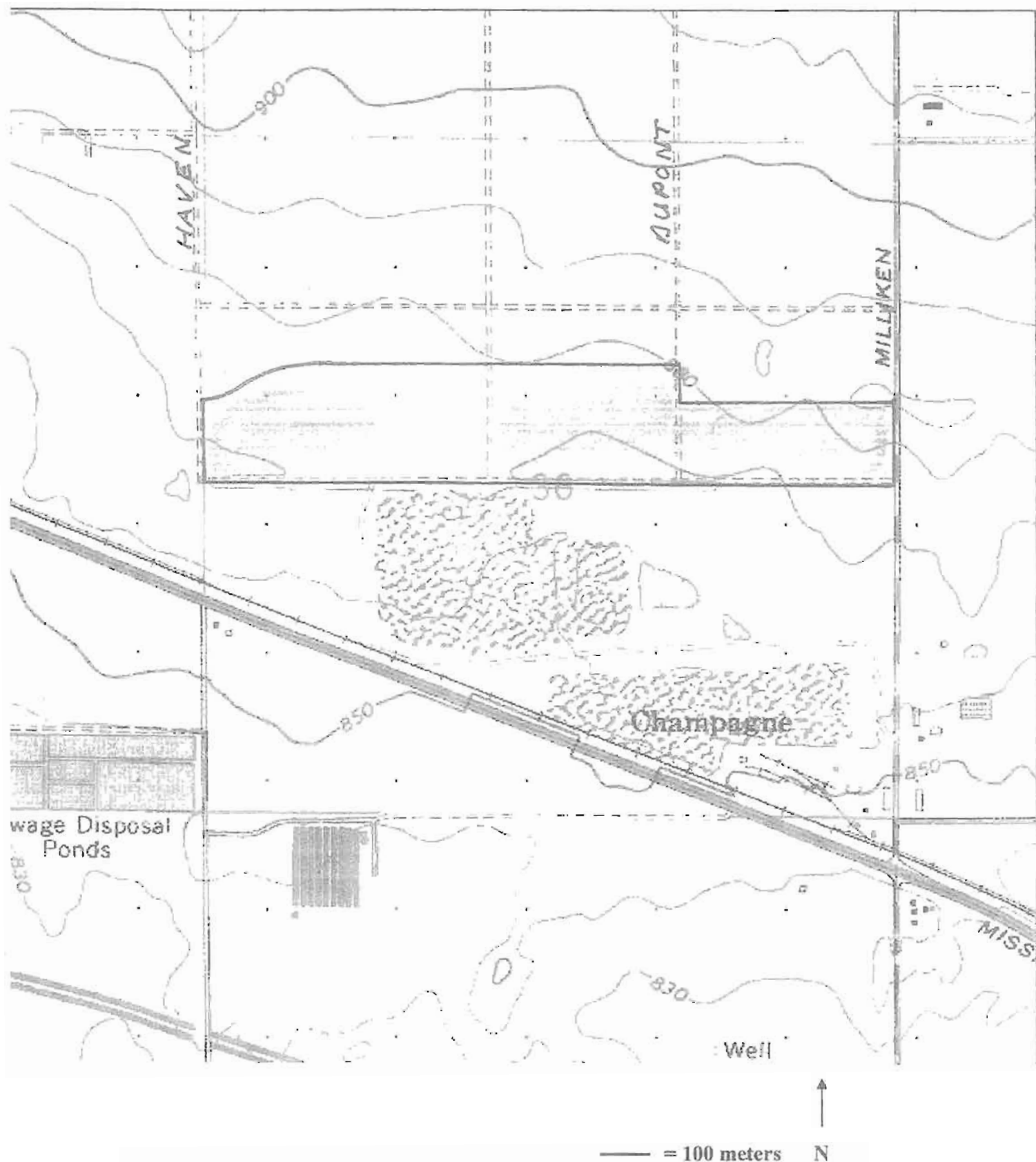


Figure 2. General vicinity of survey site, Guaste, California USGS 7.5" quadrangle at 200%. 103-acre study site is outlined in black and highlighted in yellow.

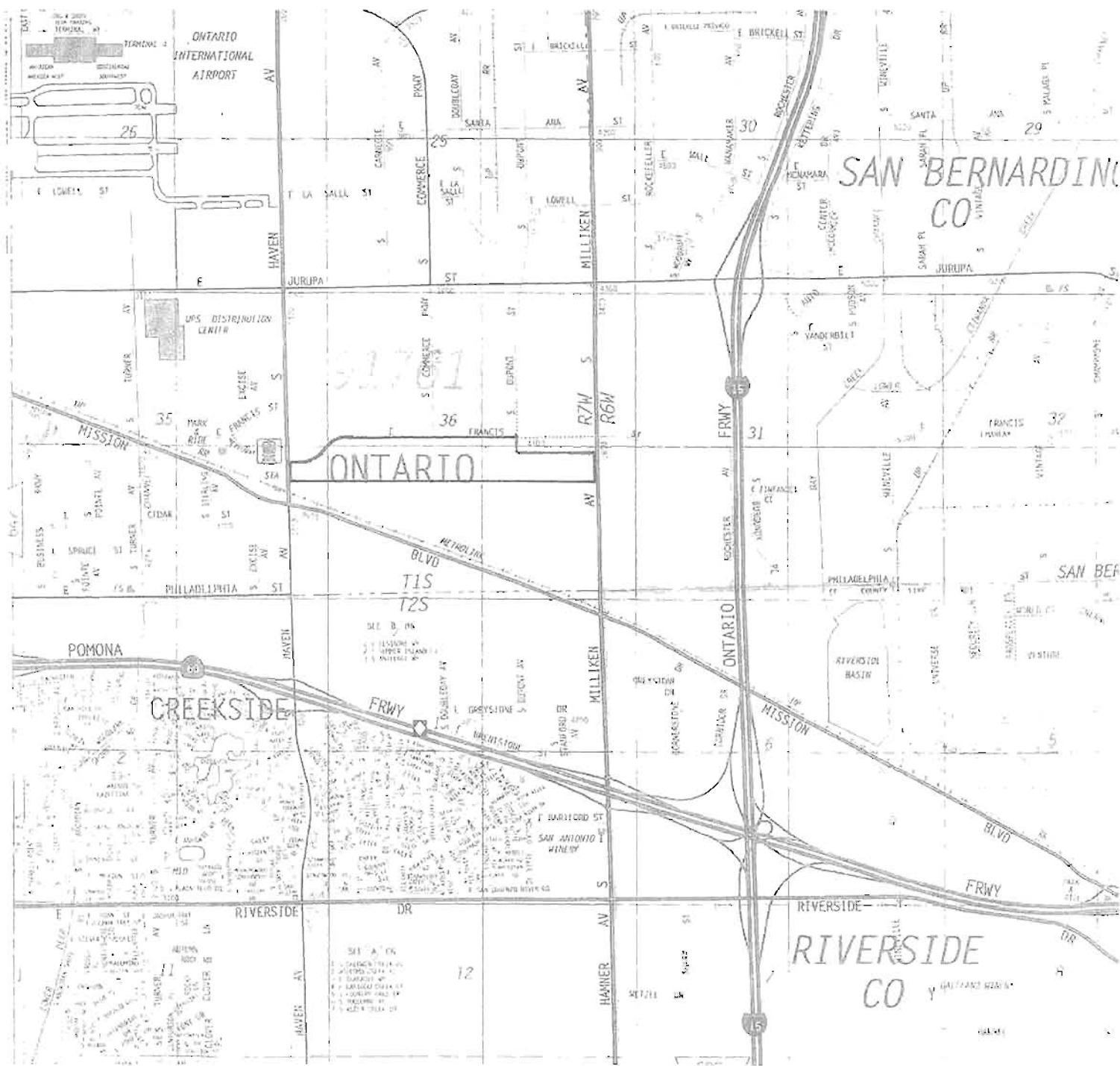


Figure 3. General site vicinity as it is given on page 643 in the *Thomas Guide* (2001). 103-acre study area is outlined in black and indicated by an arrow.

1.0 SUMMARY

The San Bernardino County Solid Waste Management Division has requested a general biological study a 103-acre site located north of the Milliken Sanitary Landfill, Ontario, California.

In order to assess the subject site for general biological attributes and resources, a field visit was made to the site on November 4, 2005. Notes were taken on vegetation communities and structure as well as plant and animal species observed on the site, along with photographs of the subject site. In addition, as a major source for this investigation, a review of recent reports of biological surveys of the site was undertaken.

This investigation determined that the subject property currently supports extensive areas of annual grassland/forbland vegetation, most associated with fine Delhi sands. A western portion of the site remains in active viticulture. A small strip of riparian scrub (with willows) occurs along a drainage giving off of the southern end of Dupont St. Additional scrub habitats on the southern central portion of the site have Mulefat (*Baccharis salicifolia*) in poorly drained areas. Coastal sage scrub elements such as deer weed, buckwheat, California sage bush, black sage, and white sage have become established on the slopes at the southern end of the borrow pits on the central site.

The federally endangered Delhi Sands Flower-Loving Fly (DSF, *Rhaphiomidas terminatus abdominalis*) and federally endangered San Bernardino Kangaroo Rat (SBKR, *Dipodomys mariami parvus*) have both been determined to be absent from the study site.

During the course of biological studies on the site, four "Special Animals" as defined by the California Department of Fish and Game Natural Diversity DataBase (CNDDB 2005) were detected within the study area: Burrowing Owl (*Athene cunicularia*), Loggerhead Shrike (*Lanius ludovicianus*), San Diego horned lizard (*Phrynosoma coronatum blainvillei*), and San Diego Black-tailed jackrabbit (*Lepus californicus bennettii*). Populations of Burrowing Owl and San Diego horned lizard appear to represent populations of higher densities than normally appear in western San Bernardino or Riverside counties.

2.0 INTRODUCTION

This report presents the methods and results of a general biological assessment and review of recent biological surveys, for a 103-acre site located north of the Milliken Sanitary Landfill, Ontario.

A field investigation of the site was conducted on November 4, 2005. In the conduct of the field work, additional consideration was given to presence or absence of riparian or riverine habitats and vernal pools.

In addition to the field visit on November 4, 2005, previous biological survey reports for the site were reviewed. Recently, three years of focused surveys for the federally

endangered Delhi Sands Flower-Loving Fly (DSF, *Rhaphiomidas terminatus abdominalis*) have been undertaken on the study site with negative results (Osborne 2003, 2004, 2005). During the course of DSF surveys (always conducted during summer months), Burrowing Owl (*Athene cunicularia*) was frequently documented on the site as well as evidence of an unidentified species of Kangaroo Rat (Osborne 2004). In spring of 2005, focused surveys for Burrowing Owl and San Bernardino Kangaroo Rat (SBKR, *Dipodomys mariami parvus*) were undertaken on the site (Tom Dodson and Associates 2005). During the course of these surveys, Burrowing Owl nesting sites were well documented and mapped. The SBKR was determined to be absent from the site. All of the above cited reports made additional observations and documented ecological conditions, plant and animal species (especially a long list of insect species owing to the nature of the studies), and other characteristics of the site. Complete lists of plant, vertebrate and invertebrate species encountered on the site are presented in the appendix.

The study site is located on the Guasti, California USGS 7.5-minute quadrangle map, Township 1 South, Range 7 West, on the northern portion of Section 36. Latitude ranges from approximately 034° 02' 27" to 34° 02' 40" N and Longitude from 117° 33' 27" to 117° 34' 30" W. Figure 1 shows the general vicinity of the study site at 50% scale on the Guasti, California USGS 7.5-minute quadrangle map. Figure 2 displays the study site at 200% scale on this USGS quadrangle. Figure 3 provides the project vicinity as it is given in the *Thomas Guide* (2001). The study area is generally bounded by Francis Street on the north, Milliken Avenue on the east, Haven Avenue on the west, and the Milliken Sanitary Landfill on the south.

3.0 METHODS

A field investigation of the site was conducted on November 4, 2005. Habitat conditions were evaluated and general efforts were made to document biological resources likely to be overlooked in the previous conduct survey focusing on DSF, SBKR, and Burrowing Owl. General notes were taken on vegetation and wildlife observed on the site.

In addition to the November field visit, other reports on biological surveys for the site were reviewed and evaluated. These studies included three years of focused surveys for Delhi Sands Flower-Loving Fly (DSF, *Rhaphiomidas terminatus abdominalis*) (Osborne 2003, 2004, 2005) and focused surveys for Burrowing Owl and San Bernardino Kangaroo Rat (SBKR, *Dipodomys mariami parvus*) (Tom Dodson and Associates 2005).

In the conduct of the field work, additional consideration was given to presence or absence of riparian or riverine habitats, vernal pools, or any other potential jurisdictional waters or wetlands. General notes were taken on vegetation communities and structure, as well as plant and animal species (or their sign) observed on the site, along with photographs of the subject site.

Where wintering adult Burrowing Owls were found, GPS data were collected on burrow locations.

4.0 RESULTS

In the course of the November 4, 2005 field visit, I found abundant new annual vegetation had germinated due to recent rains. Many annual forb species, not normally observed during the summer season (when DSF surveys are undertaken) were observed. In addition, renewed investigation of shrublands on the site revealed a few shrub species not previously documented on the site.

Two special animal species were observed on the site on November 4. At least seven adult Burrowing Owls were observed in association with the numerous burrows on the sides of the borrow pits located on the central portion of the site. Loggerhead Shrike was also observed on the central site.

Habitat descriptions and species lists presented here are the result of combined data accumulated from the November 4, 2005 site visit, and the four focused survey reports previously prepared for the study site.

4.1 Existing Environment and Community

4.1.1 Adjacent lands

Lands north, west and east of the subject site are developed into commercial enterprises such as warehouses. The Milliken Sanitary Landfill, now closed, dominates lands to the south of the site, with an area of highly disturbed, disked land on the south of eastern portions of the site.

4.1.2 Topography

The site has slight rolling topography owing to relictual sand dune structure. Dunes, formerly in viticulture, still have elevational differentials of nearly 15 feet. In addition, large areas of excavation used to obtain fill materials associated with the landfill resulted in low basins in the central portion of the site. Elevation on the site ranges from approximately 857 feet to 885 feet.

4.1.3 Soils

The eastern (approximately) half of the site, as well as the western (approximate) third of the site consist of Delhi fine sands in dune formation. Past excavation activities on central portions of the site have exposed the underlying Tujunga gravelly sands (stripping away the overlying Delhi sands). In addition, probably associated with past excavation and soils transportation associated with the landfill, additional areas of the central site have overlying soils contaminated with Tujunga materials packed to a hard and dense consistency. Past agricultural activities have apparently had little effect on the deep and extensive Delhi sands over most of the site.

