

**APPENDIX C:
BIOLOGICAL RESOURCES**

**Joshua Tree Salvage Plan
for the
Home Depot Center in the
Town of Yucca Valley, California**

Prepared for:

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SECTION 1: INTRODUCTION

This Joshua tree salvage plan has been prepared for the Home Depot site in the Town of Yucca Valley in compliance with the Town of Yucca Valley Ordinance Number 140. The Ordinance provides for the protection of native desert plants and requires that, if plants protected by the Ordinance can not be preserved in place, then plants should be translocated on site or made available for adoption through the Town's plant adoption program. Plants protected by the Ordinance include all species of mesquites (*Prosopis* spp.), yuccas (*Yucca* spp.), creosote rings (ten feet or greater in diameter), Joshua trees (*Yucca brevifolia*), California juniper (*Juniperus californica*), desert willow (*Chilopsis linearis*), pinon pine (*Pinus monophylla*), Palo Verde (*Cercidium* spp.), and manzanita (*Arctostaphylos* spp.).

1.1 - Project Location

The project site includes approximately 29.3 acres of undeveloped land located on the eastern boundary of the Town of Yucca Valley, within the County of San Bernardino, California shown in Exhibit 4 of the August 2, 2005 MBA "Joshua Tree Survey for Proposed Home Depot Site in Yucca Valley, California." The project site is bound on the north by Highway 62 (Twenty-nine Palms Highway) and on the west by Avalon Avenue. The project site extends to Indio Avenue to the east and Palisades Drive to the south.

1.2 - Project Description

The project consists of a retail development complex that includes a Home Depot with a house plant enclosure/outdoor garden center, restaurant and parking area. Implementation of the project will include mass grading, associated infrastructure, and the construction of offsite utility and highway/roadway improvements. The landscape plan for the project incorporates Joshua trees to be salvaged from the site.

1.3 - Existing Conditions

The project site is a vacant lot with surrounding land uses including undeveloped land to the south, retail development to the east and west, and residential development to the north. The site is relatively flat at an elevation of approximately 3,200 feet above mean sea level. It is dominated by Joshua trees and creosote bush (*Larrea tridentata*). The only species within the project site protected by the Ordinance are Joshua trees. The result of field survey efforts (MBA 2005) conducted for the proposed project determined that there are 235 Joshua trees within the project impact area. Of these, approximately 166 were determined to be salvageable. All trees within the project site have been

tagged with numbered tree tags and mapped utilizing Global Positioning Systems (GPS). Data for each tree was recorded including height, number of branches, and general health.

Although not protected by the Ordinance, individuals of cactus (*Opuntia* sp.) will also be salvaged where feasible. In particular, a beavertail cactus (*Opuntia basilaris*) located in a disturbed area in the northern portion of the project site, measuring approximately 4.3 feet in diameter and 1.25 feet in height, will be salvaged.

SECTION 2: SALVAGE PLAN

2.1 - General Information

Weather can be a major factor in the success of transplantation; cool, wet weather is best while hot, and dry weather is worst. If feasible, the salvage process will be initiated at the beginning of the wet season, which extends from November through March.

The orientation of the tree is critical to its success in transplantation. All Joshua trees will be transplanted in the same orientation that they were growing on site.

A Project Biologist will be assigned to the Joshua tree salvage and transplantation process, and will be responsible for the oversight of the implementation of the salvage plan. The Project Biologist is required to have knowledge of native desert plants, have a Bachelor's degree with an emphasis in biology, and a minimum of 3 years of experience.

2.2 - Pre-Salvage

The Project Biologist will coordinate with the landscape architect to determine the number of trees required for the landscape plan. The Project Biologist will also be informed regarding the number of groupings needed by the landscape plan and the size, if relevant, of the Joshua trees required for each grouping.

Within 2 weeks prior to the initiation of tree removal, the Project Biologist (or designated biologist under the supervision of the Project Biologist) will mark all trees within the project site that are suitable for transplantation. The Project Biologist will utilize the maps, GPS data and information gathered during the initial Joshua tree survey. All trees suitable for transplantation will be marked with spray paint on the north side.

Prior to initiating Joshua tree salvage, all contractors involved in the salvage project will attend a site meeting with the Project Biologist. The Project Biologist will provide the contractor(s) with a copy of this Salvage Plan and will review all relevant components of the program.

The storage area for the salvaged trees will be prepared ahead of time. The trees will be stored by planting in a temporary trench. The trench should be approximately 1 foot wider than the root ball of the trees and long enough to accommodate all the trees to be salvaged. More than one trench may be required. Trees can be planted immediately adjacent to each other in the trench, allowing enough

room between trees for equipment. The Project Biologist will coordinate with the contractors to determine the length and width of the trench required.

2.3 - Salvage

Trees that have been marked will be removed utilizing a tree spade or backhoe and personnel with shovels. The entire rootball should be removed intact, if possible. All attempts should be made to minimize exposure of the root ball to air and the roots should be kept moist at all times. Root balls will be sprayed with a mixture of water and rooting hormone (see below for more details) as soon as they are lifted from the ground and placed on a trailer. The salvaged trees will be immediately transported on trucks and/or trailers to the storage area.

2.4 - Storage

A temporary storage area will be established for temporary storage of the Joshua trees during site grading. The salvaged trees will be planted in the trench and in the same orientation as they were prior to salvage. Trees can be planted immediately adjacent to each other in the trench, allowing enough room between trees for equipment. Once in the trench, the roots will be covered with soil and the trees watered. The same watering specifications as described below under translocation will be followed.

