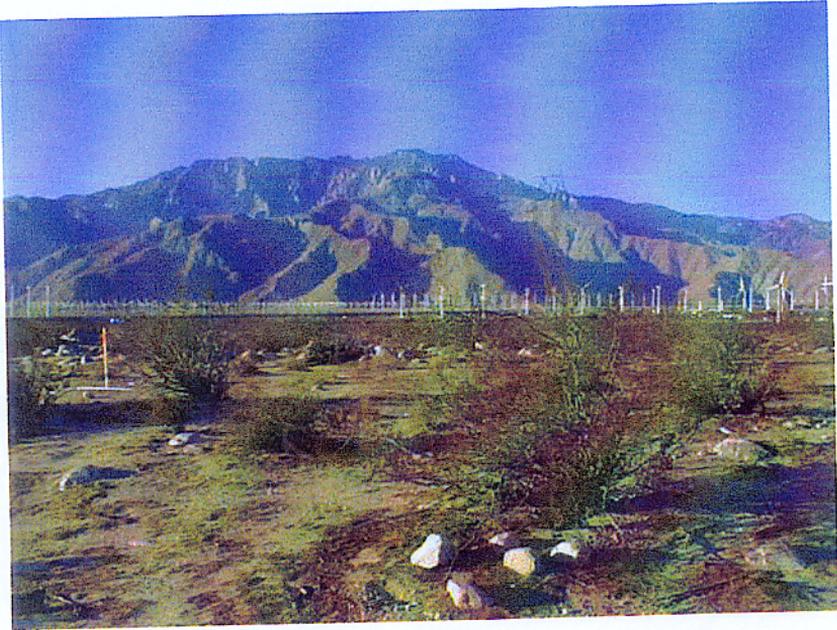


Biological Assessment
Proposed 10 Acre Turbine Site



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Appendix A: California Natural Diversity Database

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Appendix C: Wildlife Compendium

EXECUTIVE SUMMARY

No signs of the desert tortoise were observed on-site although the site may have once been used by this species. Habitat for the flat-tailed horned lizard is absent. Habitat for both the Palm Springs ground squirrel and Palm Springs pocket mouse is present on-site, however neither species was observed during this series of surveys. Pit-fall trap data indicate that the Coachella Valley Jerusalem cricket does not occur on-site. The wildlife observed on-site include only common species such as the jackrabbit, coyote, desert iguana, and western whiptail lizard. The 10.0 acre site shows signs of human disturbance along it's perimeter and in isolated locations throughout the site.

The proposed use of the 10.0 acre project site is not expected to result in significant local or regional environmental impacts. Potential foraging habitat for some common species is expected to be eliminated by this project. However, since the project site is so small, the environmental effects are expected to be negligible.

Survey data collected on-site would be enhanced if surveys were conducted in the spring.

1.0 INTRODUCTION

Wintec Energy, LTD plans to develop an electrical substation on the 10 acre project site to serve the needs of future wind energy development in the area. The site is located north of Interstate 10, east west of Indian Avenue and north of 19th Avenue along (Figure 1, Figure 2). Site photographs (Figure 3, Figure 4, Figure 5, Figure 6) were taken at the corners of the site toward the middle of the site and are included herein to enhance the understanding of this report.

This document has been developed to discuss the findings of a biological survey that was completed on-site on December 15 & 16, 2000 and January 4, 2001.

2.0 MATERIALS & METHODS

The methodology used to evaluate the biological resources on the 10,0 acre site are discussed below.

2.1 Field Surveys

The project site was surveyed between 9:00 - 3:00 pm, December 18 & 19, 2000, and between the hours of 7:30 am - 9:30 am on January 4, 2001. Surveys were conducted on foot. Surveys of the site were completed along linear transects separated by 30 feet from adjacent transects. Survey transects covered the entire site and are based on the survey protocol guidelines of the United States Fish and Wildlife Service (1992). A total of 20 pit-fall traps were placed at 10 meter intervals across the site on December 15, 2000 and checked and removed on December 16, 2000.

2.2 Weather Conditions During Surveys

Weather conditions during the December 18, 2000 survey are summarized as follows: wind speed averaged 15 mph from the west, skies were clear, air temperature was 62 degrees F, soil temperature was 61 degrees F. The weather conditions during the December 19 surveys were as follows: wind speed averaged 10 mph from the west, scattered clouds and airborne sand and dirt were prevalent, air temperature was 62 degrees F, soil temperature was 70 degrees F. Weather conditions during the January 4, 2001 surveys were as follows: wind speed averaged 5 mph from the west, skies were clear, air temperature was 67 degrees F, soil temperature was 60 degrees F.