4.1.4 Vegetation

The eastern half of the survey area is a long-abandoned vineyard, with secondary reestablishment of natural vegetation. Dominant plants in these areas are western ragweed (*Ambrosia acanthicarpa*) and *Verbesina encelioides*. Telegraph weed (*Heterotheca grandiflora*) and slender buckwheat (*Eriogonum gracile*) are co-dominants in some areas. *Eriogonum fasciculatum* and *Croton californica* are common in some areas on the eastern portion of the survey site. The western portion of the site with active viticulture on Delhi sands has secondary weedy vegetation dominated by tumbleweed (*Amaranthus albus*) and western ragweed. Harder substrates on Tujunga soils (Woodruff 1980) where poorly drained, have mule fat (*Baccharis salicifolia*) in addition to the above listed dominant plants found over the site generally. A small strip of riparian scrub (with willows) occurs along a drainage giving off of the southern end of Dupont St. Coastal sage scrub elements such as deer weed (*Lotus scoparius*), buckwheat (*Eriogonum fasciculatum*), California sage bush (*Artemisia californica*), black sage (*Salvia mellifera*), and white sage (*Salvia apiana*) have become established on the slopes at the southern end of the borrow pits on the central site – probably invading from the slopes of the landfill to the south of the site. Interestingly, dominant annual plant species have changed through the years 2003 – 2005. In 2003, eastern, sandy portions of the site were dominated by large shrubs of western ragweed (*Ambrosia acanthicarpa*). In summer of 2004 (after a relatively dry winter) the ragweed was greatly reduced in abundance. Finally, during summer 2005, after record high winter precipitation, telegraph weed (*Heterotheca grandiflora*), covering extensive areas in dense thickets, became the dominant vegetation (Osborne 2005). Table 1 (Appendix A) provides a list of plant species encountered on the survey site.

4.1.5 Vertebrate Community

Small mammal burrows were common throughout the site, mainly those of Botta's pocket gopher, ground squirrel, pocket mouse, and Delzura kangaroo rat. Coyote dens are located on the central site (on the southeastern corner of the borrow pits) and on the large dune of the eastern portion of the site. During summer months, the Side-blotched lizard (*Uta stansburiana*), and San Diego horned lizard (*Phrynosoma coronatum blainvillei*) were the most commonly encountered vertebrates – large numbers of them seen on every site visit. Burrowing Owl, Northern mocking bird, Red tailed hawk and western meadowlark were the most common birds encountered on the site.

4.1.6 Insect Community

During summer site visits during the last three years, at least 171 insect species (counting only large and conspicuous insects) were either casually observed or collected (Osborne 2005). A list of most insect species observed during the course of focused survey work (three years) is presented in the appendix (Table 3, Appendix A). A highly diverse community of insects continued to be present on the site; including the Delhi sands associated flies, *Apiocera convergens* (endemic to Delhi sands deposits), *Ligyra gazophylax*, and *Nemomydas pantherinus*. *Apiocera convergens* was observed in higher

abundance than I have seen on any other site. Interestingly, *Apiocera crysolasia* continued not to occur on the site. Bombyliid fly species (these being specialist parasites on other – typically predatory and parasitic insect species), and predatory robber flies (Assilidae) were diverse. In general, the insect community was marked by high abundance and diversity of predatory, parasitic and hyperparasitic insect groups. Apiocerids, mydids, bombyliids and asilids, (all mentioned above), tachinids, conopids, sphecids, pomilids, rhipiphorids, scoliids, mutilids, and mymerliontids were all well represented and common.

4.1.7 Special Animals

During the course of biological studies on the site, the federally endangered Delhi Sands Flower-Loving Fly (DSF, *Rhaphiomidas terminatus abdominalis*) and federally endangered San Bernardino Kangaroo Rat (SBKR, *Dipodomys mariami parvus*) have both been determined to be absent from the study site.

Four "Special Animals" as defined California Department of Fish and Game Natural Diversity Data Base (CNDDB 2005) were detected within the study area. In all studies, Burrowing Owls (*Athene cunicularia*) were observed in and near ground squirrel and coyote burrows on the central portion of the site (in sandy walls of the excavated basins or borrow pits). During DSF surveys in 2005, seven individuals were observed at one burrow (these likely including immatures from a nesting burrow). A formal survey of Burrowing Owl in spring (nesting season) of 2005 (Tom Dodson and Associates) resulted in the documentation of seven or eight nesting pairs of Burrowing Owls. The November 4, 2005 site visit documented at least seven overwintering or resident adult Burrowing Owls about the burrows on the central portion of the site (on the walls of the borrow pits). A map of burrow locations has been provided by Tom Dodson and Associates (2005). Table 1 provides a list of burrow locations (given as latitude and longitude) used by Burrowing Owl. This list includes burrows only where associated with the borrow pits. Burrowing Owl burrows not associated with the borrow pits on the central site were not recorded by GPS and were not investigated on November 4, 2005. The owl is listed as "California Special Concern Species" (CSC) and "Federal Special Concern" species (FSC). The FSC category replaces the former "Category 2" category, wherein species were proposed as candidates for listing as threatened or endangered under the Federal Endangered Species Act. The Loggerhead Shrike (*Lanius ludovicianus*) was observed on the central site on November 4, 2005, as well as during the course of the three summers of DSF survey. Continued presence of Loggerhead Shrike on the site suggests that it is possibly resident on the site and may nest there. The Loggerhead Shrike is a CSC species *when nesting*. The San Diego horned lizard (*Phrynosoma coronatum blainvilliei*), was found in unusually high abundance during summer months, with several individuals observed per hour at times. San Diego Black-tailed jackrabbit (*Lepus californicus bennettii*) was also found on the site in small numbers. The San Diego horned lizard, and San Diego Black-tailed jackrabbit are listed as CSC. Table 2 (Appendix) lists vertebrate species seen on the site over the course of all biological studies of the site.

Table 1. Locations on borrow pits (central study site) of burrows used by Burrowing Owls. These do not include burrows located outside the borrow pit area. Latitude and Longitude are given with an error of ± 16 feet.

N. Latitude	W. Longitude
34° 02.494'	117° 34.186'
34° 02.495'	117° 34.211'
34° 02.502'	117° 34.211'
34° 02.504'	117° 34.211'
34° 02.507'	117° 34.211'
34° 02.519'	117° 34.212'
34° 02.479'	117° 34.216'
34° 02.480'	117° 34.209'
34° 02.473'	117° 34.197'
34° 02.509'	117° 34.177'
34° 02.549'	117° 34.216'
34° 02.556'	117° 34.216'
34° 02.552'	117° 34.216'
34° 02.555'	117° 34.200'
34° 02.476'	117° 34.127'

Although habitat conditions on the site appear suitable for the federally endangered Delhi Sands Flower-Loving Fly, three years of survey for this insect show it to be absent from the site.

5.0 DISCUSSION

The Burrowing Owl population documented on the subject site is large as compared to populations found at most localities in California. This population may be considered as significant to conservation of Burrowing Owl in southern California. As an alternative to onsite conservation, the California Department of Fish and Game may require special measures be taken to protect Burrowing Owls during the course of grading on the subject site. Consultation with the CDF and review of Burrowing Owl protocols recommended by the Burrowing Owl Consortium (www2.ucsc.edu/scpbrg/owls.htm), prior to any grading of the subject site is recommended.

6.0 REFERENCES

- California Natural Diversity Data Base (CNDDB). 2003. List of special animals. Heritage section, California Department of Fish and Game.
- Hickman, J.C. (ed.). 1993. The Jepson manual: Higher plants of California. University of California Press. Berkeley, California.
- Munz, P.A. 1974. A flora of southern California. University of California Press, Berkeley, California.

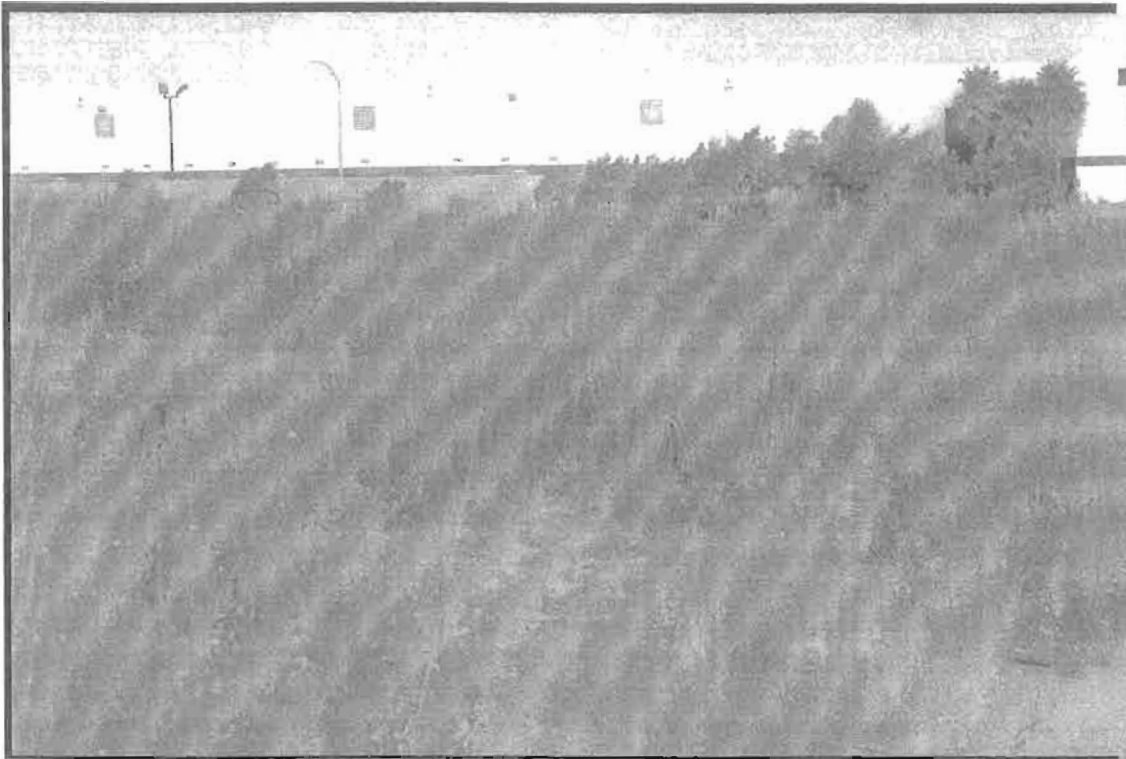


Figure 4. Photograph of high quality dune habitat on the eastern-central portion of the survey site dominated by *Heterotheca grandiflora* (2005). View looks to the northwest.

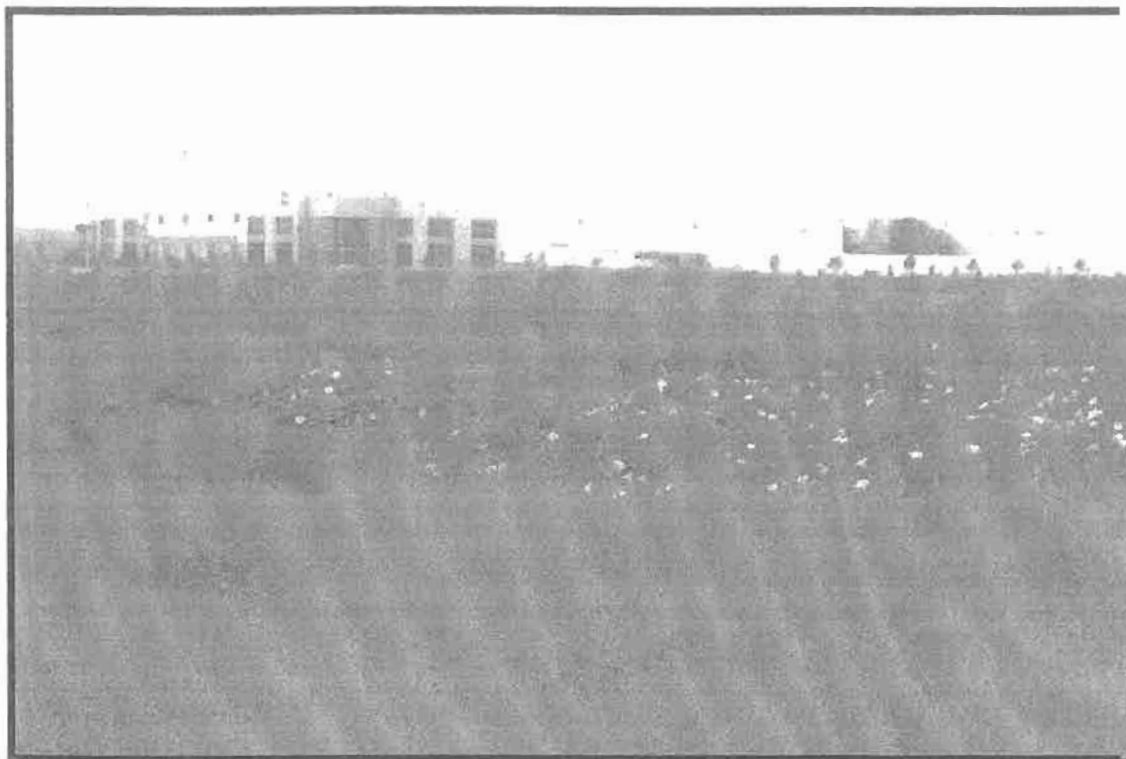


Figure 5. Photograph (2005) of typical habitat on western portions of the site in active viticulture. View looks northwest from near the southern edge of the site. Buildings are off-site to north. White flowers are jimsonweed.



Figure 6. Photograph (2005) of excavated area in southern central portion of the site with Delhi sands in sides and Tujunga soils at bottom. This is the southwestern borrow pit area. Burrowing owl (seen here) is abundant in this area from 2003 through 2005.