Once all the trees are in the storage area, the Project Biologist and/or the landscape architect will determine which trees are to be utilized for the landscape plan and which trees can be made available for the Town's adoption program. The landscape architect will provide a landscape plan to the Project Biologist and contractors depicting the different areas that will be receiving the Joshua trees. The areas should be clearly marked with numbers or letters (i.e., 1, 2, 3, or A, B, C). The Joshua trees to be used in the landscape plan will be marked with spray paint on the north side with the number or letter of the area where they will be planted. If available, an excess of trees will be marked for the landscape plan to compensate for mortality (estimated at 30%).

2.5 - Translocation

Once the translocation sites are available for landscaping, the Project Biologist will inform the contractor of the number of holes required for each transplantation area. The requisite number of holes will be dug prior to transporting the trees to the site. The receiving holes should be approximately 1 foot larger than the root balls they receive.

A water and rooting hormone (vitamin B-1) mix should be prepared prior to translocating the trees. Vitamin B1 is sold by nurseries and home improvement stores. It is often sold with minerals or

chelating agents added, which is acceptable. The rooting hormone should be mixed per manufacturer's direction; dilution is typically 1:250 (B1: Water).

The receiving hole should be filled with a mixture of water and rooting hormone, and allowed to drain before placing the tree in the hole. Salvaged trees will be transported to the planting area and then lowered into the holes. Once the plant is set in the hole in the proper orientation, the hole should be backfilled and the tree watered once again. The root ball should be pressed into the hole by standing on the root ball while the soil around the plant is wet. This is done to eliminate air pockets from the hole. The roots must be in contact with the soil. A basin will be left around the plant to hold water. The trees will be watered again after 10 days by soaking with a mixture of B1 and water.

The trees will be watered periodically through the establishment period based upon their appearance. The Project Biologist (or designee) will monitor the plants for signs of stress and desiccation and notify maintenance personnel when the plants must be watered. For each watering, the basin should be filled and then allowed to drain (and the soil dry) before watering again. Watering will be conducted as needed to support the initial translocation; however, the goal is to establish the plants without need for supplemental watering. The transplants will be monitored weekly for 3 months and then monthly until the Project Biologist has determined that they are established.

**Biological Resources Assessment
Home Depot Retail Center Site (29.3 acres)
Town of Yucca Valley, San Bernardino County, CA**

**(Yucca Valley North USGS Topographic Quadrangles: Section 32, T1N, R6E)
(includes Joshua Tree Survey Results and
Focused Desert Tortoise Survey Report)**

Prepared for:

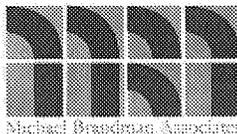
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August 2, 2005

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SECTION 1: SUMMARY

At the request of the Town of Yucca Valley, Michael Brandman Associates (MBA) conducted a study of the natural resources and biological setting on 29.3-acres in the Town of Yucca Valley, San Bernardino County, California. The proposed project involves a Home Depot Retail Center, other retail and related improvements. The dominant vegetation within the property is Joshua trees (*Yucca brevifolia*) and creosote bush (*Larrea tridentata*). The literature review resulted in 10 sensitive plant and wildlife species being documented within the general vicinity of the project site. Of these, only two have the potential to occur within the project site, Coast (San Diego) horned lizard (*Phrynosoma coronatum (blainvillei)*) and desert tortoise (*Gopherus agassizii*). No sensitive species were observed within the project site. Joshua trees are locally protected by the Town's Plant Protection and Management Ordinance. Prior to the issuance of a grading permit, a native plant removal permit must be obtained from the Community Development Director.

SECTION 2: INTRODUCTION

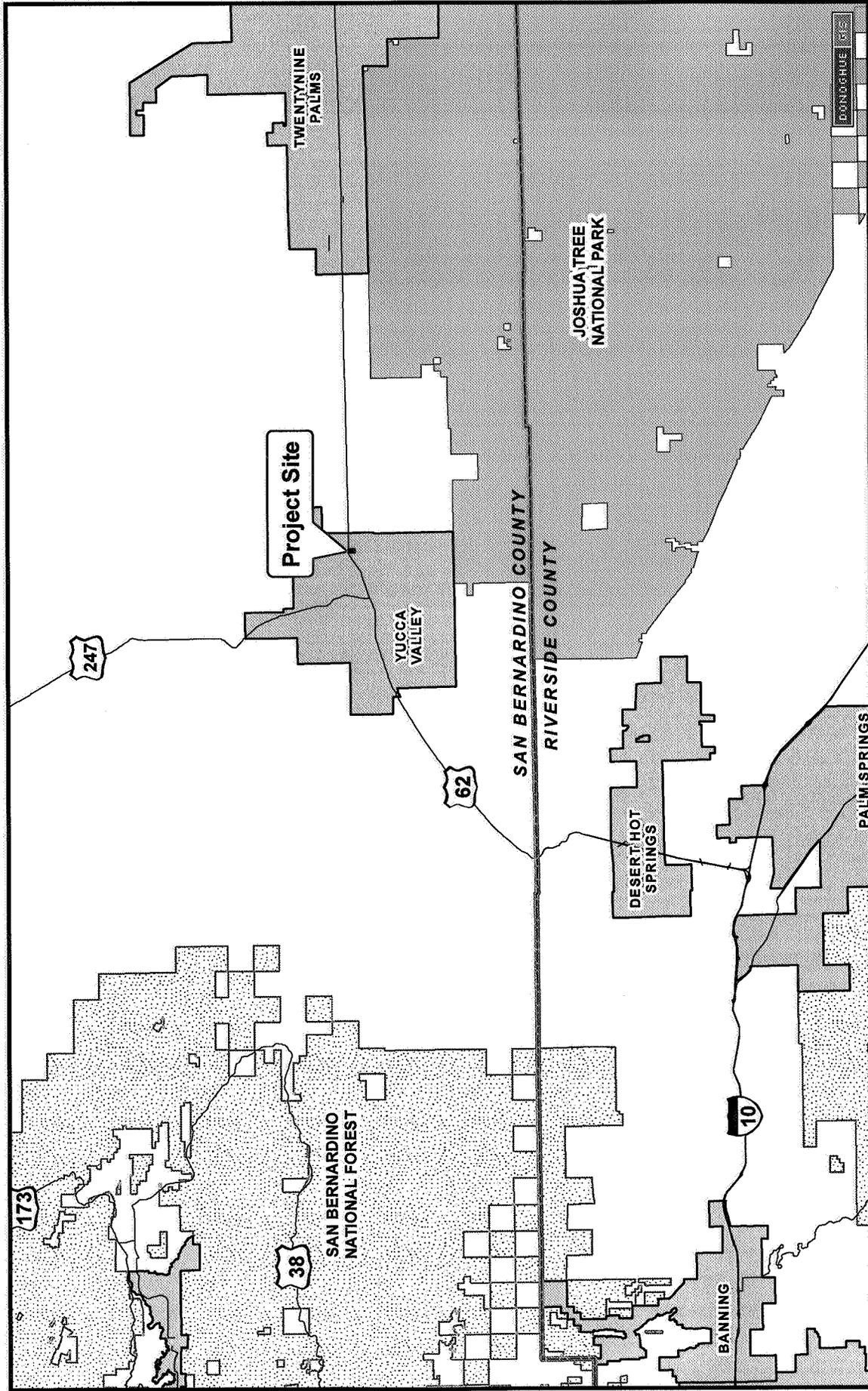
At the request of the Town of Yucca Valley, MBA conducted a biological resource assessment to evaluate the impact area for the proposed Home Depot Retail Center and related improvements, comprised of 29.3 acres, located in the Town of Yucca Valley, San Bernardino County, California. This property is hereinafter referred to as project site or site.