FIGURE 1

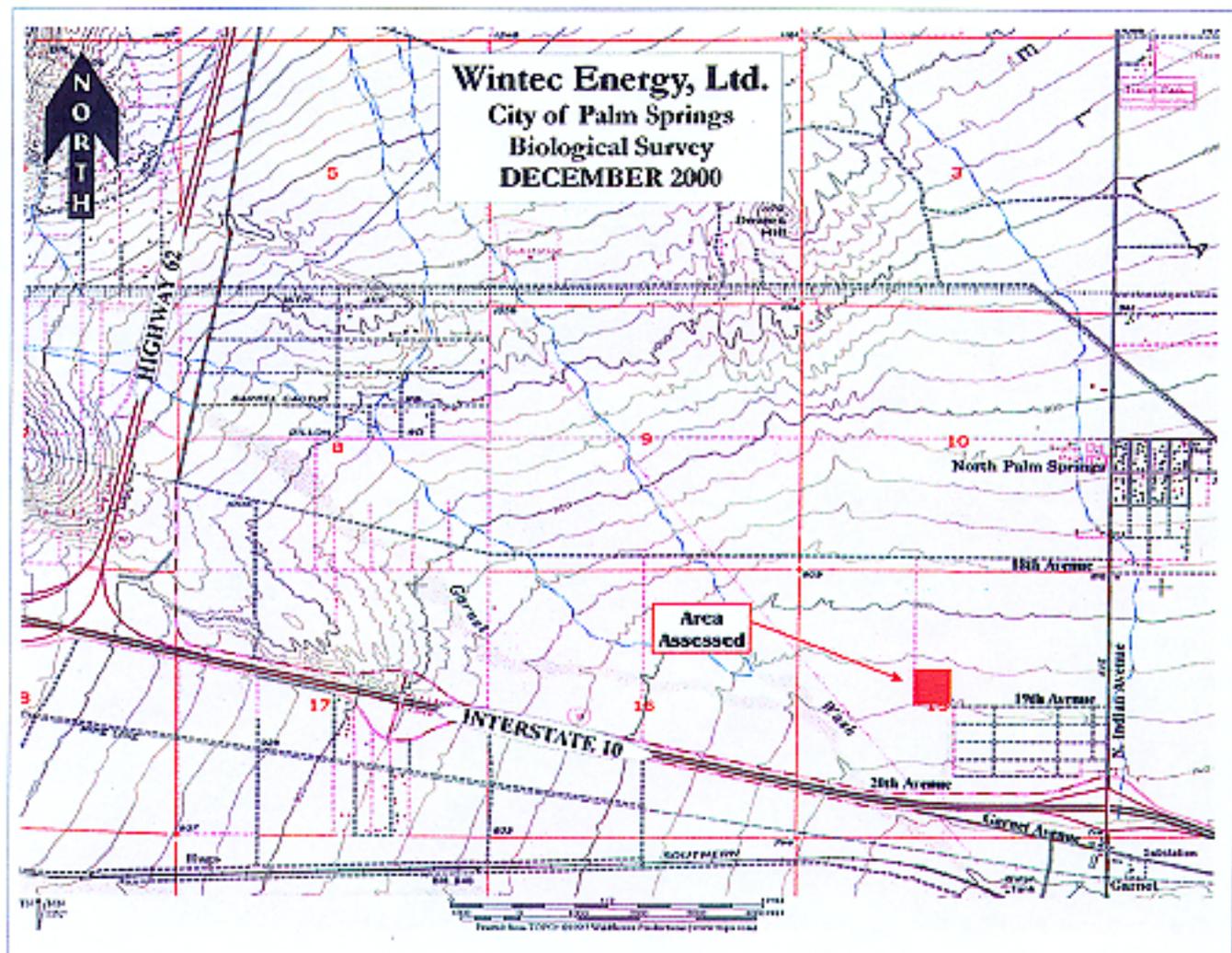


FIGURE 2

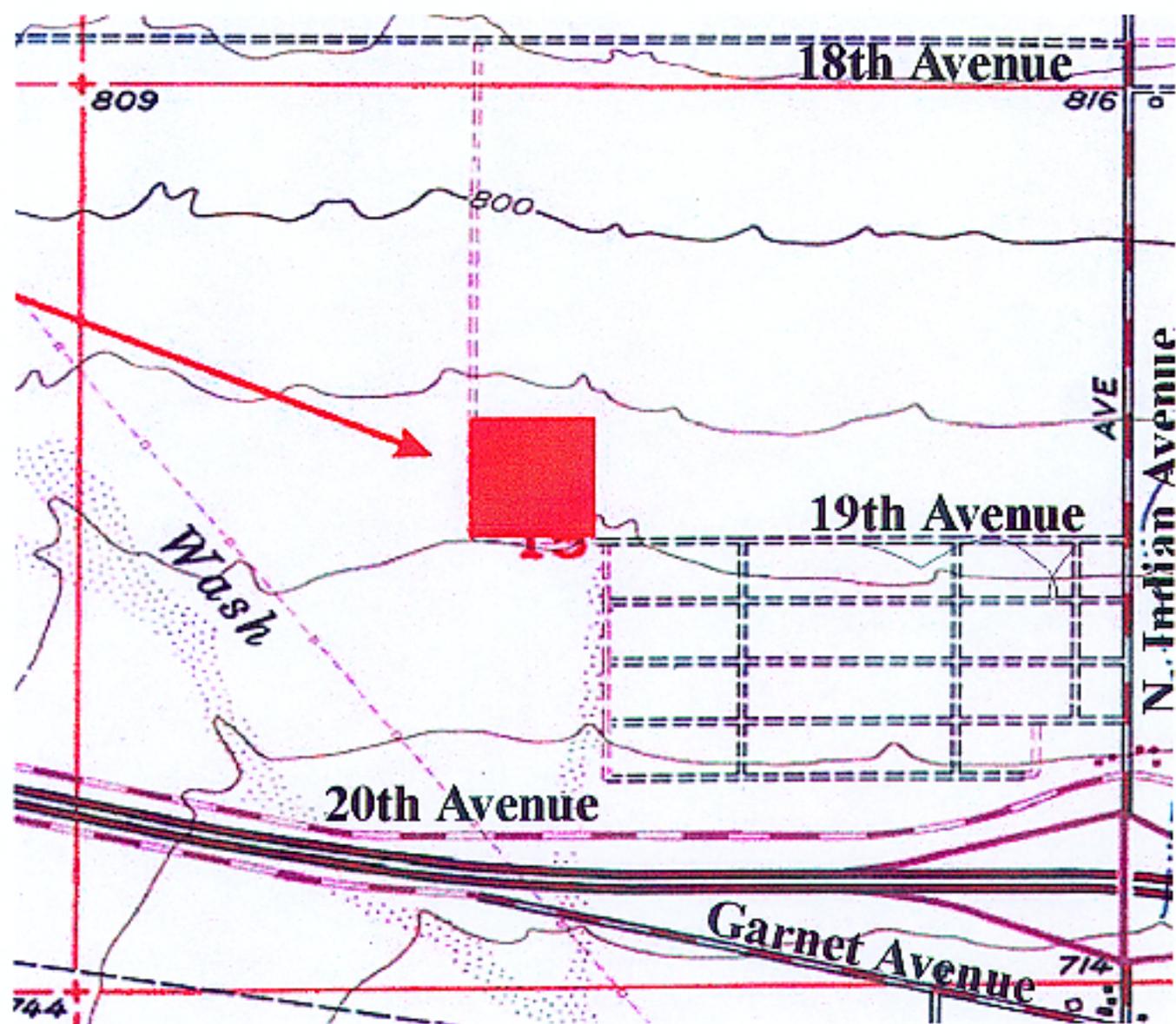