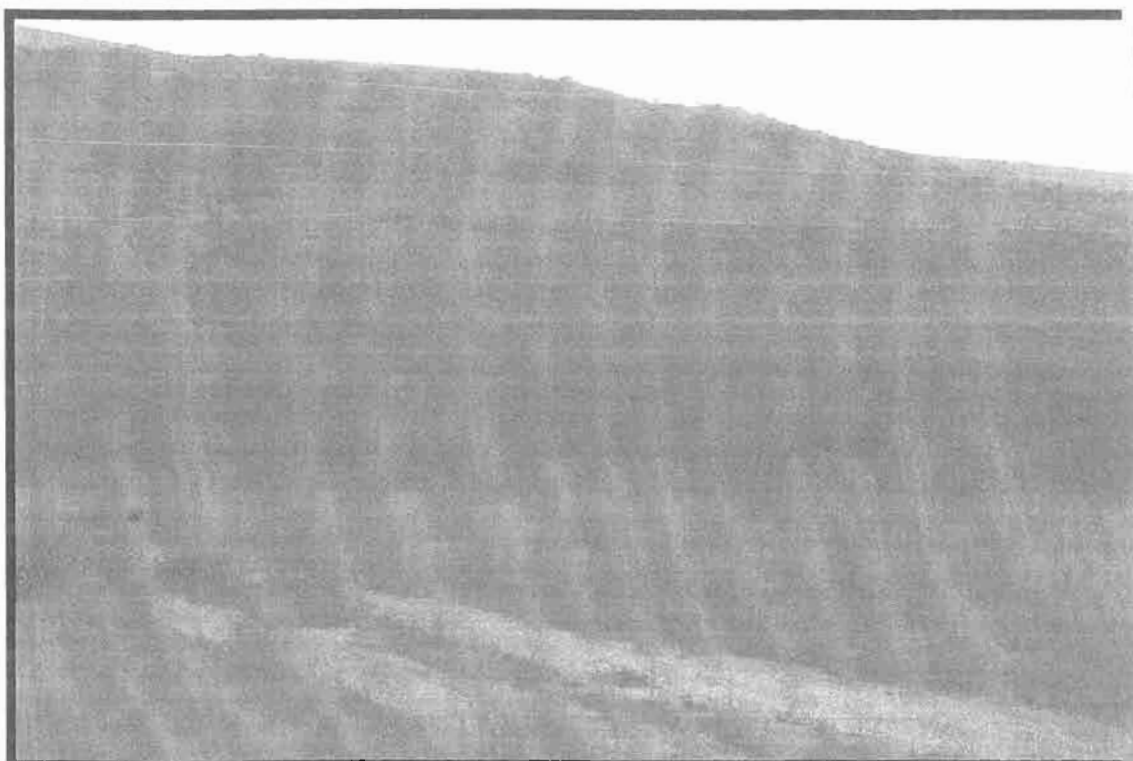


Figure 7. Photograph (2005) of dirt road along the central study survey site and annual grassland/forbland vegetation with new growth following fall rains. *Bacharis* scrub is seen in the background below the landfill. Note the landfill with abundant coastal sage scrub. View looks south southwest from the central site.

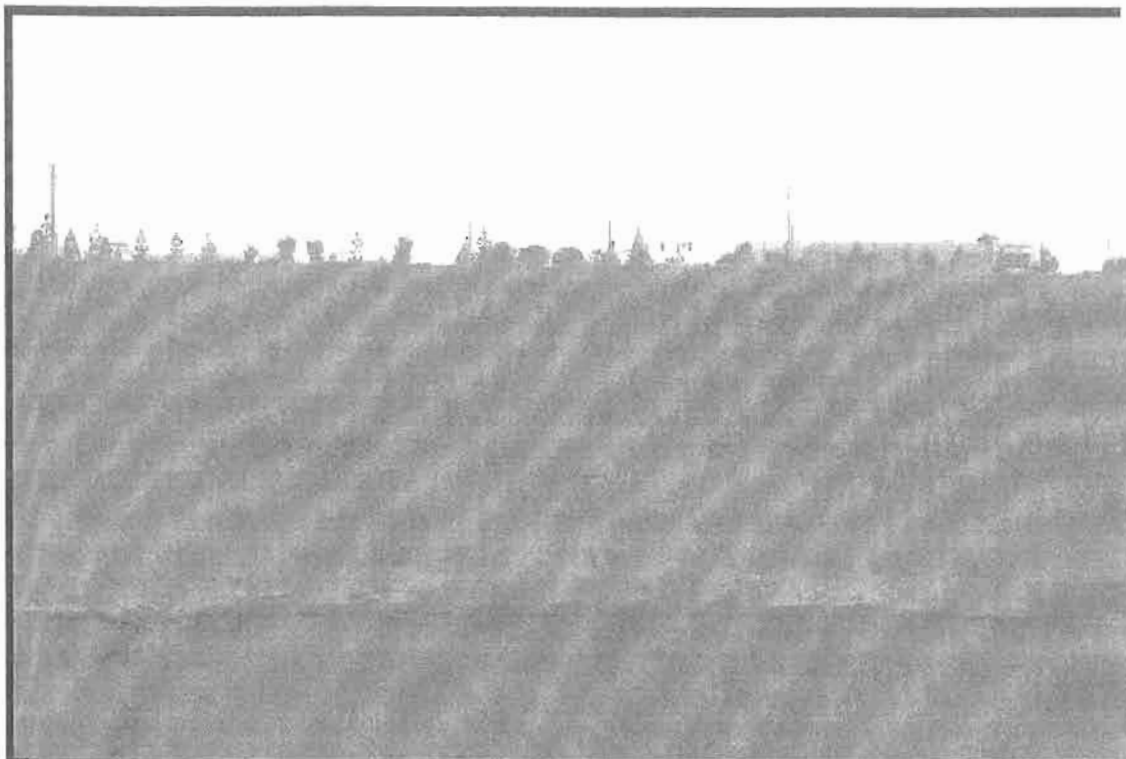


Figure 8. Annual vegetation dominated by *Heterotheca* on the dunes of the eastern study site. View looks east from the wash south of Dupont St.

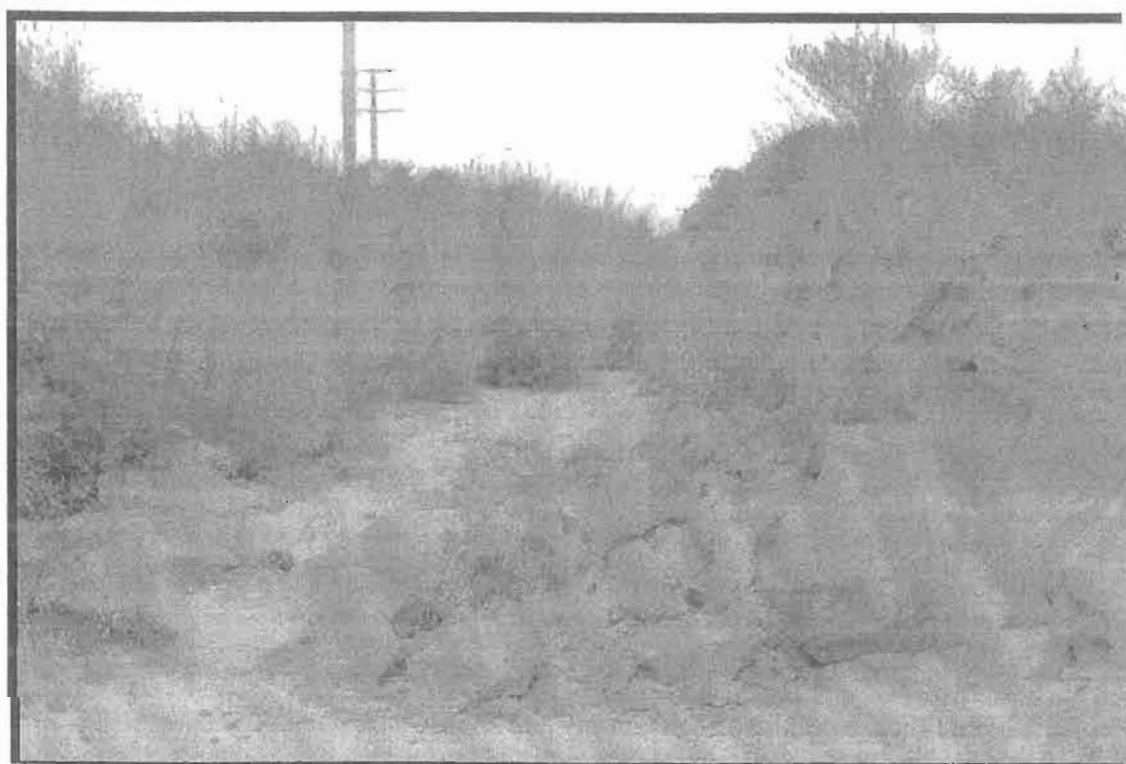


Figure 9. Photograph of willow scrub in the wash on the central eastern site (down stream from Dupont street).

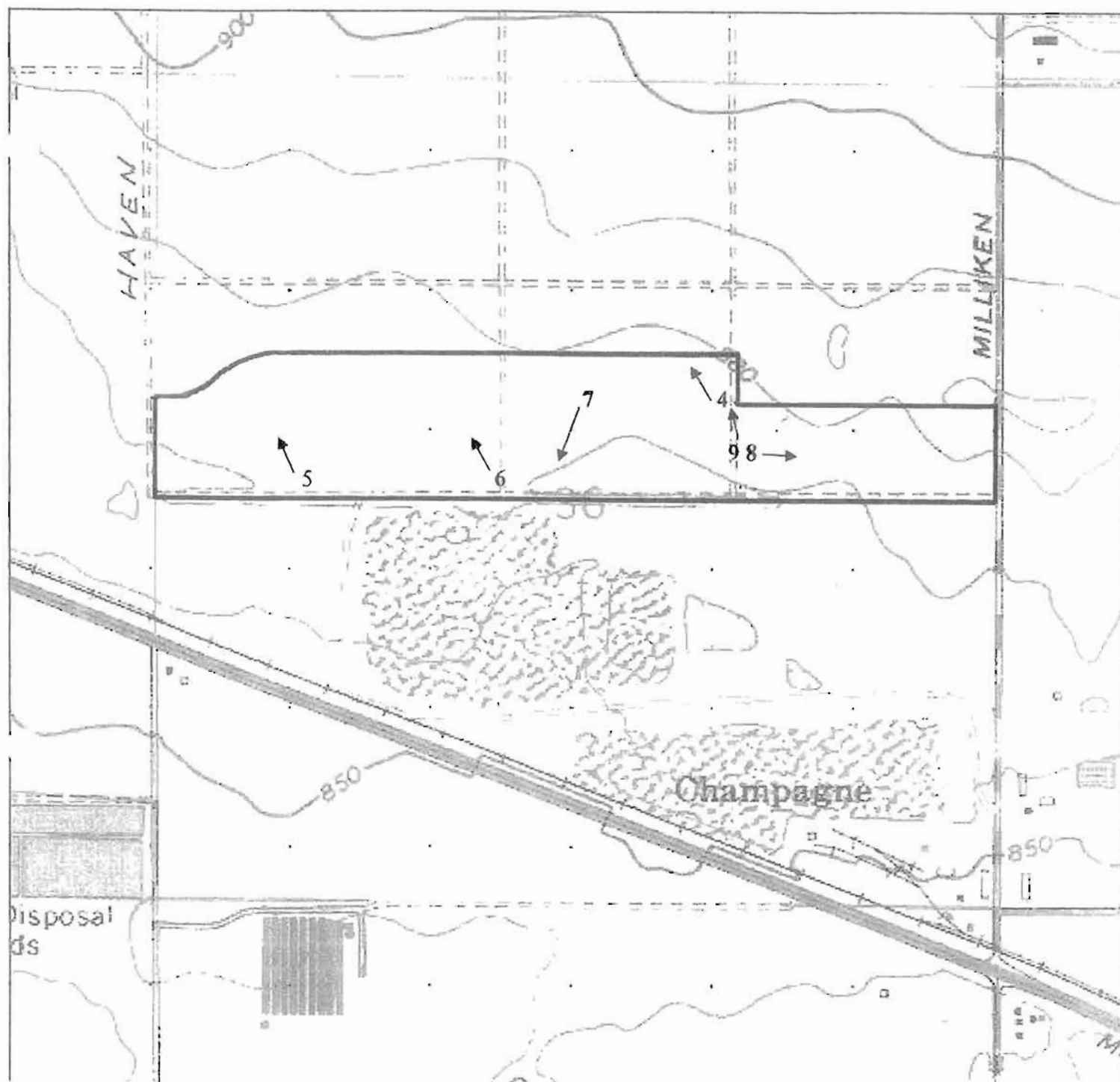


Figure 10. Approximate locations around survey site from which photographs were taken (base of arrows). Arrow indicates the direction a photograph was taken. Numbers next to the arrows indicate figure numbers (Figures 4-9).

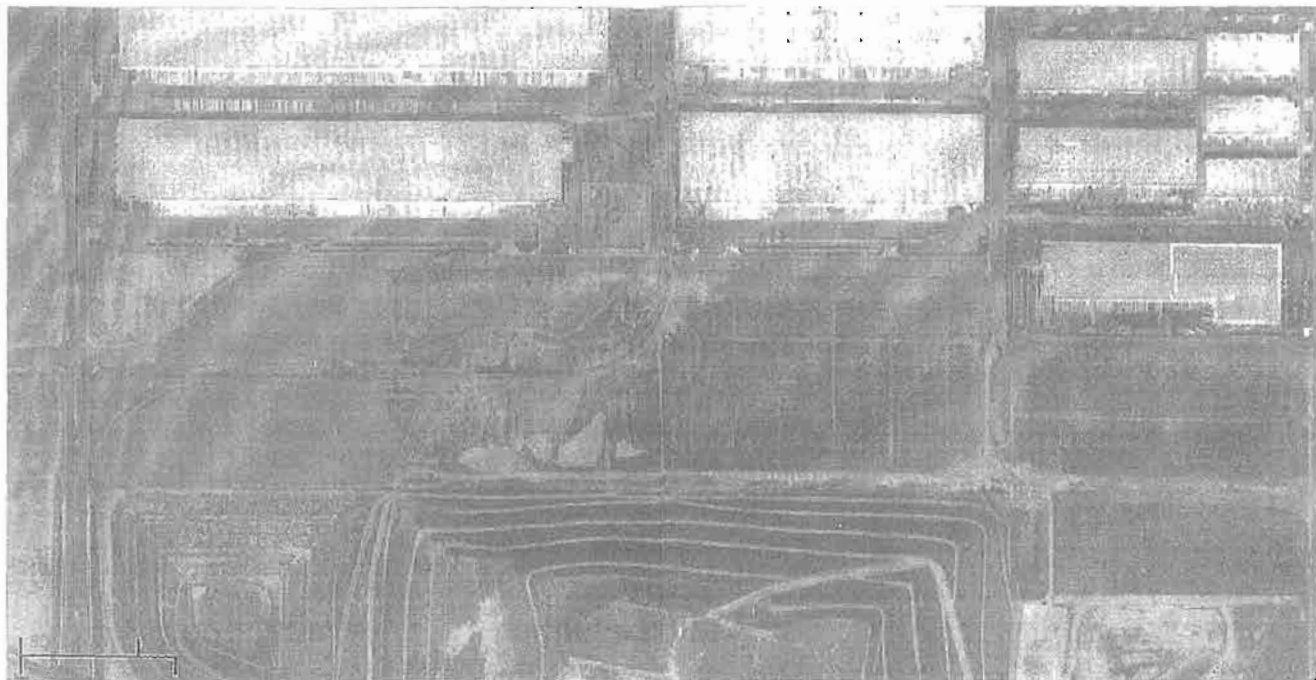


Figure 11. Approximate distribution of vegetation communities on the study site.
 Pink = active viticulture, Green = riparian scrub, Yellow = *Baccharis* scrub with coastal
 sage scrub elements, and Unshaded = annual grassland/forbland on abandoned vineyard.
 Black outline is the study site boundary.