2.1 - Project Location

The project site includes approximately 29.3 acres of undeveloped land located on the eastern boundary of the Town of Yucca Valley, within the County of San Bernardino, California (Exhibit 1). The project site is bound on the north by Highway 62 (Twentynine Palms Highway) and on the west by Avalon Avenue (Exhibit 2). The site is located in Section 32, Township 1 North, and Range 6 East of the Yucca Valley North 7.5 minute U.S. Geological Survey (USGS) quadrangle map.

2.2 - Project Description

The project consists of a retail development complex that includes a Home Depot with a houseplant enclosure/outdoor garden center and other commercial retail, restaurant and related parking areas, as well as related roadway and infrastructure improvements. Implementation of the project will include mass grading, associated infrastructure, and the construction of offsite utility and highway/roadway improvements. The landscape plan for the project incorporates Joshua trees salvaged from the project site. Offsite improvements include an eastern extension of Palisade Drive, which would be adjacent to the southern portion of the project site, and other utility improvements (Exhibit 3).



Data Sources: Riverside County, San Bernardino County



Michael Brandman Associates



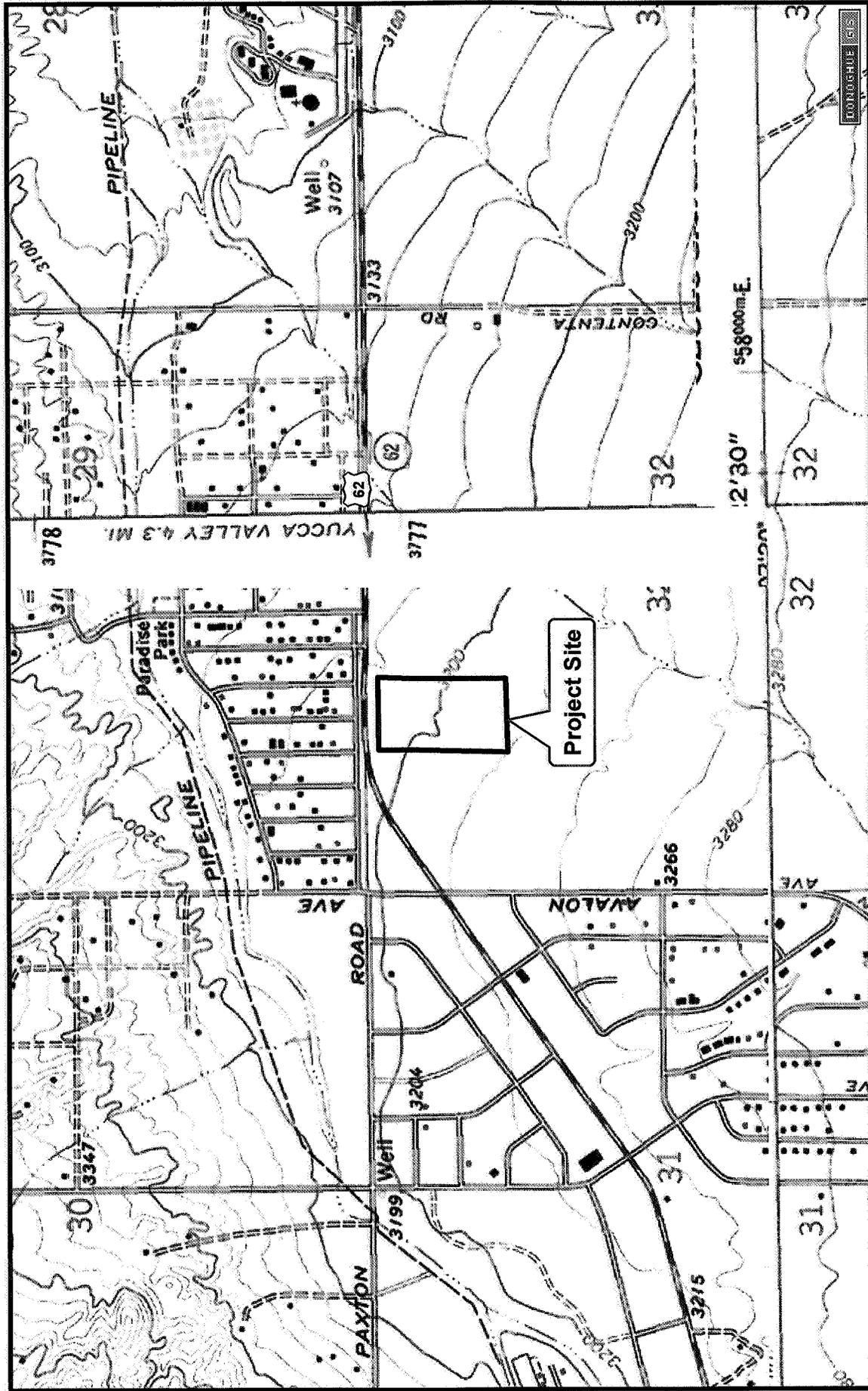
NORTH



- Major Roads
- County Line
- Project Site
- City Boundaries
- Joshua Tree National Park
- San Bernardino National Forest

Exhibit 1

Regional Vicinity Map



Data Sources: San Bernardino County, MapTech



Michael Brandman Associates

27900001 | Ex2_Vicinity.mxd | 07-13-2005



Project Site



Exhibit 2 Local Vicinity Map

BIOLOGICAL RESOURCES ASSESSMENT



Source: City of Yucca Valley, San Bernardino County



Project Design

Impact Area (29.3 Acres)



Exhibit 3 Site Plan

SECTION 3: REGULATORY BACKGROUND

Special status species are native species that have been afforded special legal or management protection because of concern for their continued existence. There are several categories of protection at both federal and state levels, depending on the magnitude of threat to continued existence and existing knowledge of population levels.

3.1 - Federal Endangered Species Act

The U.S. Fish and Wildlife Service (USFWS) administers the federal Endangered Species Act (FESA) that provides a process for listing species as either threatened or endangered, and methods of protecting listed species. The FESA defines as “endangered” any plant or animal species that is in danger of extinction throughout all or a significant portion of its range. A “threatened” species is a species that is likely to become endangered in the foreseeable future. A “proposed” species is one that has been officially proposed by USFWS for addition to the federal threatened and endangered species list.

Section 9 of the FESA prohibits “take” of threatened or endangered species. The term “take” means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in such conduct. The presence of any federally threatened or endangered species that are in a project area generally imposes severe constraints on development, particularly if development would result in “take” of the species or its habitat. Under the regulations of the FESA, the USFWS may authorize “take” when it is incidental to, but not the purpose of, an otherwise lawful act.

3.2 - California Endangered Species Act