FIGURE 3



FIGURE 4

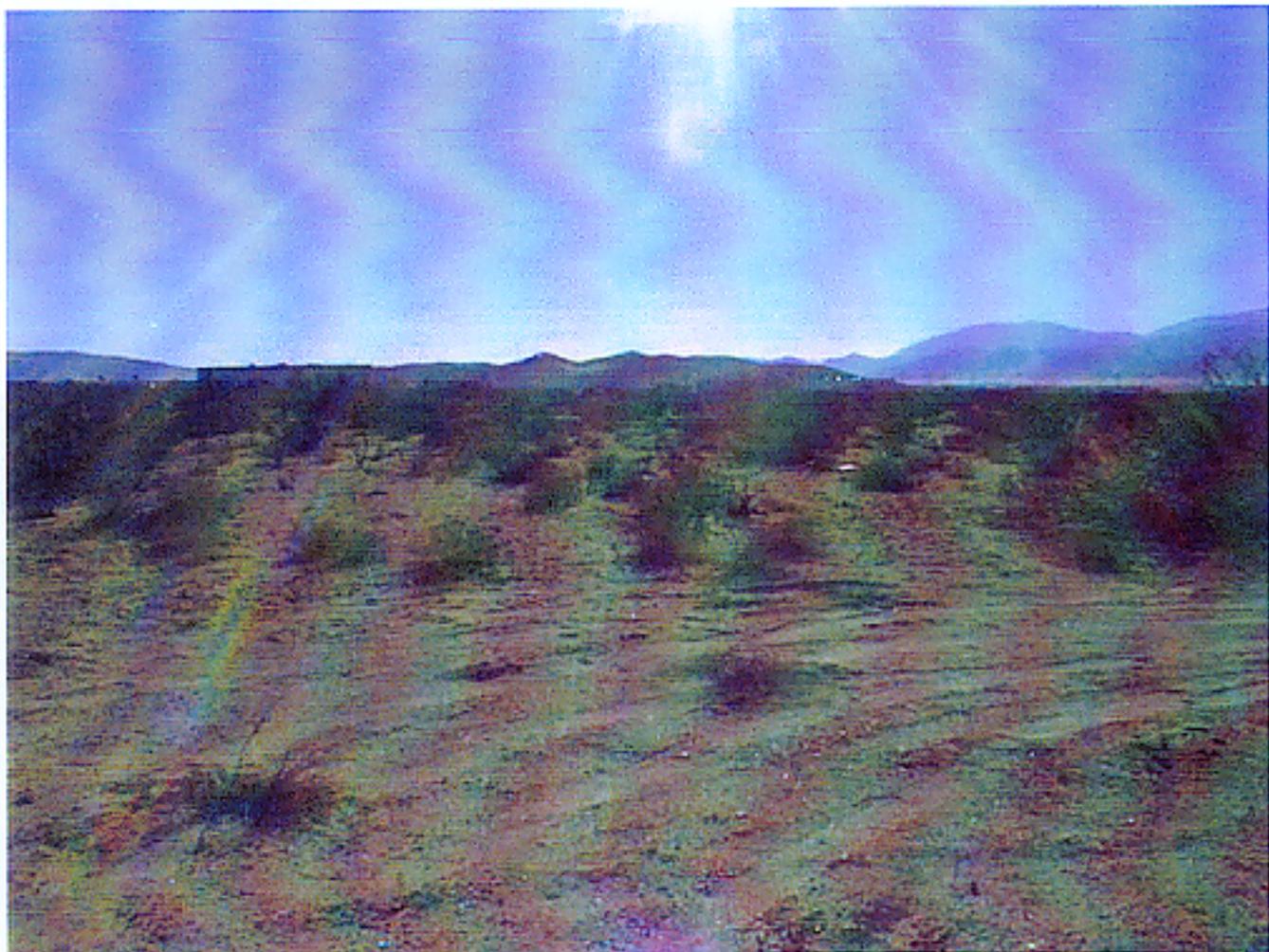


FIGURE 5