8.0 APPENDIX

Appendix A

Table 1. Plant species encountered on the survey site.

FAMILY and common name	Species
AMERANTHACEAE	
white tumbleweed	<i>Amaranthus albus</i>
ASTERACEAE	
Annual bur-weed	<i>Ambrosia acanthicarpa</i> (not <i>artemisiifolia</i>)
California sage	<i>Artemisia californica</i>
mule fat	<i>Baccharis salicifolia</i>
coyote bush	<i>Baccharis sarathroides</i>
Tocalote	<i>Centaurea melitensis</i>
flax-leaved horseweed	<i>Conyza bonariensis</i>
horseweed	<i>Conyza canadensis</i>
interior goldenbush	<i>Ericameria linearifolia</i>
sunflower	<i>Helianthus annua</i>
slender sunflower	<i>Helianthus gracilentus</i>
Telegraph weed	<i>Heterotheca grandiflora</i>
prickly lettuce	<i>Lactuca serriola</i>
valley lessingia	<i>Lessingia glandulifera</i>
tall wreath plant	<i>Stephanomeria virgata</i>
dandelion	<i>Taraxacum officinale</i>
earless crown-beard	<i>Verbesinia encelioides</i>
BORAGINACEAE	
ranchers fiddleneck	<i>Amsinkia menziesii</i>
Cleveland's cryptantha	<i>Cryptantha clevelandii</i>
common cryptantha	<i>Cryptantha intermedia</i>
Guadalupe cryptantha	<i>Cryptantha maritima</i>
	<i>Plagiobothrys</i> sp.
slender pectocarya	<i>Pectocarya linearis</i>
BRASSICACEAE	
shortpod mustard	<i>Hirschfeldia incana</i>
tall tumbledustard	<i>Sisymbrium altissimum</i>
London rocket	<i>Sisymbrium irio</i>
CHENOPODIACEAE	
Saltbush	<i>Atriplex canescens</i>
Russian thistle	<i>Salsola tragus</i>
CRASSULACEAE	

Morning dove	<i>Zenaidura macroura</i>
White-crowned sparrow	<i>Zonotrichia atricapilla</i>

Mammals

San Diego pocket mouse	<i>Chaetodipus fallax</i>
Delzura kangaroo rat	<i>Dipodomys simulans</i>
Cactus mouse	<i>Peromyscus eremicus</i>
Deer mouse	<i>Peromyscus maniculatus</i>
Desert cottontail	<i>Sylvilagus audubonii</i>
Black-tailed jackrabbit	<i>Lepus californicus</i>
California ground squirrel	<i>Spermophilus beecheyi</i>
Coyote	<i>Canis latrans</i>
Botta's pocket gopher	<i>Thomomys bottae</i>

Table 3. Insects encountered on the survey site.

<u>Order</u>	<u>Family</u>	<u>Genus, species</u>
Diptera	Apioceridae	<i>Apiocera convergens</i>
	Asilidae	<i>Efferia albibarbis</i>
		<i>Mallophora faultrix</i>
		<i>Saropogon luteus</i>
		<i>Stenopogon brevisculus</i>
		<i>Stenopogon loma</i>
		<i>Stenopogon rufibarbis</i>
		<i>Apheobantus</i> sp
		<i>Exoprosopa butleri</i>
		<i>Ligyra gazophylax</i>
		<i>Neodiplicampa mira</i>
	Bombyliidae	<i>Poecilognathus</i> sp
		<i>Rhynchanthrax caprea</i>
		<i>Thyridanthrax atrata</i>
		<i>Thyridanthrax pallida</i>
		<i>Toxophora pellucida</i>
		unidentified
		unidentified
		unidentified
		<i>Villa lateralis</i>
		<i>Villa molitor</i>
	Calliphoridae	<i>Phaenicia sericata</i>
	Conopidae	<i>Physocephala texana</i>
	Dolichopodidae	<i>Condylostylus pilicornis</i>
	Muscidae	<i>Musca domestica</i>
	Mydidae	<i>Nemomydas pantherinus</i>
	Sarcophagidae	<i>Sarcophaga</i> sp
	Syrphidae	<i>Copostylum marginatum</i>
		<i>Copostylum quadratus</i>

Diptera	Syrphidae	<i>Eupeodes volucris</i> <i>Eristalis aenea</i> <i>Eristalis latifrons</i> <i>Eristalis tenax</i> <i>Pseudodora clavatus</i> <i>Volucella mexicana</i>
	Tabanidae	<i>Tabanus punctifer</i>
	Tachinidae	<i>Archytas apicifer</i> <i>Cylindromyia</i> sp <i>Eumachronychia</i> <i>Gymnosoma fuliginosum</i> <i>Peleteria</i> sp
	Therividae	<i>Thereva semitaria</i>
	Anthophoridae	<i>Anthophora urbana</i> <i>Melissodes</i> sp <i>Zylocopa varipuncta</i>
	Apidae	<i>Apis mellifera</i>
	Chrysididae	<i>Chrysis</i> sp <i>Parnopes edwardsii</i>
	Formicidae	<i>Iridomyrmex humilis</i> <i>Liometopum</i> sp <i>Meserpergandi</i> sp <i>Pogonomyrmex californicus</i> unidentified
	Gasteroptropidae	<i>Agapostemon</i> sp
	Halictidae	<i>Megachile</i> sp
Hymenoptera	Megachilidae	<i>Dasymutilla californica</i> <i>Dasymutilla clydenetra</i> <i>Dasymutilla coccineohirta</i> <i>Dasymutilla sackeni</i> <i>Pseudometheca</i> sp
	Mutillidae	<i>Ageniella</i> sp <i>Aporinellus</i> sp <i>Liris</i> sp <i>Pepsis chrysothemis</i> <i>Pepsis thysbe</i> unidentified
	Pompilidae	<i>Campsomeris tolteca</i>
	Pompilidae	<i>Ammophila</i> sp <i>Ammophila aberti</i> <i>Ammophila azteca</i> <i>Bembix americana</i> <i>Bicyrtes ventralis</i> <i>Cerceris californicus</i> <i>Cerceris femurrubrum</i> <i>Chalybion californicum</i>
	Scoliidae	
	Sphecidae	

Hymenoptera	Sphecidae	<i>Chlorion aerarium</i>
		<i>Clypedon californicus</i>
		<i>Cryptocheilus sp</i>
		<i>Mimesia sp</i>
		<i>Oxybelus pitanta</i>
		<i>Oxybelus uniglumis</i>
		<i>Philanthus multimaculatus</i>
		<i>Prionyx foxi</i>
		<i>Prionyx thomae</i>
		<i>Scellphron caementarium</i>
		<i>Sphex ichneumones</i>
		<i>Tachysphex sp</i>
		<i>Tachysphex sp</i>
		<i>Taschytes elongatus</i>
		<i>Eumenes bollii</i>
		<i>Euodynerus annulatum</i>
		<i>Polistes apachus</i>
		<i>Polistes dorsalis</i>
		<i>Polistes exclamens</i>
Neuroptera	Chrysidae	<i>Chrysopa sp</i>
		unidentified
Heteroptera	Myrmeliontidae	
	Corimelaenidae	<i>Corimelaena sp</i>
	Largidae	unidentified
	Lygaeidae	<i>Geocoris sp</i>
	Lygaeidae	<i>Lygaeus kalmii</i>
		<i>Nysius sp</i>
	Membracidae	unidentified
	Miridae	<i>Lygus sp</i>
	Nabidae	<i>Nabis sp</i>
	Pentatomidae	<i>Chlorochroa uhleri</i>
		<i>Thyanta sp</i>
	Pentatomidae	<i>Trichopepla aurorae</i>
Coleoptera	Reduviidae	<i>Phymata sp</i>
		<i>Rhynocoris ventralis</i>
		<i>Sinea diadema</i>
		<i>Zelus sp</i>
		<i>Zelus renardii</i>
	Rhopalidae	<i>Arhyssus sp</i>
	Carabidae	unidentified
	Cerambycidae	<i>Parandra sp</i>
	Chrysomelidae	<i>Coscinoptera aeneipennis</i>
		<i>Diabrotica balteata</i>
		<i>Diabrotica undecimpunctata</i>
		<i>Lema trilineata</i>
	Coccinellidae	<i>Adalia bipunctata</i>

Coleoptera	Coccinellidae	<i>Coccinella septempunctata</i>
	Curculionidae	<i>Hippodamia convergens</i>
	Melyridae	unidentified
	Rhipiphoridae	<i>Collops</i> sp
	Scarabaeidae	<i>Macrosiagon flavipenne</i>
Odonata	Tenebrionidae	<i>Cotinus texana</i>
		<i>Elodes gracilis</i>
		unidentified
	Aeshnidae	<i>Aeshna multicolor</i>
		<i>Anax junius</i>
	Coenagrionidae	<i>Argia</i> sp
	Libellulidae	<i>Libellula croceipennis</i>
		<i>Libellula saturata</i>
		<i>Paltothemis lineatipes</i>
		<i>Pantala flavescens</i>
Lepidoptera		<i>Pantala hymenaea</i>
		<i>Sympetrum corruptum</i>
		<i>Tramea lacerata</i>
		<i>Tramea onusta</i>
	Danaidae	<i>Danaus plexippus</i>
	Hesperiidae	<i>Erynnis funeralis</i>
		<i>Heliopetes ericitorum</i>
		<i>Hylephila phyleus</i>
		<i>Pyrgus albescens</i>
	Lycaenidae	<i>Brephidium exilis</i>
		<i>Everys amyntula</i>
		<i>Hemiargus ceranus</i>
		<i>Leptotes marina</i>
		<i>Plebejus acmon</i>
		<i>Strymon melinus</i>
	Noctuidae	<i>Acontia sedata</i>
		<i>Schinia sexplagiata</i>
		<i>Schinia scarletina</i>
	Nymphalidae	<i>Junonia coenia</i>
		<i>Vanessa cardui</i>
Orthoptera		<i>Vanessa virginiensis</i>
	Pieridae	<i>Colias eurytheme</i>
		<i>Nathalis iole</i>
		<i>Pieris rapae</i>
		<i>Pontia protodice</i>
	Pyralidae	unidentified
		unidentified
	Sesiidae	<i>Paranthrene robiniae</i>
	Sphingidae	<i>Hyles lineata</i>
	Acrididae	<i>Derotmema saussuraenum</i>
		<i>Melanoplus</i> sp

Orthoptera	Acrididae	<i>Psoloessa thamnogaea</i> <i>Schistocerca</i> sp <i>Schistocerca nitens</i> <i>Trimerotropis californica</i> <i>Trimerotropis pallidipennis</i>
	Gryllidae	<i>Gryllus</i> sp <i>Oecanthus</i> sp
	Stenopelmaticidae	<i>Stenopelmatus</i> sp
	Tettigoniidae	<i>Microcentrum rhombifolium</i> <i>Scudderia mexicana</i>
	Mantodea	Mantidae <i>Iris oratoria</i> <i>Litaneutria minor</i> <i>Stagmomantis californica</i>

Appendix B

Field Notes

Date 11/4/05 Time 1100 to 1245 Job Silver Run
 Miles 138395 Location Silver Run Ontario
 Biologists K. H. D.
 Survey for: _____
 Habitat Assessment for: Canada B.

Weather: Temp 66 Wind 0 Cloud cover overcast to clearing Rain 0

Biological elements:

Vegetative communities:

Agrostoid Grass / Furb's meadow etc. in sand
Baccharis scrub
willow scrub
Vineyards

Soil type _____

Plant species:

Adm. BS, WS, Baccharis sarothamnifolia

Vertebrates

MIZLA NOSTA BLPH YBLA SAPH RBLTA ARICK
WHSP NODD MODO BUDW HOFI

Uta

Arthropods

Oak Woodlands _____ Riparian Veg _____ type _____
 Vernal Pools _____

Comments: Buzzing on 15th

N	W
34 02.494	117 34.186
34 02.495	117 34.211
34 02.502	117 34.211
34 02.504	117 34.211
02.507	.211
02.519	.212
02.579	.216
.480	.209
.473	.197

**FOCUSED SURVEYS FOR SAN BERNARDINO KANGAROO RAT
(*DIPODOMYS MARIAMI PARVUS*) (SBKR) AND
BURROWING OWL (*ATHENE CUNICULARIA*)
FOR A 103-ACRE PARCEL
NORTH OF MILLIKEN SANITARY LANDFILL
CITY OF ONTARIO, SAN BERNARDINO COUNTY, CALIFORNIA**

Prepared for:

Lilburn Corporation
1905 Business Center Drive
San Bernardino, California 92408

Prepared by:

Tom Dodson & Associates
2150 North Arrowhead Avenue
San Bernardino, California 92405

April 2005

Certification: I hereby certify that the statements furnished herein, and in the attached exhibits present data and information required for this Biological Survey to the best of my ability, and the facts, statements, and information presented are true and correct to the best of my knowledge and belief. Federal Fish and Wildlife Permit No. TE094308-0


Shay E. Lawrey

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INTRODUCTION AND SUMMARY OF FINDINGS

Tom Dodson & Associates (TDA) has prepared this report to relay the findings of focused surveys for San Bernardino kangaroo rat (*Dipodomys merriami parvus*) (SBKR) and burrowing owl (*Athene cunicularia*) at a 103-acre parcel, adjacent to the north side of the Milliken Sanitary Landfill. The subject parcel is located in the City of Ontario, San Bernardino County, on the Guasti, California USGS 7.5-minute Quadrangle map, Township 1 S, Range 7 W, on the northern portion of Section 36. Latitude ranges from 34°02'27" to 34°02'40"N and Longitude ranges from 117°33'27" to 117°33'30"W. The parcel is generally bounded by Francis Street on the north, Milliken Avenue on the east, Haven Avenue on the west, and Milliken Sanitary Landfill on the south.