The California Department of Fish and Game (CDFG) administers the California Endangered Species Act (CESA). The State of California considers an endangered species as one whose prospects of survival and reproduction are in immediate jeopardy. A threatened species is considered as one present in such small numbers throughout its range that it is likely to become an endangered species in the near future in the absence of special protection or management. A rare species is one that is considered present in such small numbers throughout its range that it may become endangered if its present environment worsens. State threatened and endangered species are fully protected against take, as defined above.

3.3 - Section 3503 and 3511 of California Fish and Game Code

The CDFG administers the California Fish and Game Code. There are particular sections of the Code that are applicable to natural resource management. For example, section 3503 of the Code states it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird. Section 3511 of the Code lists fully-protected birds species, where the CDFG is unable to authorize the issuance of permits or licenses to take these species. Pertinent species that are state fully protected include golden eagle (*Aquila chrysaetos*) and white-tailed kite (*Elanus leucurus*).

3.4 - Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) makes it unlawful to pursue, capture, kill, or possess or attempt to do the same to any migratory bird or part, nest, or egg of any such bird listed in wildlife protection treaties between the United States, Great Britain, Mexico, Japan, and the countries of the former Soviet Union.

3.5 - Section 404 of the Federal Clean Water Act

Section 404 of the federal Clean Water Act, which is administered by the U.S. Army Corps of Engineers (USACE), regulates the discharge of dredge and fill material into waters of the United States (U.S.). USACE has established a series of nationwide permits that authorize certain activities in waters of the U.S., provided that a proposed activity can demonstrate compliance with standard conditions. Normally, USACE requires an individual permit for an activity that will affect an area equal to or in excess of 0.3 acre of waters of the U.S. Projects that result in impacts to less than 0.3 acre can normally be conducted pursuant to one of the nationwide permits, if consistent with the standard permit conditions. USACE also has discretionary authority to require an Environmental Impact Statement for projects that result in impacts to an area between 0.1 and 0.3 acre. Use of any nationwide permit is contingent on the activities having no impacts to endangered species.

3.6 - Section 1600 of the California Fish and Game Code

All diversions, obstructions, or changes to the natural flow or bed, channel, or bank of any river, stream, or lake in California are subject to the regulatory authority of the CDFG pursuant to Sections 1600 through 1603 of the Code, requiring preparation of a Streambed Alteration Agreement. Under the Code, a stream is defined as a body of water that flows at least periodically, or intermittently, through a bed or channel having banks and supporting fish or other aquatic life. Included are watercourses with surface or subsurface flows that support or have supported riparian vegetation. CDFG also has jurisdiction within altered or artificial waterways based on the value of those waterways to fish and wildlife, and also has jurisdiction over dry washes that carry water ephemerally during storm events.