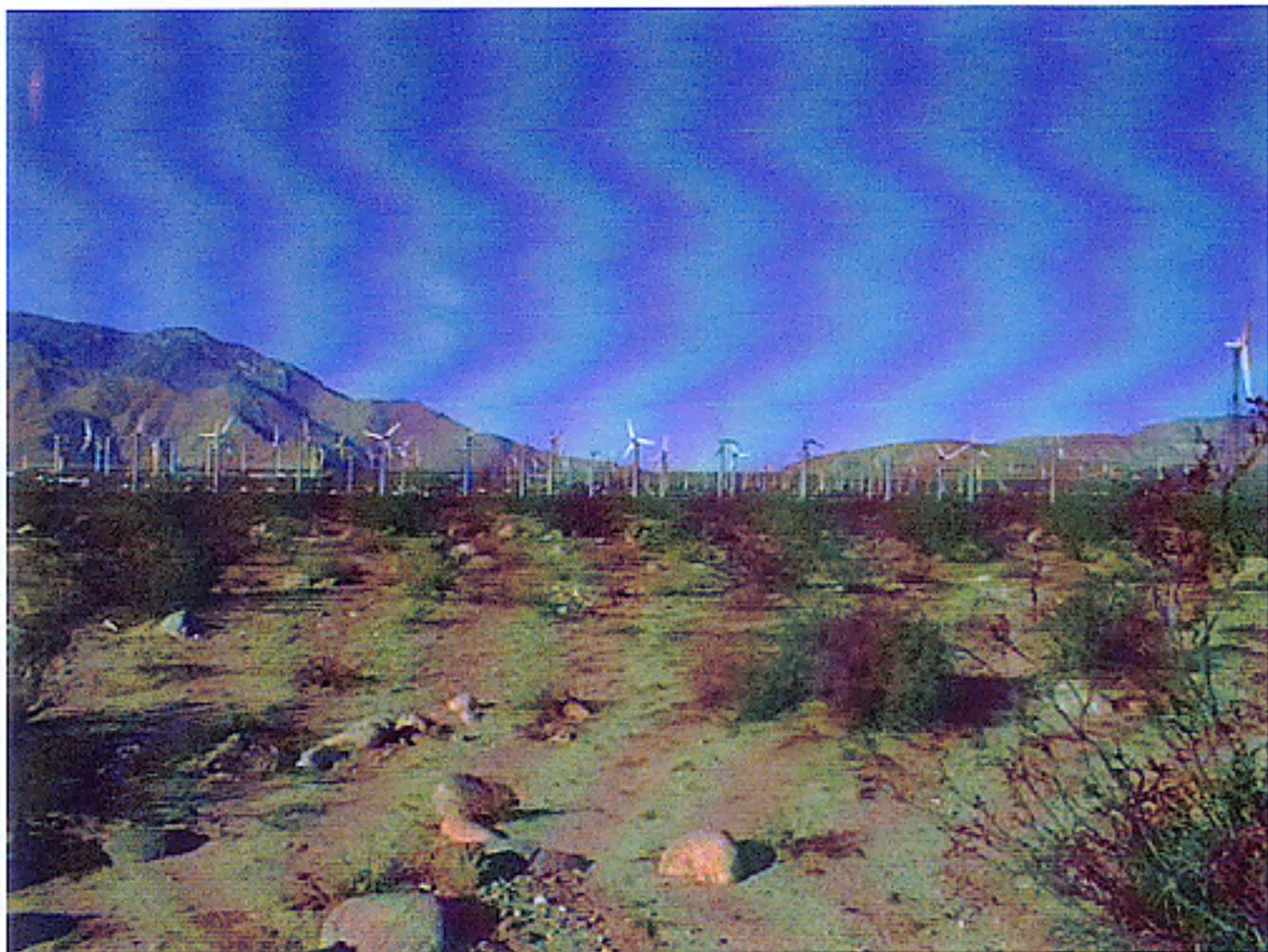
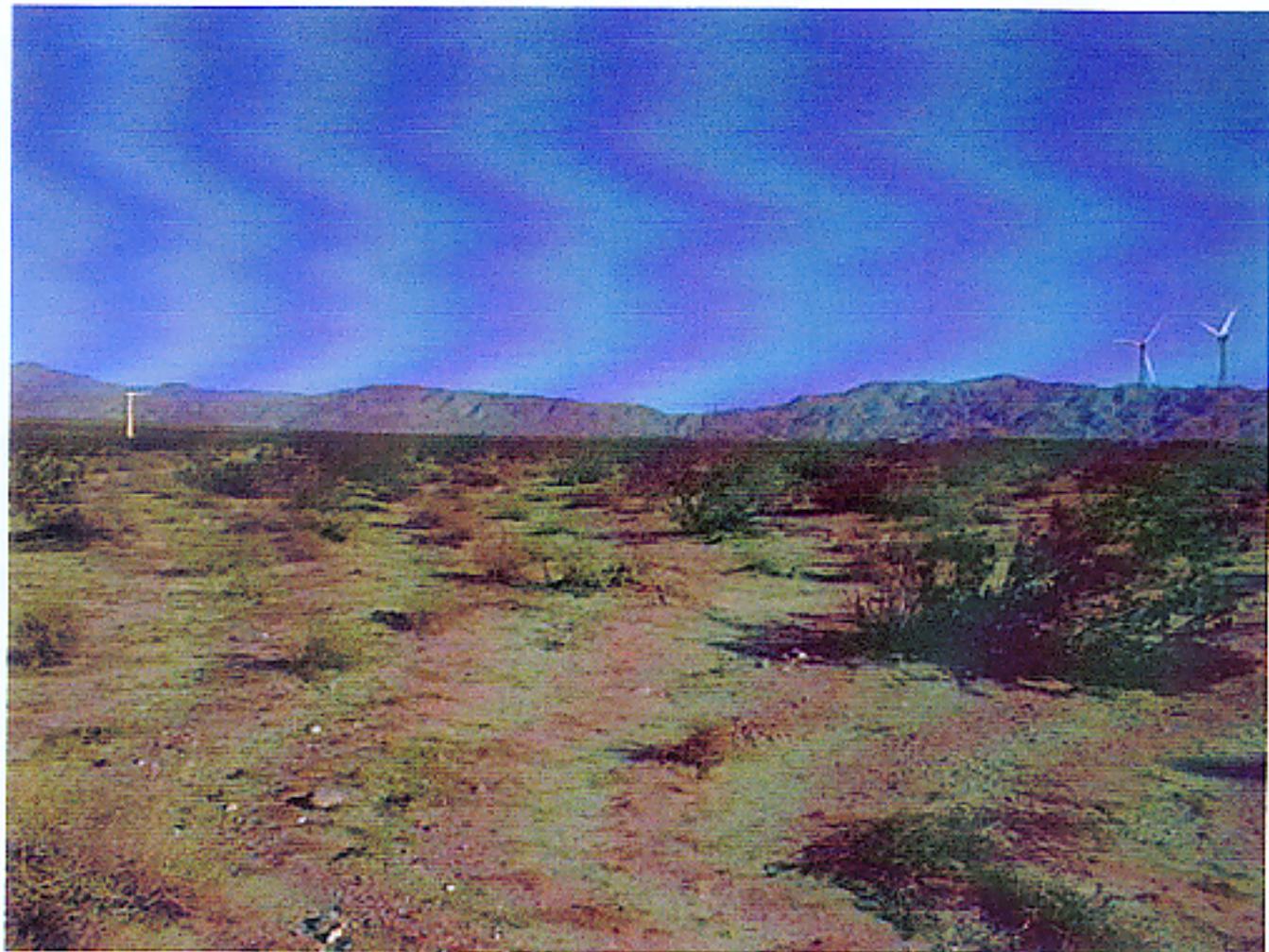