Burrowing owls were observed and kangaroo rat sign was noted during a protocol Delhi sands flower-loving fly survey, conducted on the property by Kendall H. Osborne (Osborne 2003 and 2004). Based on this information, TDA was contracted to conduct a focused burrowing owl survey and a trapping survey for SBKR. Shay Lawrey, a biologist permitted by the U.S. Fish and Wildlife Service (USFWS) to trap and handle SBKR (TE 094308-0), conducted the protocol live-trapping survey and the focused burrowing owl survey between March 7 and March 12, 2005. The purpose of these surveys was to determine the presence or absence of these two species throughout the project area, evaluate their relative abundance and breeding status, and to map their locations. The results of the surveys were that no SBKR were captured, however, seven breeding pairs, and potentially eight breeding pairs, of burrowing owls were found spread out over the 103-acre parcel. Nests from various bird species were encountered on the property during the surveys.

METHODOLOGY

Background information was gathered prior to visiting the site to determine which sensitive species would be expected in this area. The California Natural Diversity Data Base (NDDDB) and literature references were examined to obtain information on species occurrences in the project vicinity. The CNDDDB search was conducted for the USGS – Guasti Quadrangle, California, 7.5 Minute Series Topographic. Shay Lawrey, of TDA, conducted the protocol trapping on the subject property between March 7 and March 12, 2005. Four trap lines of fifty, 12-inch, Sherman live traps were placed along the property (Figure 4). The trap lines traversed a slight rolling topography containing fallow vineyard, non-native grasses and reestablished native annual and perennial elements such as telegraph weed, buckwheat, croton and mule fat. Using SBKR trapping protocols issued by the USFWS, traps were set at dusk, baited with rolled oats, and inspected at midnight and again at pre-dawn the following morning. All animals were identified, sexed and released unharmed at the point of capture. Daily notes included weather conditions such as temperature, wind speed, and cloud cover.

The focused burrowing owls survey was conducted in accordance with the "Burrowing Owl Survey Protocol and Mitigation Guidelines" prepared by the California Burrowing Owl Consortium on April 1993. Although the protocol requires surveying the site and a 150-meter zone of influence on all sides of the project, zone of influence was not surveyed, as the parcel is completely surrounded by industrial development. The site was surveyed once in the evening on April 6th from 5:00 p.m. to 7:30 p.m. The main focus of this site visit was to locate potential burrow locations. Burrows were checked for signs indicating the presence of burrowing owls such as pellets, white wash, feathers, and prey remains. The site was then surveyed twice a day on April 7, 8 and 9, 2005 from 6:30 a.m. to 9:00 a.m. and from 5:00 p.m. to 7:30 p.m. The property was surveyed in transects set at 30-meter intervals. Burrows found during the initial site visit were rechecked for owl activity during each subsequent survey.

BACKGROUND INFORMATION

SBKR

There are 19 subspecies of Merriam's k-rat (*Dipodomys merriami*), three of which occur in California, including the SBKR. Of the three California subspecies, SBKR are the smallest and darkest. Merriam's kangaroo rats are wide spread throughout the arid regions of the western United States and northwest Mexico (Hall 1981; Williams *et al.* 1993a). Within this distribution, the historical range of SBKR is thought to have encompassed an area of approximately 326,467 acres. Today, SBKR is known to occupy approximately 3,247 acres (McKernan 1997). Of the six primary, recently, occupied locations in the San Bernardino and San Jacinto Valleys, only three sites (Santa Ana River and its tributaries, Cajon and Lytle creeks, and San Jacinto and Bautista creeks) support robust, sustaining populations of SBKR and large contiguous patches of occupied habitat. In most heteromyids, soil texture is a primary factor in determining species' distributions (Brown and Harney 1993). SBKR are found primarily on well drained, sandy loam substrates, characteristic of alluvial fan and flood plains, where they are able to dig simple, shallow burrows (MEC Analytical Systems 2000).

The USFWS emergency listed the SBKR on January 27, 1998 and subsequently listed them as federally endangered later that same year on September 24, 1998 (63 FR 3837) under the Endangered Species Act of 1973 (63 FR 3877), as amended. The USFWS also designated critical habitat units for the SBKR on April 23, 2002 (67 FR 19811). The units included reaches of the Santa Ana, Lytle and Cajon creeks, San Jacinto River and Bautista creek, and the Etiwanda alluvial fan (65 FR 77178).

It has been commonly thought that SBKR either do not occupy or rarely occupy areas with vegetative cover over 60% or areas dominated by non-native vegetation. This thought however, has been tested in recent years, as this species has been found, in high

densities, to occupy areas that would appear unsuitable, such as fallow orange groves and disturbed habitat dominated by ruderal vegetation. SBKR are nocturnal mammals and like other kangaroo rats, are highly adapted to live in hot and sometimes waterless deserts and valleys.

BURROWING OWLS

The burrowing owl is a mottled brownish and sand colored, dove sized raptor, with large yellow eyes, a rounded head lacking ear tufts, white eyebrows, and long legs compared to other owl species. It is a ground dwelling owl typically found in arid prairies, fields, and open areas where vegetation is sparse and low to the ground. The burrowing owl is heavily dependent upon the presence of mammal burrows, commonly ground squirrel, in its habitat to provide shelter from predators, inclement weather, and to provide a nesting place (Coulombe 1971). They are also known to make use of human-created structures such as cement culverts and pipes for burrows.

Burrowing owls spend a great deal of time standing on dirt mounds at the entrance to a burrow, or perched on a fence post or other low to the ground perch from which they hunt for prey. Burrowing owls frequently hunt by hovering in place above the ground and dropping on their prey from above. Burrowing owls feed primarily on insects such as grasshoppers, June beetles, and moths, but will also take small rodents, birds, and reptiles. They are active during the day and night, but are considered a crepuscular owl; generally observed in the early morning hours or at twilight. The breeding season for the burrowing owl is February 1 through August 31. Up to eleven, but typically seven to nine eggs are laid in a burrow, abandoned pipe, or other subterranean hollow where incubation is complete in 28-30 days. Young burrowing owls fledge in 44 days. The burrowing owl is considered a migratory species in portions of its range, which includes western North America from Canada to Mexico, and east to Texas and Louisiana. Burrowing owl populations in California are considered to be sedentary or locally migratory.

Throughout its range it is vulnerable to habitat loss, predation, vehicular collisions, destruction of burrow sites and poisoning of ground squirrels (Grinnell and Miller 1944, Zarn 1974, Remsen 1978). Burrowing owls have disappeared from significant portions of their range in the last 15 years and overall nearly 60% of the breeding groups of owls known to have existed in California during the 1980s had disappeared by the early 1990s (Burrowing Owl Consortium 1993). The burrowing owl is not listed under the state or federal Endangered Species Act, but is considered both a federal and state "species of special concern." The burrowing owl is a migratory bird protected by the international treaty under the Migratory Bird Treaty Act of 1918 and by State law under the California Fish and Game Code (CDFG Code #3513 & #3503.5).

RESULTS

BURROWING OWLS

There were 16 adult burrowing owls observed on the subject parcel during the April 2005 burrowing owl survey. Approximate locations of active and potentially active burrowing owl nests were plotted on Figure 2. Seven breeding pairs of burrowing owls were identified. Breeding pairs of owls were determined when both the male and female were observed perched together and interacting, by preening, feeding, vocalizing, or performing food exchanges or other activity that would signify a pair bond. An additional breeding pair of burrowing owls is thought to exist on the site even though only one owl was observed at any one time at the suspected nesting burrows. The site supports at least seven and potentially eight breeding pair of burrowing owls.

In one potential breeding location, only one owl was observed at the burrow entrance at any given time during the survey. However, there was evidence suggesting that this location was a breeding burrow. In one case, an adult male burrowing owl was observed delivering nesting material (clumps of dry grass) to the burrow. A female owl was observed using the same burrow on separate occasions. The burrow entrance was stockpiled with prey items (moths). Stockpiling prey items at the nest by owls and other raptors can indicate newly hatched young; males anticipating young in the nest go on hunting frenzies and sometimes secure more food than can be consumed by the newly hatched young. Excess prey items are left at the nest or cached in various locations for feeding later. The behavior of the adult owls at this location during the middle of the breeding season suggests that could be a breeding site and not simply a burrow occupied by a single owl.

The burrowing owls on the site were observed foraging predominantly for moths and other flying insects. Prey items found at burrow entrances included small mammals, moths and other insects, and feathers indicating bird kills. Burrowing owls could be seen perched outside their burrows at all times during the survey period. The site contains suitable habitat for burrowing owls as evidenced by the number of owls observed during the survey, behavior of the owls indicating multiple breeding pairs on the site. The soil is soft and spongy, allowing the owls to easily excavate their own burrows. There appear to be few natural predators in the area (coyote tracks were observed on the site), and the habitat conditions produce sufficient numbers of insect and other prey species for the owls.

SBKR

No SBKR were caught during the five-night trapping session. Throughout the survey site, there were various small mammal signs and four native rodent species were trapped (Table 1). Overnight temperatures ranged between 50°F and 54°F. There was a light cloud cover and a light drizzle at the end of the trap session. The plant communities found within the study site include fallow vineyard, non-native grasses, remnant coastal sage

scrub, and small patches of wetland associations (Appendix A). The soils and substrate are composed of sandy loam. In the project area the soils are stabilized, yet friable and are conducive for burrow construction and maintenance.

Table 1
RODENT SPECIES TRAPPED WITHIN THE 103-ACRE PARCEL
NORTH OF THE MILLIKEN SANITARY LANDFILL IN THE
CITY OF ONTARIO, SAN BERNARDINO COUNTY, CALIFORNIA

Species
San Diego pocket mouse (<i>Chaetodipus fallax</i>)
Delzura kangaroo rat (<i>Dipodomys simulans</i>)
cactus mouse (<i>Peromyscus eremicus</i>)
deer mouse (<i>Peromyscus maniculatus</i>)

DISCUSSION AND CONCLUSIONS

The result of the trapping survey is that no SBKR were captured within the 103-acre parcel directly north of the Milliken Sanitary Landfill. No further evaluation relative to this species is necessary. Burrowing owls exhibiting breeding behavior were observed on the project site. Active burrowing owl nests cannot be subject to take per the requirements of state law. The CDFG should be contacted to establish acceptable mitigation measures with regards to this species. Bird nests were encountered during the surveys. The State of California prohibits the take of active bird nests. Thus, any grubbing or brushing to occur on the property should be conducted outside of the State identified breeding season of February 15 through September 1.

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- California Fish and Game Code 3503 and 3503.5 state:
- 3503:** *It is unlawful to take, possess or needlessly destroy the nest or eggs of any bird except as otherwise provided by this code or any regulation made pursuant thereto.*
- 3503.5:** *It is unlawful to take, possess, or destroy any birds in the orders Falconiformes or Strigiformes (birds-of prey) or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by this code or any regulation adopted pursuant thereto.*