3.7 - Section 401 of the Clean Water Act

Section 401 of the Clean Water Act requires that "any applicant for a federal permit for activities that involve a discharge to waters of the State, shall provide the federal permitting agency a certification from the State in which the discharge is proposed that states that the discharge will comply with the applicable provisions under the federal Clean Water Act." Therefore, before the USACE will issue a Section 404 permit, applicants must apply for and receive a Section 401 water quality certification from the Regional Water Quality Control Board (RWQCB).

3.8 - Porter Cologne Act

The RWQCB regulates actions that would involve "discharging waste, or proposing to discharge waste, with any region that could affect the water of the state" (water code 13260(a)), pursuant to provisions of the State Porter-Cologne Water Quality Act. "Waters of the State" are defined as "any surface water or groundwater, including saline waters, within the boundaries of the state" (water code 13050 (e)).

3.9 - Town of Yucca Valley Ordinance No. 140, Plant Protection and Management

Chapter 1 of the Plant Protection and Management Ordinance, Desert Native Plant Protection, aims to preserve and protect native plants unique to Yucca Valley. Plants protected by the ordinance include all species of mesquites (*Prosopis* spp.), yuccas (*Yucca* spp.), creosote rings (ten (10) feet or greater in diameter), Joshua trees (*Yucca brevifolia*), California juniper (*Juniperus californica*), desert willow (*Chilopsis linearis*), pinon pine (*Pinus monophyll*), Palo Verde (*Cercidium* spp.), and manzanita (*Arctostaphylos* spp.). The ordinance states that protected desert native plants shall not be removed except under a permit issued by the Community Development Director. Prior to the issuance of a native tree or plant removal permit, a plot plan shall be approved by the Community Development Department indicating exactly which trees or plants are authorized to be removed or relocated. In the event that it is found to be unreasonable to maintain a Joshua tree in its original place, translocation onsite is one option, or the Town has established an adoption program to allow for members of the public to adopt Joshua trees.

SECTION 4: METHODS

4.1 - Literature Review

Prior to the field visit, a literature review was conducted of the environmental setting of the project site. Literature reviewed included the United States Department of Agriculture (USDA 1971) Soil Survey for the project site, the USGS topographic quadrangle, the California Natural Diversity Database (CNDDDB 2005), and literature detailing the habitat requirements of sensitive species occurring in the vicinity of the project site. The CNDDDB GIS database was utilized, together with ArcGIS software, to determine sensitive species located within a seven mile radius of the project site.

4.2 - Plant Community Mapping

Plant communities were mapped using 7.5-minute USGS topographic base maps and aerial photography. The plant communities within the project site were classified according to CDFG's List of Terrestrial Natural Communities (2003) and cross-referenced to descriptions provided in Holland's *Preliminary Descriptions of the Terrestrial Natural Communities of California* (1986 and 1992 update). The CDFG does not currently have a narrative description of the vegetation communities; therefore, the descriptions provided are according to Holland.

4.3 - Jurisdictional Areas

Aerial photography was reviewed prior to conducting general surveys. The photographs were used to locate and inspect any potential natural drainage features and water bodies that may be considered under the jurisdiction of either USACE and/or CDFG. In general, surface drainage features indicated as blue-line streams on USGS maps that are observed or expected to exhibit evidence of flow are considered potentially subject to state and federal regulatory authority as "waters." An assessment of the potentially jurisdictional waters was conducted during the habitat assessment.

4.4 - Field Investigation

4.4.1 - General Biological Assessment

MBA's biologist Linda Archer completed an onsite investigation on May 16, 2005. Weather conditions during the biological resources survey were sunny with temperatures in the high 90s (degrees Fahrenheit) and winds from 10 to 15 miles per hour. The project site was surveyed on foot from 9:30 a.m. until 12:30 p.m. The entire project site was surveyed to determine the extent of plant communities and to assess the presence of suitable habitat for sensitive plant and wildlife species. Parameters assessed included soil conditions, presence of indicator species, slope, aspect and hydrology. All plant and wildlife species observed, as well as dominant plant species within each plant community, were recorded in a standardized field notebook.

Plants

Common plant species observed during the field survey were identified by visual characteristics and morphology in the field and recorded in a field notebook. Unusual and less familiar plants were identified in the laboratory using taxonomical guides. A list of all species observed on the project site was compiled from the survey data (Appendix B). Taxonomic nomenclature used in this study follows the California Native Plant Society (CNPS 2005). In this report, scientific names are provided immediately following common names of plant species (first reference only).

Wildlife

Wildlife species detected during field surveys by sight, calls, tracks, scat, or other sign were recorded during surveys in a field notebook. Field guides were used to assist with identification of species during surveys. Although common names of wildlife species are fairly well standardized, scientific names are used in this report and are provided in Appendix B for reference.

4.4.2 - Other Biological Reports

An assessment of Joshua trees present on the site and a focused survey for desert tortoise were also incorporated into this document and the individual survey reports are included as Appendices.

SECTION 5: EXISTING CONDITIONS

5.1 - Environmental Setting

The project site is a vacant lot with surrounding land uses including undeveloped land to the south, retail to the east and west, and residential development to the north. The site is relatively flat at an elevation of approximately 3,200 feet above mean sea level. It is dominated by Joshua trees (*Yucca brevifolia*) and creosote bush (*Larrea tridentata*). No jurisdictional features were observed within the project site. The soils onsite consist of sandy alluvial soils.