FIGURE 6



3.0 RESULTS

3.1 Literature Search

The California Natural Diversity Database indicates that the following endangered, threatened and/or sensitive species exist or have once existed in the Seven Palms Valley, Desert Hot Springs, Palm Springs and Cathedral City region of the Coachella Valley (Appendix A). This list does not reflect what is on the project site but rather what has been observed within the borders of these USGS quadrangles. These species are listed below and include the following notations describing their status (where C = California, F = federal, T = threatened, E = endangered, SOC = species of concern, P = proposed and N = no official status).

Deep Canyon snapdragon (N - *Antirrhinum cyanthiferum*), Coachella Valley milk-vetch (FE - *Astragalus lentiginosus coachellae*), ayenia (N - *Ayenia compacta*), Arizona spurge (N - *Chamaesyce arizonica*), flat-seeded spurge (FSOC - *Chamaesyce platysperma*), desert pupfish (FE, SE - *Cyprinodon macularis*), California ditaxis (FSOC - *Ditaxis californica*), glandular ditaxis (N - *Ditaxis clariana*), willow flycatcher (SE - *Empidonax traillii*), prairie falcon (N - *Falco mexicanus*), Little San Bernardino Mountains gilia (FSOC - *Gilia maculata*), Coachella Valley giant sand treader cricket (FSOC - *Macrobaenetes valgum*), spearleaf (N - *Matelea parvifolia*), slender woollyhead (N - *Nemacaulus denudata*), Colorado Valley woodrat (N - *Neotoma albigula venusta*), cheeseweed owlfly (FSOC - *Oliarces clara*), peninsular bighorn sheep (*Ovis canadensis cremnobates*), flat-tailed horned lizard (N - *Phrynosoma mcallii*), black-tailed gnatcatcher (N - *Polioptila melanura*), vermilion flycatcher (N - *Pyrocephalus rubinus*), Coachella Valley round-tailed ground squirrel (FSCO - *Spermophilus tereticaudus chlorus*), Coachella Jerusalem cricket (FSCO - *Stenopelmatus calhullaensis*), Laguna Mountains jewelflower (N - *Streptanthus bernardinus*), crissal thrasher (N - *Toxostoma crissale*), Le Conte's thrasher (N - *Toxostoma lecontei*), Coachella Valley fringe-toed lizard (FT, SE - *Uma inornata*), and Mecca aster (FSOC - *Xylorhiza cognata*).