FIGURE 1
Regional Location Map



FIGURE 2
Vicinity Map

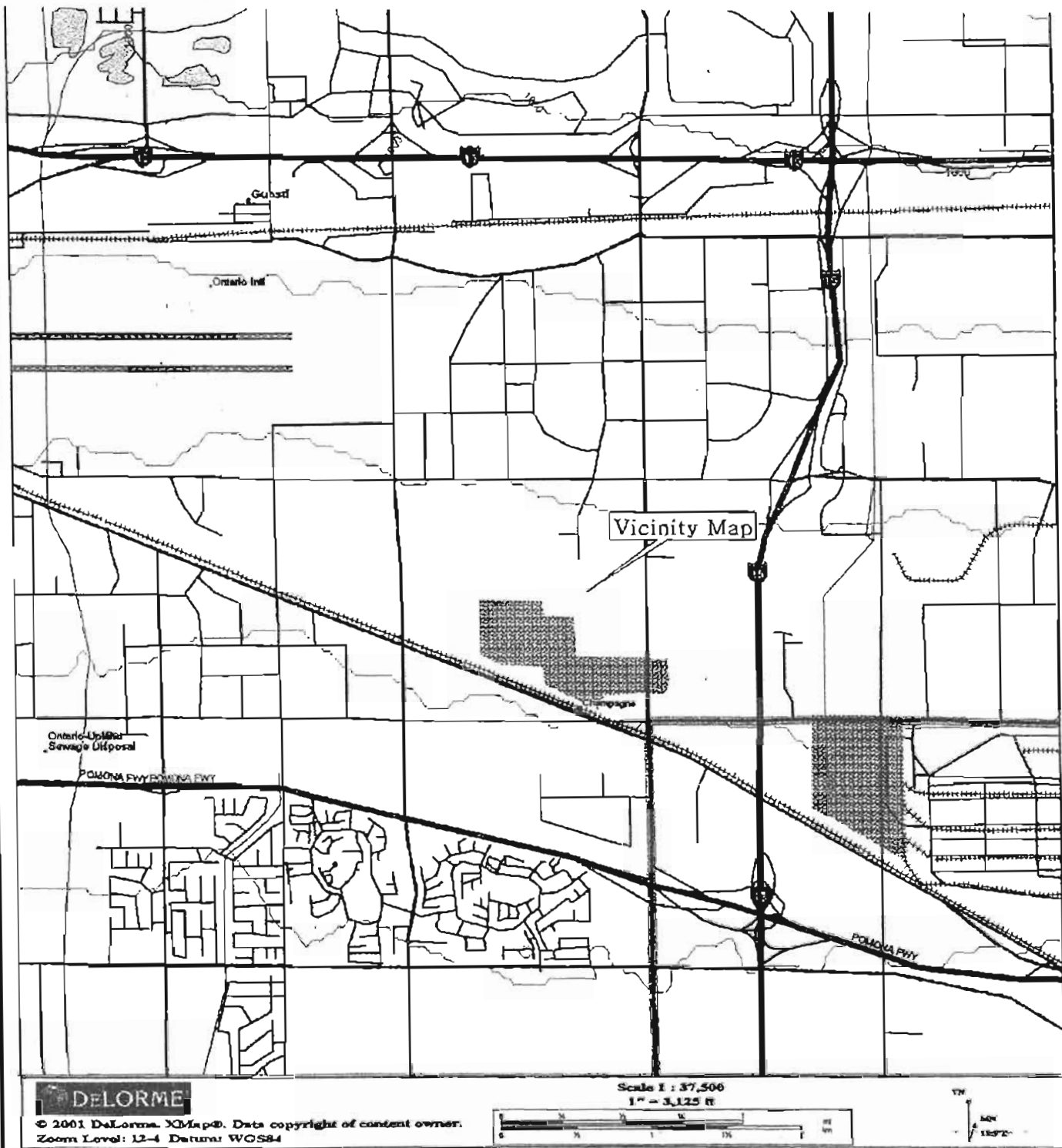


FIGURE 3
Site Location Map

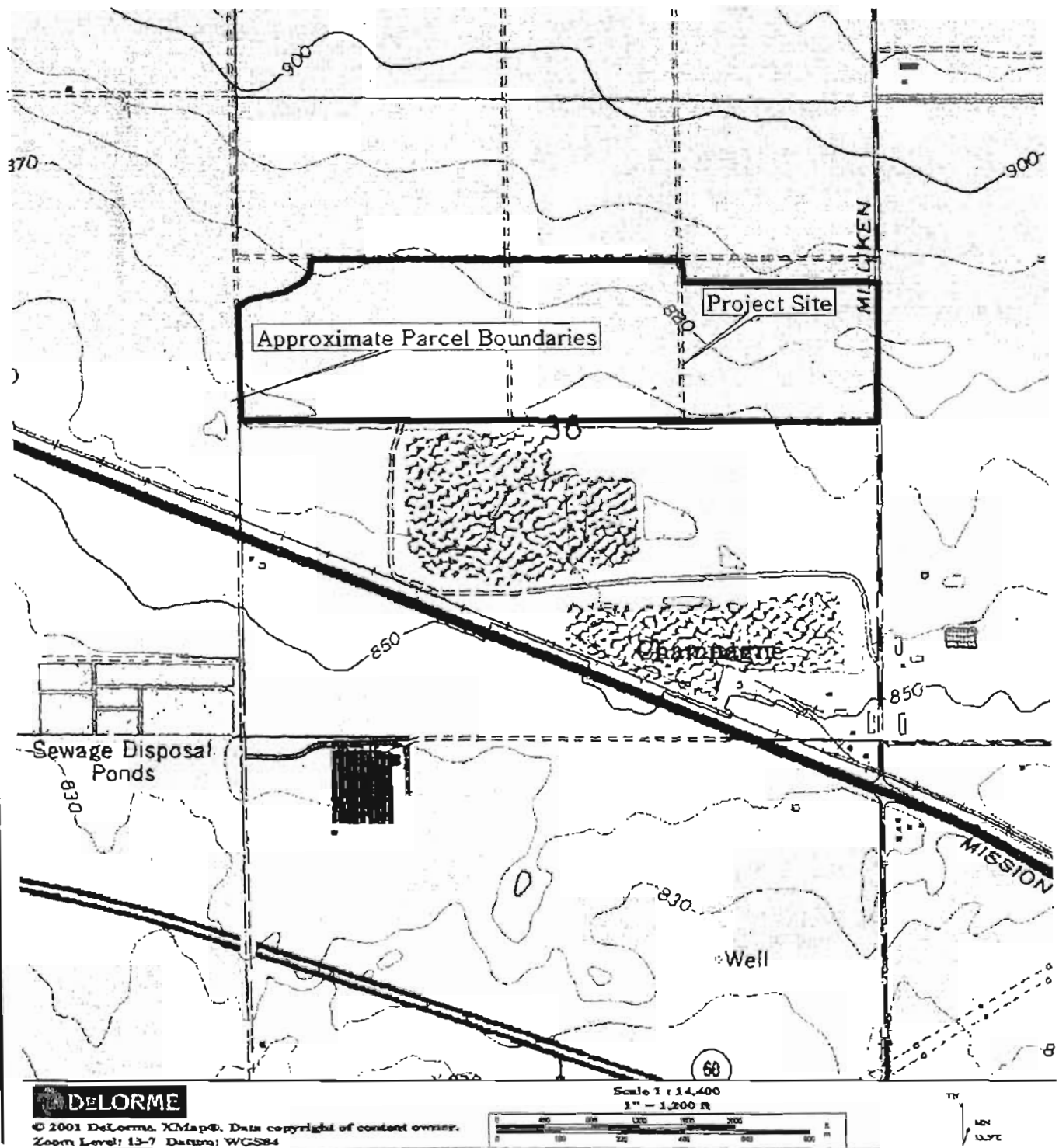


FIGURE 4
Trap Line Location

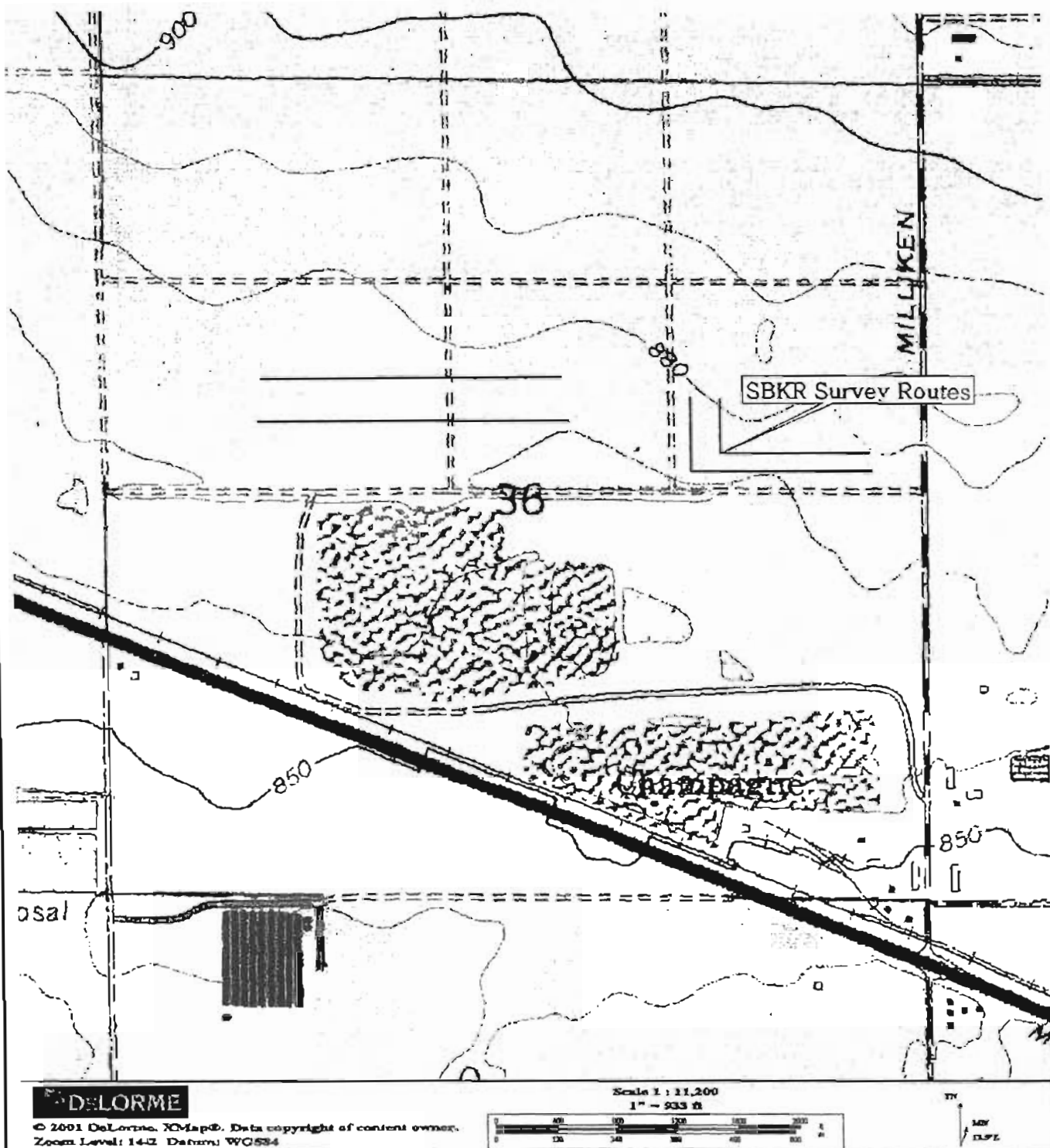
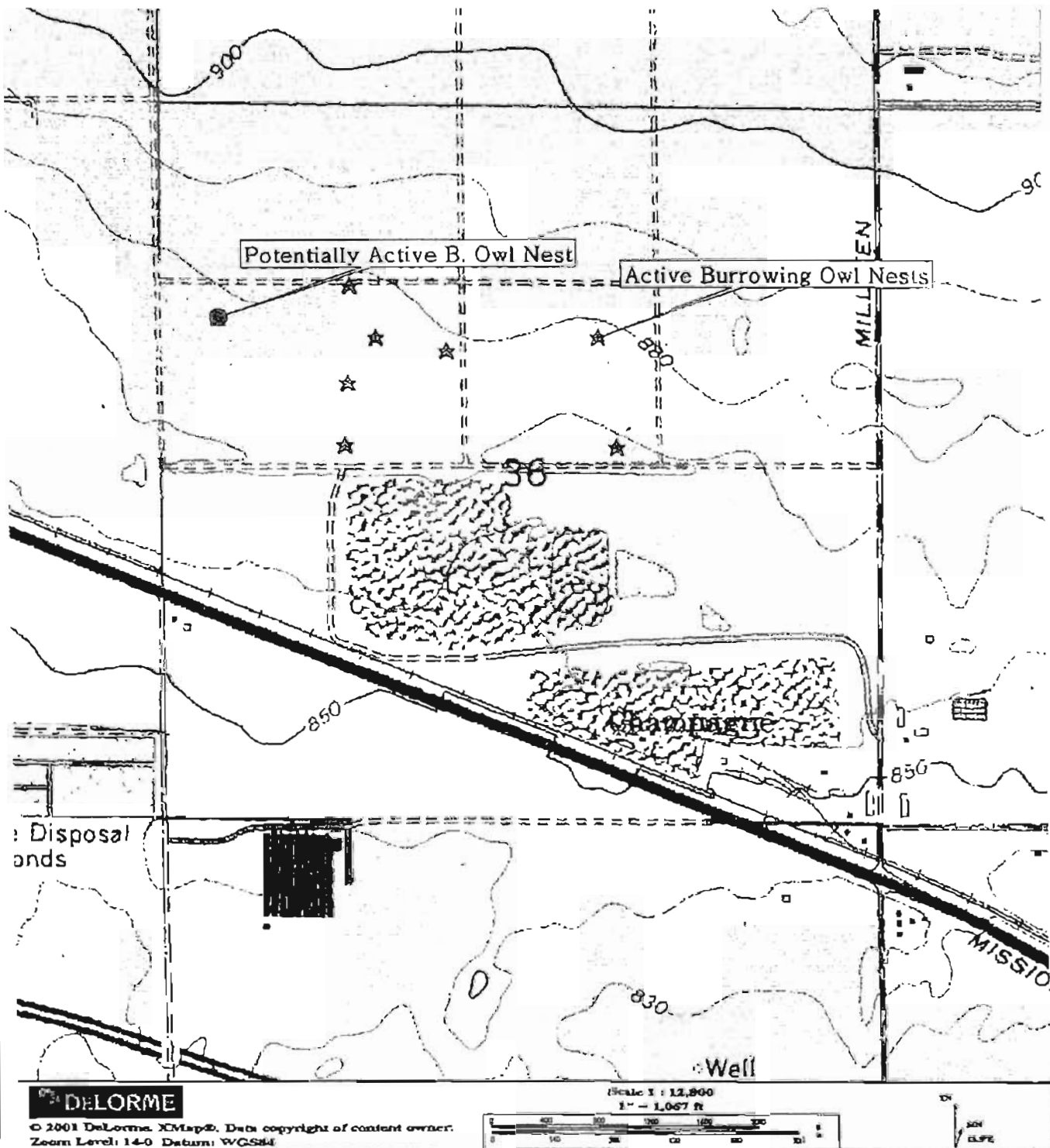


FIGURE 5
Active Burrowing Owl Burrow Locations



APPENDIX A
PLANT SPECIES LIST

Appendix A PLANT SPECIES LIST

Allen spp	Latin Name	Common Name	Family
*	<i>Ambrosia artemisiifolia</i>	common ragweed	Asteraceae
	<i>Amsinckia menziesii</i>	small-flowered fiddleneck	Boraginaceae
	<i>Artemisia californica</i>	California sagebrush	Asteraceae
	<i>Astragalus pomonensis</i>	Pomona milkvetch	Fabaceae
*	<i>Avena fatua</i>	wild oats	Poaceae
	<i>Baccharis salicifolia</i>	mulefat	Asteraceae
*	<i>Brachypodium distachyon</i>	purple false-brome	Poaceae
*	<i>Bromus catharticus</i>	rescue grass	Poaceae
*	<i>Bromus diandrus</i>	rip-gut grass	Poaceae
*	<i>Bromus madritensis</i>	foxtail brome	Poaceae
	<i>Camissonia bistorta</i>	California sun cup	Onagraceae
	<i>Camissonia hirtella</i>	hairy sun-cups	Onagraceae
	<i>Camissonia micrantha</i>	miniature suncup	Onagraceae
*	<i>Centaurea melitensis</i>	toxicole	Asteraceae
*	<i>Conyza bonariensis</i>	South American horseweed	Asteraceae
	<i>Crassula connata</i>	pygmy weed	Crassulaceae
	<i>Cryptantha clevelandii</i>	Cleveland's cryptantha	Boraginaceae
	<i>Cryptantha intermedia</i>	common cryptantha	Boraginaceae
	<i>Cryptantha maritima</i>	Guadalupe cryptantha	Boraginaceae
	<i>Ericameria linearifolia</i>	narrowleaf goldenbush	Asteraceae
*	<i>Erodium botrys</i>	long-beaked filaree	Geraniaceae
*	<i>Erodium cicutarium</i>	redstem filaree	Geraniaceae
	<i>Heterotheca grandiflora</i>	telegraph weed	Asteraceae
*	<i>Hirschfeldia incana</i>	Mediterranean Hoary-Mustard	Brassicaceae
*	<i>Hordeum marinum</i>	Mediterranean barley	Poaceae
*	<i>Lactuca serriola</i>	wire lettuce	Asteraceae
	<i>Lotus purshianus</i>	Spanish clover	Fabaceae
	<i>Lotus strigosus</i>	strigose bird's-foot trefoil	Fabaceae
*	<i>Marrubium vulgare</i>	horehound	Lamiaceae
*	<i>Melilotus indica</i>	tall nasty clover	Fabaceae
	<i>Oenothera californica</i>	California Evening Primrose	Onagraceae
	<i>Oenothera elata</i>	Common evening primrose	Onagraceae
*	<i>Polygonum arenastrum</i>	common knotweed	Polygonaceae
*	<i>Rumex crispus</i>	Curley Dock	Polygonaceae
	<i>Salix sp.</i>	willow	Salicaceae
*	<i>Salsola tragus</i>	russian thistle	Chenopodiaceae
*	<i>Schismus sp.</i>	Mediterranean grass	Poaceae
*	<i>Sisymbrium altissimum</i>	tall tumblemustard	Brassicaceae
*	<i>Sisymbrium irio</i>	London rocket	Brassicaceae
*	<i>Vitis vinifera</i>	grape vine	Vitaceae
*	<i>Vulpia myuros</i>	Foxtail Fescue	Poaceae

From: "Leslie MacNair" <LMacNair@dfg.ca.gov>
To: "Peter Rooney" <PROONEY@Sares-Regis.com>
Date: 12-5-2006 10:01:38 AM
Subject: Burrowing owl Mitigation Plan for the CA Commerce Center, Ontario, CA

Dear Mr. Rooney

I have reviewed the letter prepared by you on behalf of Sares-Regis Group dated November 21, 2006 and the attached "Burrowing Owl Mitigation Plan for Development within the California Commerce Center, North Milliken Landfill, Ontario, California " prepared by Michael Brandman Associates dated September 26, 2006 (Revised October 11, 2006).