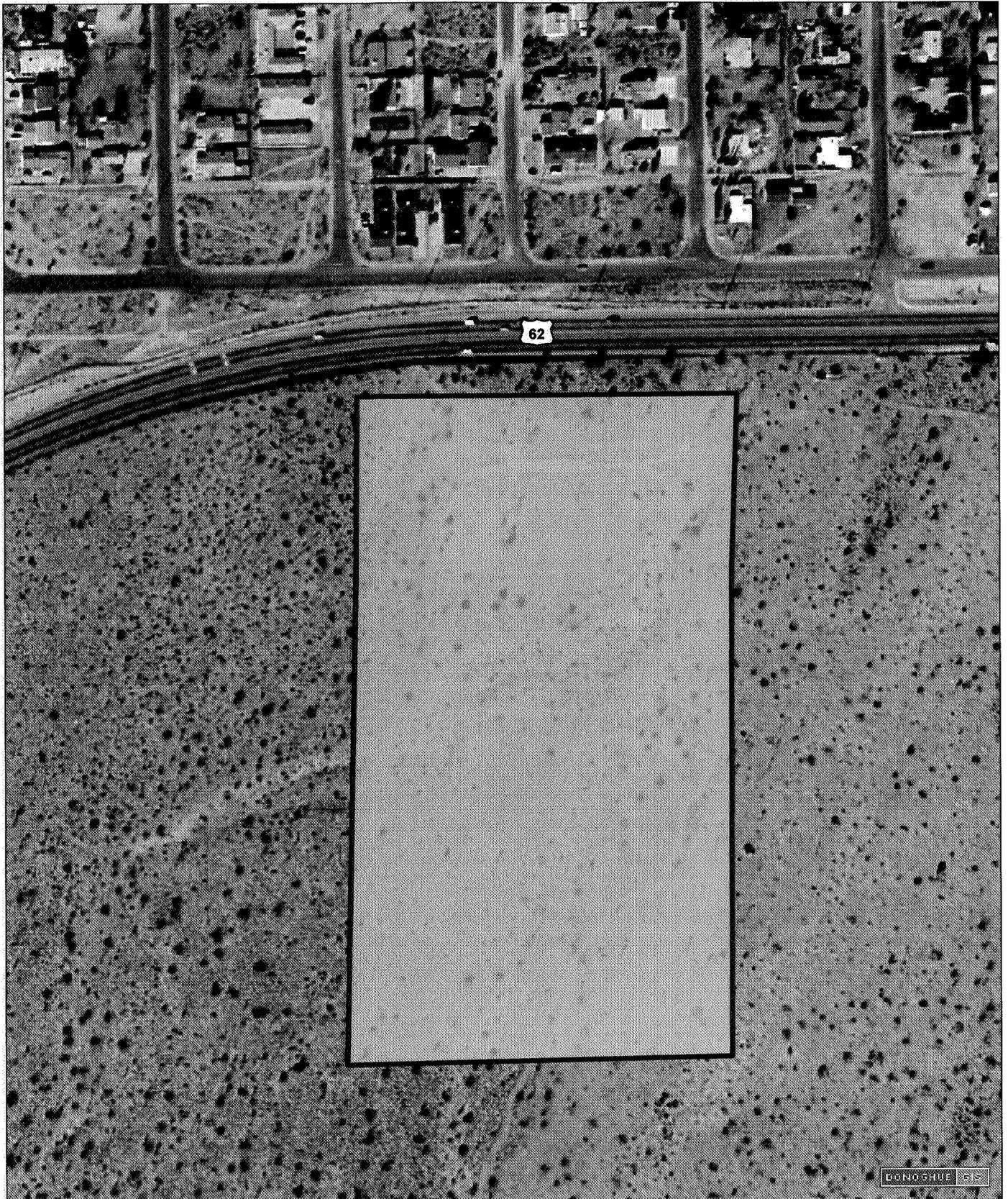
5.2 - Plant Communities

The project site contains one plant community, Joshua Tree/Creosote Bush – Nevada Ephedra (Exhibit 4). In the description below, the CDFG classification code is provided following the name of the plant community and the Holland classification code is provided for reference following the CDFG code. Appendix B provides representative photographs of the project site.

5.2.1 - Joshua Tree/Creosote Bush – Nevada Ephedra (33.170.05 {73000/34100})

The entire 29.3-acres surveyed consists of the Joshua Tree/Creosote Bush – Nevada Ephedra plant community. The CDFG lists this as a sensitive plant community under the general category of Joshua Tree Tall Scrub and Open Woodland (also designated as sensitive). This plant community is best described as an intergrade between Holland's Joshua Tree Woodland and Mojave Creosote Bush Scrub. Joshua Tree Woodland is described as an open woodland with Joshua tree usually as the only arborescent species and numerous shrub species between one and 4 meters tall. There is little or no herbaceous understory during most of the year. The dominant species include yuccas (*Yucca* spp.), buckwheat (*Eriogonum* spp.), cottonthorn (*Tetradymia* spp.), desert thorn (*Lycium* spp.), and cactus (*Opuntia* spp.). Mojave Creosote Bush Scrub is dominated by creosote bush (*Larrea tridentata*) and bursage (*Ambrosia dumosa*). Many species of ephemeral herbs may flower in late March and April.

The project site is dominated by Joshua trees and creosote bush with desert tea (*Ephedra* sp.) as a codominant. The Joshua trees are prevalent throughout the project site; however, in areas creosote bush dominates whereas in other areas creosote bush is minimal. There are occasional patches where there are no Joshua trees. These changes in vegetation are on a microhabitat level and were not significant enough to map as separate plant communities. Due to the different patches of vegetation and the location of the site on the landscape, this plant community likely represents an intergrade between Creosote Bush Scrub and Joshua Tree Woodland. Other shrubs include desert senna (*Senna armata*) and pencil cholla (*Opuntia ramosissima*). Annuals include suncups (*Camissonia* spp.), tack stem (*Calycoseris parryi*), and Wallace's wooly daisy (*Eriophyllum wallacei*). Non-native grasses also occur throughout the project site in varying densities, in some places becoming the dominant vegetation in the understory.