The Deep Canyon snapdragon (*Antirrhinum cyanthiferum*), is known to occupy only rocky sites below 800 meters in elevation. Rocky terrain is not present on-site and therefore habitat for this species is not present. None were observed during this survey.

The Coachella Valley milk-vetch (*Astragalus lentiginosus coachellae*) is a federal endangered species that is known to occur in the Coachella Valley. This species blooms between February and May. Through seed dispersal this plant may colonize anywhere within the Whitewater Floodplain or the San Gorgonio Pass where suitable habitat is present. Kobaly (1983) observed this species along the eastern edge of Windy Point in the San Gorgonio Pass (specific location not listed in database). No sign of this plant was observed during this survey, although a spring-time botanical survey should be conducted.

Ayenia (*Ayenia compacta*) is a plant species that occurs in sandy and gravelly soils between 150 - 1095 meters in elevation. No signs of this species were observed during the surveys although potential habitat may be present on-site.

Arizona spurge (*Chamaesyce arizonica*) is a small plant that is rarely more than a few inches tall. In general, the growth of this species is lateral rather than upward. This species was not observed on site and has not been observed in any area north on I-10 by Victor Horchar in the past five years.

The flat-seeded spurge (*Chamaesyce platysperma*) is a federal species of concern. This species is more common to Mexico and Arizona than California. A population of flat-seeded spurge was observed near Edom Hill within the Whitewater Floodplain (3 miles south of the project site, south of I-10) in 1926 and more recently by Victor Horchar (1998) near Deep Canyon Research Center in Palm Desert. The habitat requirements on-site for the flat-seed spurge are marginal, and none were observed during these surveys.

The desert pupfish (*Cyprinodon macularis*) is both a federal and state endangered species which requires perennial pools of water. Habitat for this species is not present on site and therefore no live pupfish were observed.

The California ditaxis (*Ditaxis californica*) is a federal species of concern. This plant occurs in sandy washes and in alluvial fans. No signs of this species have been recorded on the habitat type that occurs on-site. There is a greater likelihood that if this species were to occur in the region it would be found south of I-10 in the Whitewater Floodplain. No signs of this ditaxis were present during these surveys.

The glandular ditaxis (*Ditaxis clariana*) is a small plant that occurs on sandy substrates within washes and on hillsides where sand has accumulated. This species has been observed historically in La Quinta, Magnesia Springs Canyon and in the Santa Rosa Mountains. Habitat for this ditaxis is absent from the site and no signs of this species were observed during these surveys.

The willow flycatcher (*Empidonax traillii*) is listed by the State of California as an endangered species. This species occurs in dense willow thickets around water sources. Habitat for this species is not present on site and none were observed.

The prairie falcon (*Falco mexicanus*) is known to occur in the Coachella Valley. Although not observed on site, this species may forage on-site when sufficient food is available (small rodents, snakes, lizards). This species nests typically on cliffs which do not occur on-site.

The Little San Bernardino Mountains gilia (*Gilia maculata*) is a federal species of concern. This plant is known to occur in sandy wash habitat between 190 - 1055 meters in elevation. The elevation of the site and the absence of sandy wash habitat reduce the likelihood that this plant could occur on site. None were observed during these surveys.

The Coachella Valley giant sand treader cricket (*Macrobaenetes valgum*) is a federal species of concern. This species is known to occur on the ridges of sand dunes and in areas on sand dunes where springs dampen the sand. Habitat for this species is not present on-site and no signs of this species were observed in the 20 pit-fall traps placed across the site.

The spearleaf (*Matelea parvifolia*) is a plant which is known to occur on dry rocky ledges and slopes between 440 - 1095 meters in elevation. Habitat for this species does not occur on site. It has been observed east of Highway 74 at higher elevations.

The Colorado Valley woodrat (*Neotoma albigula venusta*) has no state or federal status. It is closely associated with beaver-tail cactus and mesquite. It occurs in warmer areas of the Colorado Desert and has been observed by Victor Horchar in the Blythe area. Although habitat for this species is not present on-site, potential woodrat burrows and debris mounds were found in two locations on the eastern edge of the 10.0 acre site. A small mammal trapping survey may be required to determine if this woodrat actually occurs on-site.

The cheescweed owlly (*Oliarces clara*) is a federal species of concern. It is known to occur in the lower Colorado River drainage and it can be found under rocks or in flight over streams. Habitat for this species is absent from the project site.

Slender woolly-heads (*Nemacaulus denudata*) has no state or federal status. This species was observed in 1948 along Highway 111, east of Whitewater. It occurs typically on desert dunes, in Sonoran desert scrub and coastal dunes according to the database and the Jepson Manual. This species was not observed on site during this survey.

The peninsular bighorn sheep (*Ovis canadensis cremonobates*) is a state threatened species and is proposed as endangered by the federal government. This species occurs below 4,000 feet in elevation in the San Jacinto Mountains and southward into Mexico. Habitat for this species is absent from the project site.