The Department believes the Mitigation Plan is acceptable to mitigate the impacts to the owls.

As discussed, there are some additional details that we still need to work out later including, but not limited to, the following:

- size and location of site to be purchased
- location of the proposed artificial burrows
- endowment for management of proposed conservation site

Therefore a final Plan that addresses outstanding issues (including the above) will need to be submitted to the Department for review and approval prior to commencing activities.

The Department appreciates your coordination on this issue and look forward to working with you further on conservation of burrowing owls.

Thank you,
Leslie MacNair
Staff Environmental Scientist
Department of Fish and Game
Eastern Sierra - Inland Deserts Region

CC: "Tom McGill" <TMcgill@brandman.com>

Burrowing Owl Mitigation Plan
for Development within the California Commerce Center,
North of the Milliken Landfill, Ontario, California

Prepared for:

Latham & Watkins
600 W. Broadway, Suite 1800
San Diego, California 92101-3375

Contact: Christopher Garrett
619.696.7419

Prepared by:

Michael Brandman Associates
621 E. Carnegie Drive, Suite 100
San Bernardino, California 92408
909.884.2255

Contact: Mikael Romich, Project Biologist



September 26, 2006
(Revised October 11, 2006)

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APPENDICES

Appendix A: Focused BUOW Report (MBA 2006)

SECTION 1: INTRODUCTION

At the request of the Sares Regis Group, Michael Brandman Associates (MBA) completed a burrowing owl (*Athene cunicularia*) (BUOW) Mitigation Plan for a 103-acre property located in the City of Ontario, San Bernardino County, California. This property is hereinafter referred to as Project Site or Site.

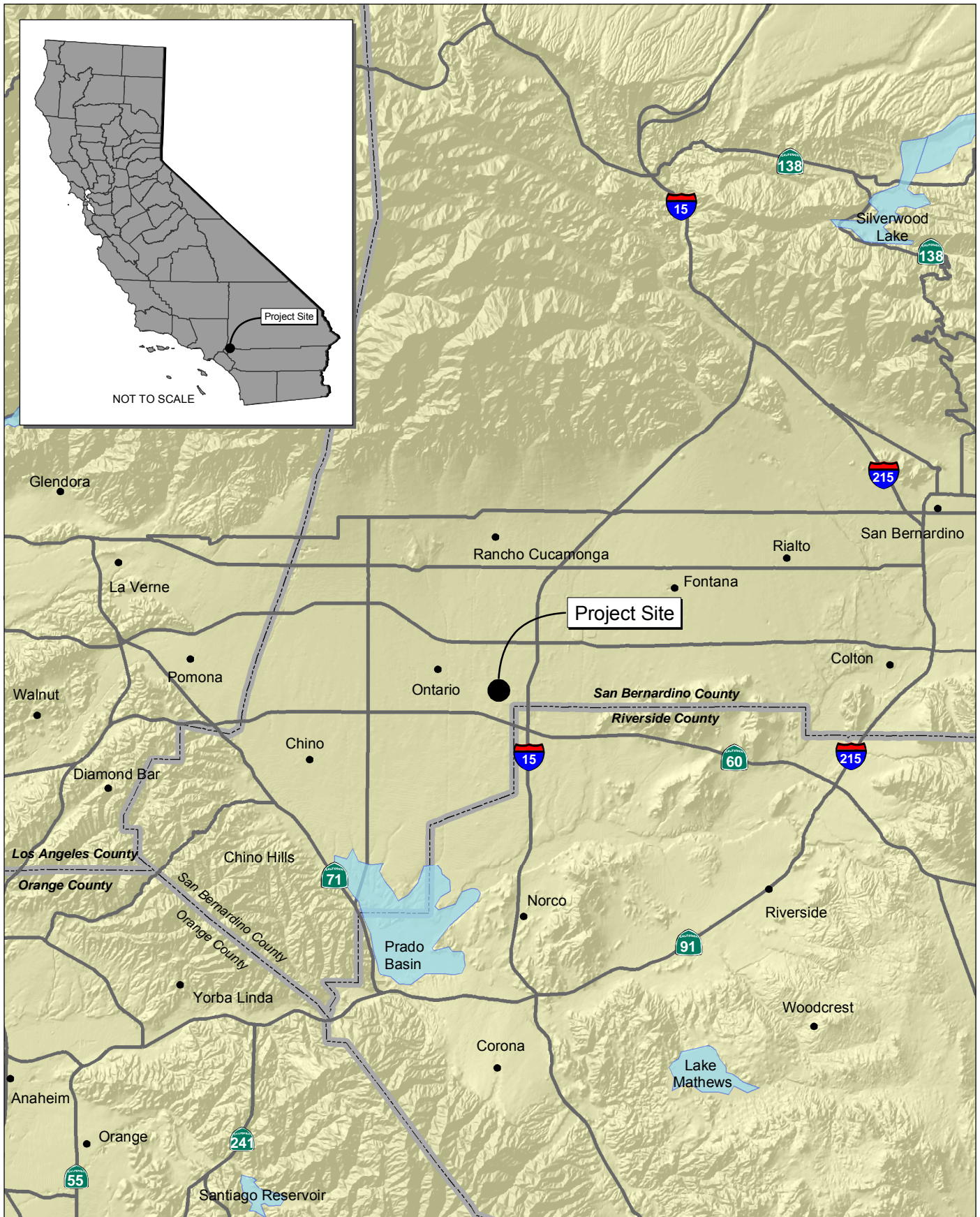
1.1 - PROJECT LOCATION

The Project Site is a 103-acre parcel located in Ontario, San Bernardino County, California. The Project Site is generally located west of Interstate 15, north of State Route 60, and south of Interstate 10 (Exhibit 1). More specifically, the Project Site is located south of and abutting Francis Street, east of and abutting Haven Avenue, west of and abutting Milliken Avenue, and north of Mission Boulevard (Exhibit 2).

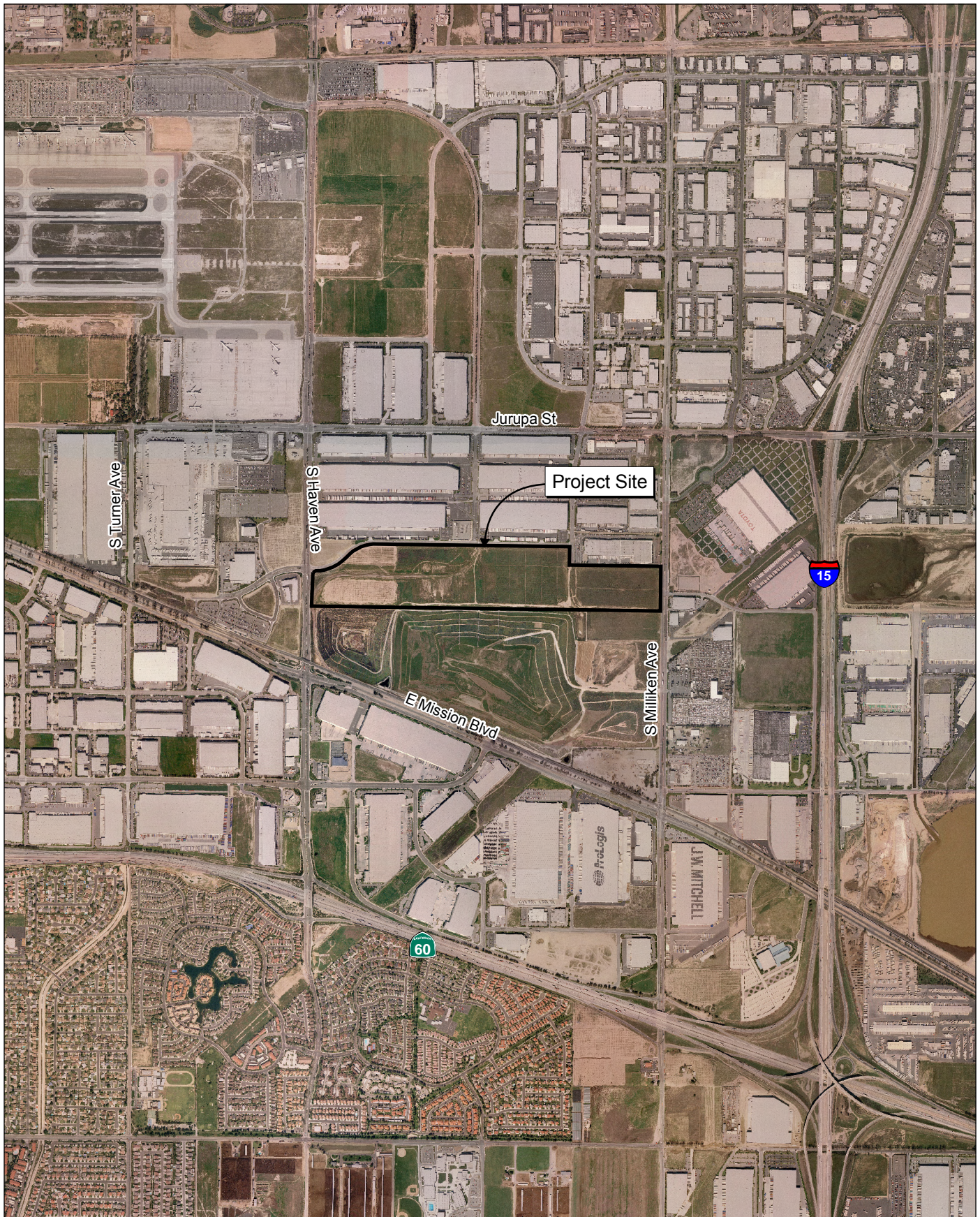
It consists of the following Assessor Parcel Numbers: 0211-281-04, -21, and -04. The Project Site occurs in Section 36, Township 1 South, Range 7 West on the Guasti US Geological Survey (USGS) 7.5-minute topographic quadrangle (Exhibit 3).

1.2 - PROJECT DESCRIPTION

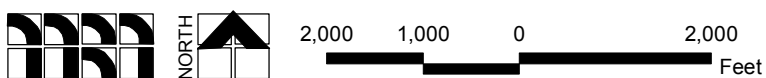
The Sares Regis Group proposes to develop the entire site for commercial use (warehousing and manufacturing) as part of the California Commerce Center. Due to the long and narrow nature of the project site, the proposed intensive development of the Site, and the existing commercial development surrounding the Site, conservation of onsite BUOW habitat was determined to be infeasible.



Source: Census 2000 Data, The CaSIL, MBA GIS 2006.



Source: GUAISTI SW & SE (1997) 3.75 DOQQ

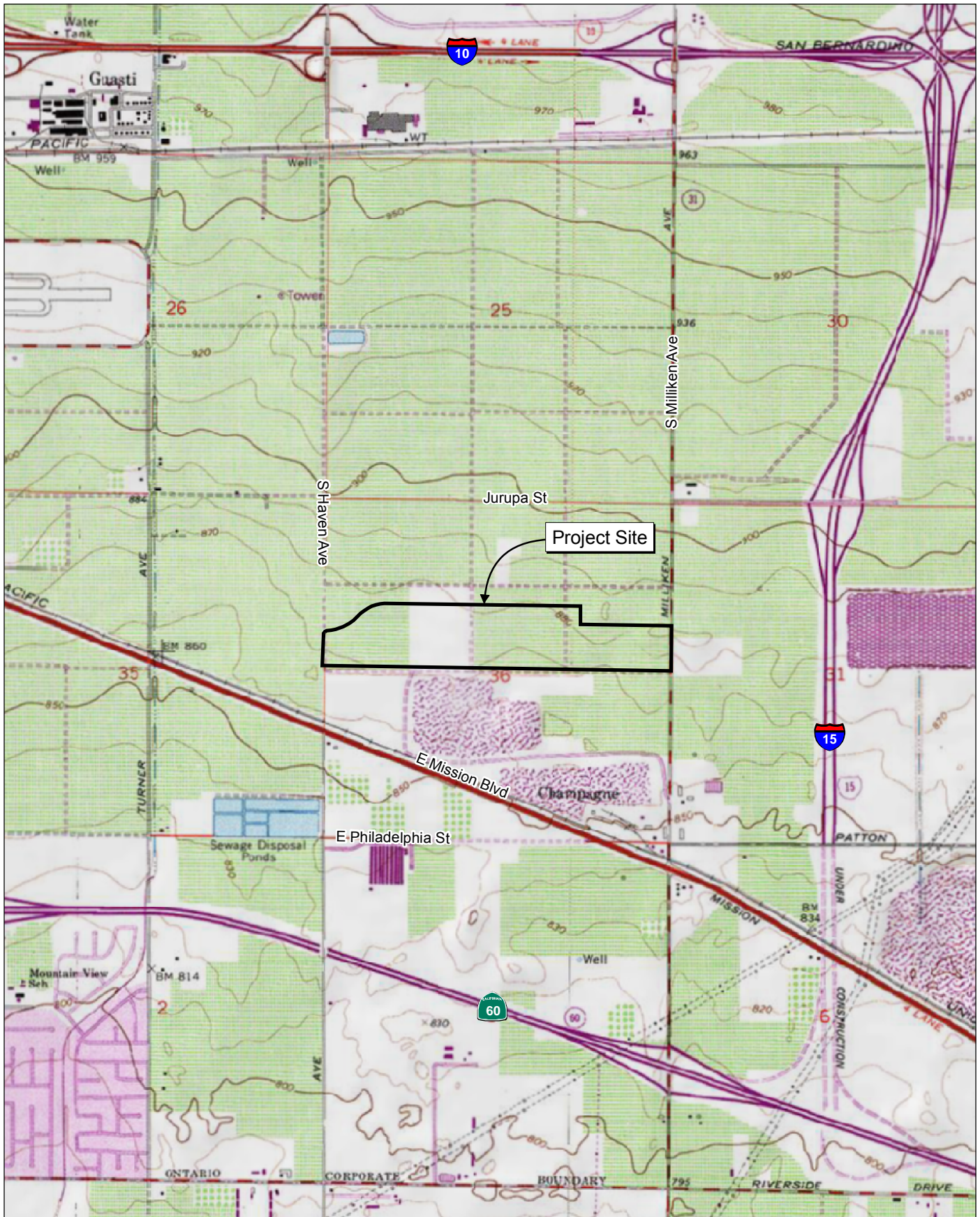


Michael Brandman Associates

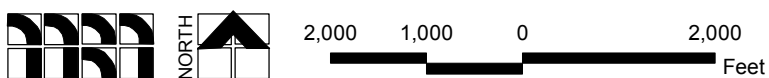
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Exhibit 2 Local Vicinity Aerial Map

SARES REGIS GROUP
BURROWING OWL MITIGATION PLAN



Source: USGS GUASTI Quad SW&SE, MBA GIS 2006.