Source: City of Yucca Valley, Riverside County



Michael Brandman Associates
2790001 | Ex4_Veg_Bio | 07-13-2005

 Joshua Tree/Creosote Bush
0 100 200
 Feet

Exhibit 4 Vegetation Map

BIOLOGICAL RESOURCES ASSESSMENT

5.3 - Special Status Species

The literature review resulted in three special status plant species and seven special status wildlife species listed as occurring within seven miles of the project site. Tables 1 and 2 identify the plant and wildlife species, respectively, that have been documented in the vicinity of the project, their status, required habitat, and potential to occur within the property.

5.3.1 - Special Status Plant Communities

The entire project site consists of the Joshua Tree/Creosote Bush – Nevada Ephedra plant community, designated sensitive by CDFG.

5.3.2 - Sensitive Plant Species

Three special status plant species were documented by the CNDDDB as occurring within the vicinity of the project site; however, there is no suitable habitat within the project site for any of the species. The field survey was conducted during the blooming period of all three of species, and none of the three special status plant species were observed during the field survey. Although creosote bush is present on the project site, the ordinance only protects creosote rings, which are not present.

The Town of Yucca Valley Plant Protection and Management Ordinance protects seven different types (genuses) of plants. Of these, only Joshua trees occur within the project site. An inventory of Joshua trees was conducted and is documented under separate cover (Appendix C). There are approximately 235 Joshua trees within the project impact area.

5.3.3 - Sensitive Wildlife Species

Seven special status wildlife species were documented by the CNDDDB as occurring within the vicinity of the project site. The project site provides suitable habitat for two of these seven species, coast horned lizard (*Phrynosoma coronatum [blainvillei]*) and desert tortoise (*Gopherus agassizii*).

A focused survey was conducted for desert tortoise and is documented under separate cover (Appendix D). No desert tortoise, signs of desert tortoise, or burrows suitable for desert tortoise were observed during the focused survey.

Table 1: Special Status Plant Species

Species		Status			Life Form	Blooming Period	Preferred Habitat	Potential on Site/Suitable Habitat
Scientific Name	Common Name	USFWS	CDFG	CNPS				
<i>Linanthus [Gilia] maculatus</i>	Little San Bernardino Mountains linanthus	—	—	1B	Annual herb	March – May	Sandy places, often in wash or Bajada, within desert dunes, Sonoran desert scrub, Mojave desert scrub, and Joshua tree woodland. Loose soft sandy soils on low benches along washes, generally where the substrate shows some evidence of water flow. The sand is loose and well-aerated, soft and unconsolidated.	Low potential to occur. Although the project site contains generally suitable habitat; there are no washes within the project site.
<i>Linanthus orcuttii</i>	Orcutt's linanthus	—	—	1B	Annual herb	May – June	Chaparral, lower montane coniferous forest; sometimes in disturbed areas, often in gravelly clearings.	Not likely to occur. No suitable habitat present within project site.
<i>Monardella robisonii</i>	Robison's monardella	—	—	1B	Annual herb	February – October	Rocky desert slopes, often among granitic boulders, in Pinyon-Juniper woodland and Joshua tree woodland.	Not likely to occur. No suitable habitat present within project site.
<p>U.S. Fish and Wildlife Service FE Federal Endangered FT Federal Threatened PE Proposed Endangered PT Proposed Threatened FC Federal Candidate FSC Species of Concern* * No longer recognized as a federal designation.</p> <p>Not Likely to Occur - There are no present or historical records of the species occurring on or in the immediate vicinity of the property area and the diagnostic habitats strongly associated with the species does not occur on or in the immediate vicinity of the property area. Low Potential for Occurrence - There is a historical record of the species within the vicinity of the property, but no existing suitable habitat on or in the immediate vicinity of the property area. Moderate Potential for Occurrence - The suitable habitat associated with the species occurs on or in the immediate vicinity of the property area, but there is not a recorded occurrence of the species within the immediate vicinity (within 2 miles) of the property. High Potential for Occurrence - There is both suitable habitat associated with the species and a historical record of the species on or in the immediate vicinity of the property area (within 2 miles). Species Present - The species was observed on the property at the time of the survey.</p>								
<p>California Department of Fish and Game CE California Endangered CT California Threatened CR California Rare</p> <p>California Native Plant Society 1A Plants presumed extinct in California. 1B Plants rare, threatened, or endangered in California and elsewhere. 2 Plants rare, threatened, or endangered in California, but more common elsewhere. 3 Plants about which we need more information. 4 Plants of limited distribution.</p>								