The flat-tailed horned lizard (*Phrynosoma mcallii*) has no state or federal status according to the database, although other sources (USFWS, BLM, U. C. Riverside) indicate that the species is federally threatened and will soon be listed as such officially. This species occurs in a variety of habitats where human intrusion is minimal. Typically, this species is observed in undisturbed sandy areas although it also occurs in areas comprised of hardpan soils and sand wherein human intrusion is minimal. Historically this species occurred throughout the Coachella Valley southward to El Centro. It is less common in the Coachella Valley but is still present in higher numbers southward. No signs of this species were observed during these surveys. Victor Horchar and biologists from Deep Canyon Research Center observed less than 10 of these horned lizards in the Whitewater

Floodplain over a ten year (1987 - 1997). Three sightings were recorded by Horchar in the Washington Street area in 1988 (2 miles north of I - 10). Washington Street is approximately 12 miles east of the site.

The black-tailed gnatcatcher (*Polioptila melanura*) nests in desert wash habitat. The project site does not contain nesting habitat for this species although it may stop to forage on-site when overflying the area.

The vermilion flycatcher (*Pyrocephalus rubinus*) nests in desert wash habitat comprised of cottonwoods, willow, mesquite and palo verde. Habitat for this species is not present on-site although it may stop to forage on site when overflying the area.

The Coachella Valley round-tailed ground squirrel (*Spermophilus tereticaudus chlorus*) is a federal species of concern. This species prefers desert succulent scrub, desert wash, desert scrub, alkali scrub and levees. Habitat for this species is not present on-site. No signs of this species were observed during these surveys.

The Coachella Valley Jerusalem cricket (*Stenopelmatus calhillaensis*) is a federal species of concern. It is known to occur on the large dunes on the northern base of the San Jacinto Mountains. No signs of this species were observed in any of the 20 pit-fall traps installed on-site during these surveys.

The Laguna Mountains jewelflower (*Streptanthus bennardinus*) occurs in chaparral and lower montane coniferous forest. Habitat for this species is absent from the project site.

The crissal thrasher (*Toxostoma crissale*) nests along dense vegetation located along streams, and/or washes wherein the vegetation is comprised of mesquite, ironwood, catclaw acacia, arrowweed and willows. Habitat for this species is absent from the project.

Le Conte's thrasher (*Toxostoma lecontei*) usually nests in dense, spiny shrubs or densely branched cactus. Nesting habitat for this species is absent on site, although this species may stop to forage on site when flying through the area.

Coachella Valley fringe-toed lizard (FT, SE - *Uma inornata*) is listed as threatened by the federal government and as endangered by the state. This lizard depends entirely on the presence of aeoline sand for the creation of habitat. No Coachella Valley fringe-toed lizard habitat is present on-site although it does occur south of I -10.

The Mecca aster (*Xylorhiza cognata*) is a federal species of concern. This plant occurs on steep canyon slopes where the soil is comprised of sandstone and clay. Habitat for this species is absent from the project site and none were observed during these surveys.

3.2 Topography & Soils

The soils on the project site are comprised of coarse sand and scattered areas with gravel and rocks. Aeoline sand deposits are not present. The site is flat, with only insignificant changes in vertical relief around the site perimeter along access roads and where historical soil excavation has occurred to the northeast (wherein a few yards of soil have been excavated near a decaying rock structure).

3.3 Disturbances

Disturbances on-site are scattered and include off road vehicle tracks, human foot tracks and areas where debris from human activities has been deposited. A decaying rock building (the foundation and portion of walls) is present on the northeastern side of the site.

3.4 Plant Communities

The dominant plant community on the project site is creosote scrub (Figure 7) which is dominated by creosote (*Larrea tridentata*) and burrobrush (*Ambrosia dumosa*). Other less common species include Mormon tea (*Ephedra aspera*), Encelia (*Encelia farinosa*), and cheesebush (*Hymenoclea salsola*). Non-native annuals are common on-site and include schismus grass (*Schismus barbatus*) and euphorbia (*Euphorbia ssp.*).

3.5 Plant Species

A floral compendium detailing all of the plant species observed on site is included herein as an appendix to this report (Appendix B).