Michael Brandman Associates
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Exhibit 3 Local Vicinity USGS Map

SARES REGIS GROUP
BURROWING OWL MITIGATION PLAN

SECTION 2: BACKGROUND INFORMATION

2.1 - 2006 SURVEY RESULTS

Four BUOW territories (three observed pair and a single individual) were identified during focused surveys conducted in 2006 by MBA (Appendix A). Several unoccupied but suitable burrows were observed during the 2006 surveys.

2.2 - BURROWING OWL BIOLOGY

The BUOW is a state species of concern due to their decline in the state of California in the past 30 years. It occurs in grasslands, lowland scrub, agricultural lands (particularly rangelands), and desert floors. The presence of burrows is the primary habitat requirement for nesting. One burrow is typically selected for use as the nest; however, satellite burrows are usually found within the immediate vicinity of the nest burrow within the defended territory of the owl. BUOW are generally considered to be monogamous although new mates often appear when one of the pair dies or when the pair divorces. Although open areas with short vegetation are critical for nesting, there is some evidence that BUOW prefer a vegetation mosaic, with nesting habitat interspersed within taller vegetation for hunting. However, the primary requirement for suitable BUOW foraging habitat appears to be low vegetation cover that allows visibility and access to prey.

SECTION 3: BURROWING OWL RELOCATION METHODOLOGY

Due to construction activities for the development of the site, a plan has been developed to passively relocate these owls from the project site. The relocation of the owls occupying the project site will involve the following steps.

3.1 - RELOCATE OWLS

The following passive relocation measures would be followed:

1. Passive relocation will occur September 1-January 31, which is outside of the breeding season for BUOW;
2. Prior to any relocation activities, approval will be obtained from California Department of Fish and Game (CDFG); and
3. The owls occupying the project site will be banded using US Fish and Wildlife Service (USFWS) metal bands and colored band.

The existing burrows on the project site will be systematically collapsed, using the California Burrowing Owl Consortium's (CBOC's) *Burrowing Owl Protocol and Mitigation Guidelines*. This will insure that no owls reside inside burrows to be collapsed. All areas of the project site will be cleared of vegetation and burrows except within a 50-meter buffer area around each occupied burrow. BUOW will be excluded from burrows in the immediate impact zone by installing one-way doors in burrow entrances. The one-way doors will be left in place 48 hours to insure owls have left the burrow before excavation. After 48 hours, existing burrows will be systematically collapsed. Burrows will be excavated using hand tools and refilled to prevent reoccupation. The project area will be monitored daily for 1 week to confirm the BUOW have vacated the project site before recommending commencement of grading.

3.2 - ARTIFICIAL BURROW CONSTRUCTION

Prior to the passive relocation, approximately eight temporary artificial burrows (a ratio of 2:1 for occupied burrows) will be constructed along the southern boundary of the project site. Artificial burrows would be constructed at least 2 weeks prior to the relocation effort to offer an opportunity for the owls on the project site to "discover" the constructed burrows during foraging or other movement patterns. Construction would follow proven methodologies as developed by Arizona Partners in Flight (2005). Unused burrows will be removed at the end of the first year.

SECTION 4: OFFSITE CONSERVATION LAND

4.1 - REPLACEMENT RATIO

The project will be adversely affecting BUOW, a California Special Concern (CSC) species, which will require mitigation and approval of the CDFG. The *CBOC Survey Protocol and Mitigation Guidelines* (1993) recommends the following off-site replacement ratios depending on the quality of the land to be acquired:

1. Replacement of occupied habitat with occupied habitat: 1.5 times 6.5 (9.75) acres per pair or single bird;
2. Replacement of occupied habitat with habitat contiguous to currently occupied habitat: 2 times 6.5 (13.0) acres per pair or single bird; and
3. Replacement of occupied habitat with suitable unoccupied habitat: 3 times 6.5 (19.5) acres per pair or single bird.

4.2 - LOCATION OF BURROWING OWL CONSERVATION

Potential replacement lands for offsite BUOW mitigation has been identified in the City of Chino (see Exhibit 4). The potential land is located within the Prado Basin below the 566-foot elevation line. These lands are either owned by the U.S. Army Corps of Engineers (USACE) or subject to a flood control easement in order to accommodate a 200-year or greater flood event in the Prado Control Basin. Both public and private land could be used for conservation. The title of the land would be transferred to a land conservancy or a conservation easement would be created and the land managed for BUOW. As a part of developing a Specific Plan to control development within The Preserve, the City of Chino released a Resource Management Plan (RMP) that provides a detailed methodology for mitigating biological impacts from development within the Specific Plan boundaries. The RMP provides recommendations for selecting and formally designating areas with long-term conservation value for burrowing owls. The goal of the RMP is to establish one or more conservation areas below the 566-foot inundation line totaling 300 acres.

MBA biologist Mikael Romich assessed both publicly and privately held land below the 566-foot contour that was within the boundaries of the The Preserve Specific Plan area on August 29, 2006. Most private land is currently being used for agriculture and dairy operations. The current private uses are not highly compatible with BUOW due to the ongoing disturbance regime. In particular, the disking of agricultural fields has created large areas that are not suitable to BUOW occupation, although these areas do provide suitable foraging opportunities. Dairy farms provide only limited opportunities for BUOW due to the high density of cattle present and the likelihood that burrows could be trampled. There may also be active ground squirrel eradication programs at dairy farms that

would further reduce the suitability to BUOW. Currently, the most suitable areas for BUOW on agricultural lands occur where burrows are present and where disturbance is minimal, such as along fence lines and percolation basins. If managed properly, privately-held agricultural lands could provide excellent nesting and foraging habitat for BUOW.

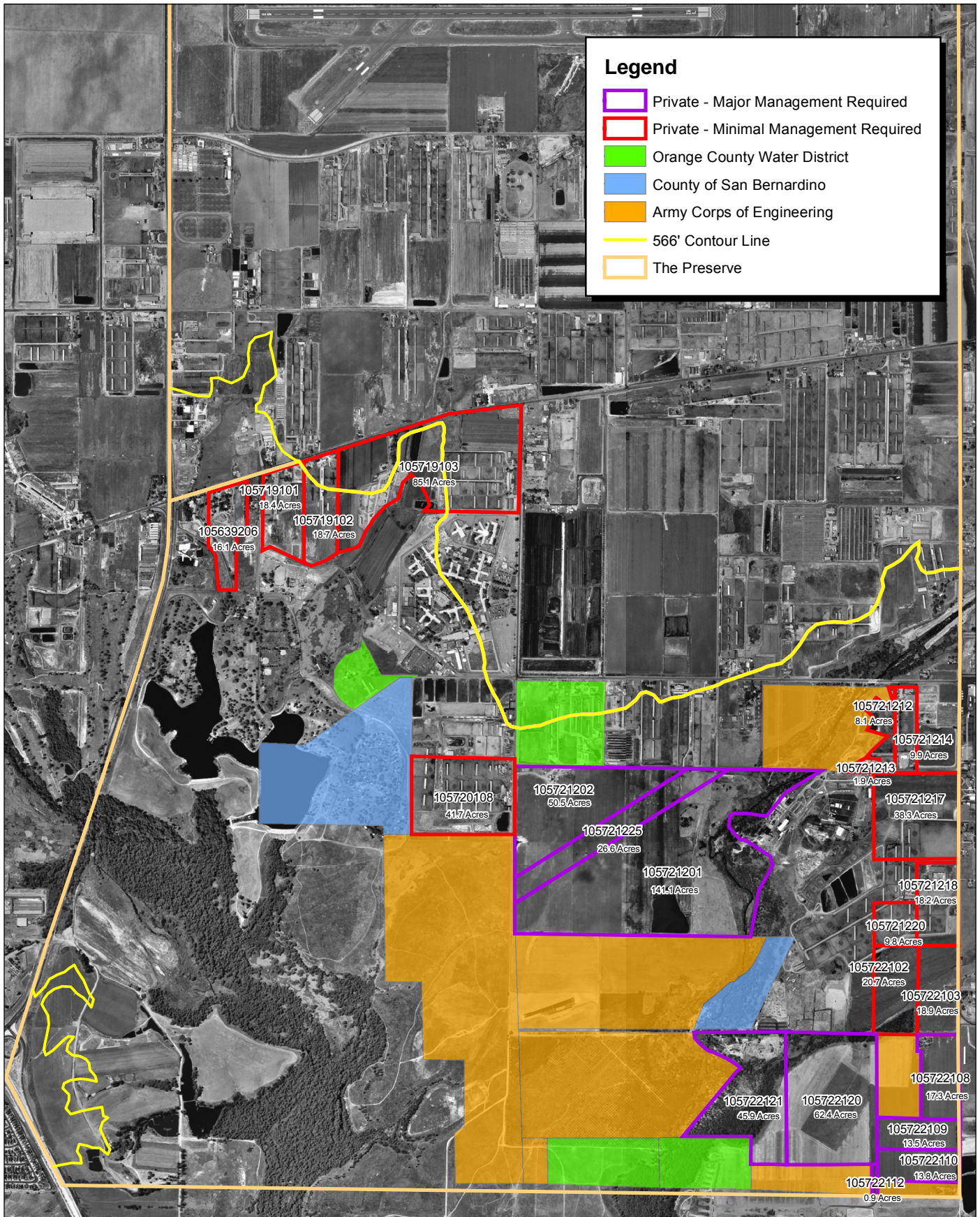
It should be noted that vast areas of the RMP are under public ownership and fall within the jurisdiction of the Orange County Water District, San Bernardino County, and the USACE (Exhibit 4). These areas are largely overgrown with vegetation and provide limited nesting habitat but good foraging opportunities for BUOW. Public lands would provide suitable habitat for both roosting or nesting by BUOW with the implementation of management efforts to control vegetation and create burrows. It is recommended that the acquisition of public lands and/or private lands be used to assemble a contiguous habitat block for BUOW.

BUOW are a species that can benefit greatly from management programs specifically suited to their needs. The essential requirement for BUOW is the presence of burrows. BUOW readily accept and nest in artificial burrows. In some areas, by simply ceasing ground disturbing activities and constructing burrows, there is a high likelihood that they will become occupied by BUOW. These areas are labeled “Minimal Management Required” on Exhibit 4.

Other areas have been classified as “Major Management Required” and include lands that would provide suitable habitat for BUOW by restoring natural conditions prior to constructing artificial burrows. Restoration would include replacing monotypic wheat and bare ground (created through disking) with plant communities that are more suitable for foraging, as well as constructing burrows and removing the ongoing disturbance. If these measures were implemented, it would be expected that high quality BUOW nesting, foraging and dispersing habitat would be created.

In both “Minimal” and “Major” management areas, ongoing vegetation management would be required to insure the habitat remained suitable for BUOW. This would include mowing to keep the vegetation at an acceptable height.

Exhibit 4 also shows the location of parcels that are privately held that could be purchased and managed for BUOW and public lands that may be available for conservation easements. Although the level of management required would differ among parcels, they would all provide high quality BUOW nesting and foraging habitat, and, due to the population of BUOW known to occur in the area, would be expected to become occupied by BUOW in a short time period. The specific management treatment would be developed specific to the parcel purchased or to which an easement is attached, but would include artificial burrow and perch construction, mowing, disking, weed eradication, seeding, and ongoing BUOW research.



Source: Terraserver (June 2002).



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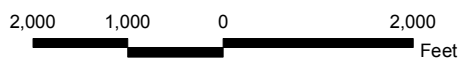


Exhibit 4 Burrowing Owl Mitigation Land in The Preserve

SARES REGIS GROUP
BURROWING OWL MITIGATION PLAN

SECTION 5: MONITORING AND REPORTING

5.1 - PASSIVE RELOCATION

All passive relocation activities and follow-up surveys will be summarized in a report that will be submitted to the City of Ontario and CDFG. The surrounding suitable habitat will be surveyed 1 month, 6 months, and the next breeding season after the relocation effort. Then the area would be surveyed once every nesting season for the next 2 years (a total of 3 years). This effort will be used to resight banded owls so as to ascertain the success of the relocation effort. All suitable habitat within approximately 500 feet of the project site will be surveyed.

5.2 - BURROWING OWL CONSERVATION LAND

The particulars of the conservation land acquired will be detailed in a report submitted to the City of Ontario and CDFG once the final parcel(s) has been identified for purchase. Information will include the location of the parcel(s), the onsite conditions at the time of conservation, the level of management activity required to create suitable BUOW habitat, the management activities completed to date, and the presence of BUOW.

The conservation land will be periodically visited for the next 3 years (12 visits) to collect data on BUOW that occupy the site, including survival, pair bonds, nest success, fidelity to the conservation site, and other relevant information. Each of the BUOW that occupy the conservation area would be color-banded to allow unique identification. An effort would also be made to color-band all the young produced by owls on the conservation area. This banding information could provide information on natal dispersal distances, locations, and fidelity to the natal territory in subsequent years.

SECTION 6: RESPONSIBLE PARTIES

The project proponent, The Sares Regis Group, is ultimately responsible for implementation of this Plan and shall provide the necessary funding. The owner reserves the right to assign responsibilities for various plan elements to representative agents or contractors it engages to implement or oversee various plan elements.

SECTION 7: REFERENCES

California Burrowing Owl Consortium (CBOC 1993). *Burrowing Owl Protocol and Mitigation Guidelines*

Arizona Partners in Flight (2005). *Artificial Burrow Construction Guidelines*.

Appendix A: Focused BUOW Report (MBA 2006)

BURROWING OWL FOCUSED SURVEY REPORT

APNs: 0211-281-04, -21, -23

**A 103-acre property in Ontario, San Bernardino County, California
Total Area Surveyed: 103 acres**

**Section 36 of Township 1 South, Range 7 West of the
Guasti USGS 7.5-minute Topographic Quadrangle Map**

Prepared for:

Latham & Watkins

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Prepared by:

Michael Brandman Associates

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Contact: Thomas J. McGill, Ph.D., Project Manager



Survey Conducted By: Mikael Romich and James Hickman

Surveys Conducted On: April 13, 18, 20, 27, May 4, 2006

Report Date: July 19, 2006
(Revised: October 11, 2006)