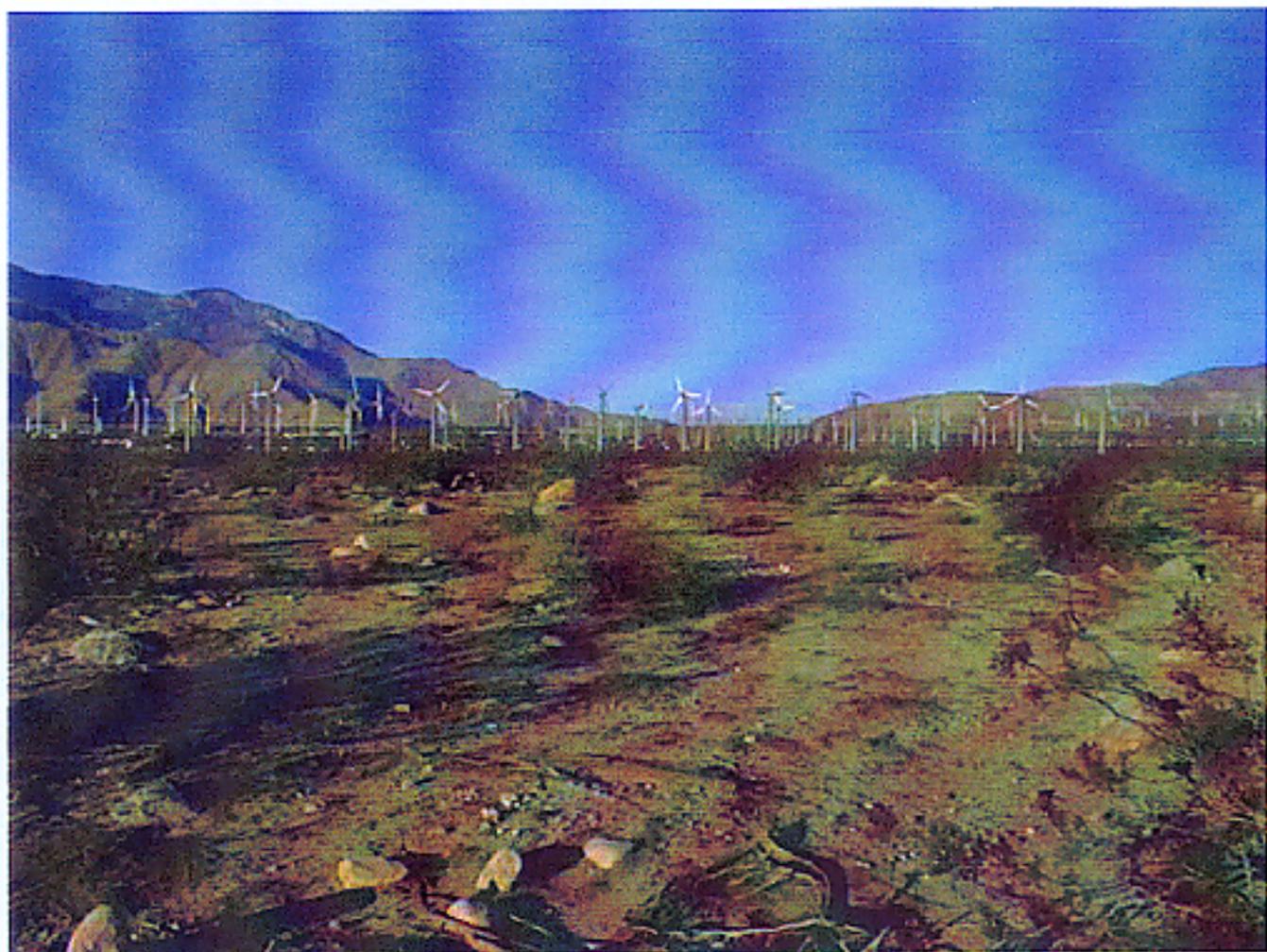
3.6 Wildlife Species

A wildlife compendium detailing all of the plant species observed on site is included herein as an appendix to this report (Appendix C).

4.0 DISCUSSION

The proposed use of the 10.0 acre project site is not expected to result in significant local or regional environmental impacts. Potential foraging habitat for some common species is expected to be eliminated by this project but because of the project size the environmental effects are expected to be negligible. Wind farm developments are adjacent to the site and use of the area for future wind farm development would be one of the most effective ways to develop the site while minimizing habitat degradation. This use would limit disturbances to access roads and tower pads whereas the use of the site for commercial building development would eliminate 100% of the habitat on-site.

FIGURE 7



Creosote/Scrub

5.0 LITERATURE REVIEWED

Burt, W. H. 1986. *A Field Guide to the Mammals in North America North of Mexico*. Houghton-Mifflin Company, Boston, Massachusetts.

California Department of Fish and Game. 2000. Special Animals. 27pp.

California Department of Fish and Game. 2000. Special Plants. 37pp.

California Department of Fish and Game Natural Diversity Database. 2000.

Garrett, K. and J. Dunn. 1981. *Birds of Southern California: Status and Distribution*. Los Angeles Audubon Society. Los Angeles, California. 408pp.

Hickman, J. C., ed. 1993. *The Jepson Manual: Higher Plants of California*. University of California Press, Berkeley, California. 1400pp.

Kobaly, R. 1996. Personal communication.

Munz, P. A. 1974. *A Flora of Southern California*. University of California Press, Berkeley, California. 1086pp.

Muth, Al. 1999. Resident Director: University of California Deep Canyon Research Center. Personal communication.

Stebbins, R. C. 1985. *A Field Guide to Western Reptiles and Amphibians*. Houghton-Mifflin Company, Boston, Massachusetts. 338pp.

U. S. Fish and Wildlife Service. 1992. Survey protocol for the Desert Tortoise. 24pp.

VHBC, Incorporated. 1999. Biological Assessment of the Seawest Catellus site. 34 pp.

VHBC, Incorporated. 2000. Biological Assessment-Sunrise Col., Indian Wells. 52pp.

VHBC, Incorporated. 2000. Coachella Valley fringe-toed lizard survey. Indian Wells Country Club Expansion. 37pp.

VHBC, Incorporated. 2000. EIR draft report review committee. Seawest. 12pp.