Table 2: Special Status Wildlife Species

Species		Status			Required Habitat	Potential on Site/Suitable Habitat
		Common Name	Federal	State		
Reptiles and Amphibians						
<i>Phrynosoma coronatum</i> (blainvillei)	Coast (San Diego) horned lizard	—	CSC	—	May be found in coastal sage scrub and chaparral in arid and semi-arid climate; prefers friable, rocky, or shallow sandy soils. Requires harvester ants for food.	High potential to occur. Suitable habitat within project site; nearest occurrence approximately 0.5 mile west of the project site.
<i>Crotalus ruber ruber</i>	Northern red-diamond rattlesnake	—	CSC	—	Occurs in rocky areas and dense vegetation of chaparral, woodland, grassland, & desert areas. Needs rodent burrows, cracks in rocks or surface cover objects.	Low potential to occur. Project site lacks rocky areas or dense vegetation for cover.
<i>Gopherus agassizii</i>	Desert tortoise	FT	CT	—	Most common in desert scrub, desert wash, and Joshua tree habitats; occurs in almost every desert habitat. Requires friable soil for burrow and nest construction. Creosote bush habitat with large annual wildflower blooms preferred.	Moderate potential to occur. Suitable habitat within project site; nearest occurrence approximately 1.5 miles east of the project site. Focused surveys determined that desert tortoise is not present within the project site.
Birds						
<i>Toxostoma lecontei</i>	Le Conte's thrasher	—	CSC	—	Sparsely vegetated desert flats, dunes, alluvial fans, or gently rolling hills having a high proportion of one or more species of saltbush (<i>Atriplex</i> spp.) and/or cylindrical cholla cactus (<i>Opuntia</i> spp.) or other desert habitats with similar structural profiles. In its typical habitat, shrubs are well scattered with contiguous or closed cover. It is rarely found in habitats consisting entirely of creosote bush (<i>Larrea</i>). Substrates are typically sandy. It requires accumulated leaf litter under most plants as diurnal cover for most arthropod prey.	Not likely to occur. Project site does not provide the preferred structural profile or habitat for prey species.

Table 2: Special Status Wildlife Species (Continued)

Species		Status			Required Habitat	Potential on Site/Suitable Habitat
		Common Name	Federal	State		
<i>Dendroica petechia brewsteri</i>	Yellow warbler	—	CSC	—	Nests in riparian plant associations. Prefers willows, cottonwoods, aspens, sycamores, & alders for nesting & foraging. Also nests in montane shrubbery in open conifer forests.	Not likely to occur. No suitable riparian habitat within project site.
Mammals						
<i>Lasius xanthius</i>	Western yellow bat	—	CSC	—	Occurs in palm oases and in residential areas with untrimmed palm trees. Roosts in trees, primarily palm trees, and appears to prefer the dead fronds of palm trees. Forages over water and among trees.	Not likely to occur. No suitable roosting or foraging habitat within project site.
<i>Ovis canadensis nelsoni</i>	Nelson's bighorn sheep	—	—	—	Widely distributed from the White Mountains in Mono County to the Chocolate Mountains in Imperial County. Is found in open, rocky, steep areas with available water and herbaceous forage.	Not likely to occur. No suitable habitat within project site.
<p>U.S. Fish and Wildlife Service</p> <p>FE Federal Endangered FT Federal Threatened PE Proposed Endangered PT Proposed Threatened FC Federal Candidate FSC Species of Concern*</p> <p>* No longer recognized as a federal designation.</p>						
<p>California Department of Fish and Game</p> <p>CE California Endangered CT California Threatened CR California Rare</p>						
<p>Other</p> <p>CDFG: CSC California Species of Concern CDFG: FP Fully Protected Species CDFG: P Protected Species</p>						
<p>Not Likely to Occur - There are no present or historical records of the species occurring on or in the immediate vicinity (within 2 miles) of the property area and the diagnostic habitats strongly associated with the species does not occur on or in the immediate vicinity of the property area.</p> <p>Low Potential for Occurrence - There is a historical record of the species within the vicinity of the property, but no existing suitable habitat on or in the immediate vicinity of the property area.</p> <p>Moderate Potential for Occurrence - The suitable habitat associated with the species occurs on or in the immediate vicinity of the property area, but there is not a recorded occurrence of the species within the immediate vicinity (within 2 miles) of the property.</p> <p>High Potential for Occurrence - There is both suitable habitat associated with the species and a historical record of the species on or in the immediate vicinity of the property area (within 2 miles).</p> <p>Species Present - The species was observed on the property at the time of the survey.</p>						

5.4 - Other Opportunities and Constraints

5.4.1 - Nesting Birds

The Joshua trees and shrubs within the project site provide suitable habitat for nesting birds such as cactus wren (*Campylorhynchus brunneicapillus*) and verdin (*Auriparus flaviceps*).

5.4.2 - Jurisdictional Areas

There are no jurisdictional features within the project site.

SECTION 6: RECOMMENDATIONS

6.1 - Sensitive Plant Species

6.1.1 - Joshua Trees

Joshua trees are protected by the Town's Plant Protection and Management Ordinance. Prior to the issuance of a grading permit, a native plant removal permit must be obtained from the Community Development Director. Prior to the issuance of a native tree or plant removal permit, a plot plan shall be approved by the Community Development Department indicating exactly which trees are authorized to be removed or relocated. A salvage plan will be prepared and approved by the Town for those trees authorized to be relocated. To the extent feasible, salvaged trees will be incorporated into the project's landscape plan. Any remaining trees will be made available for adoption according to the Town's adoption program. A 30-day adoption period is required prior to the initiation of grading.

6.2 - Sensitive Wildlife Species

6.2.1 - Desert Tortoise

Although desert tortoise were not observed within the project site, due to the presence of a desert tortoise population within 1.5 miles of the project site, the following measures are recommended to minimize the potential for impacts to this species:

- All grading and clearing limits must be staked to minimize surface disturbance. The area of disturbance should utilize previously disturbed areas as much as practical and must be confined to the smallest practical area.
- A preconstruction clearance survey should be conducted within 30 days prior to construction. If the clearance survey is positive, incidental take permits will be required from the USFWS and the CDFG. The permits would stipulate required actions such as relocation of the tortoises, installation of a tortoise proof fence, etc.
- If construction is not initiated prior to March 25, 2006, another focused protocol survey will be required to determine presence/absence of desert tortoise within the project site impact area.
- In order to minimize impacts due to increased numbers of common ravens on desert tortoise, all trash containers should be raven proof. In addition, to reduce littering, signage should be posted throughout the project site stating fines for trash dumping in open areas.

- Handling or other inappropriate treatment of tortoises must be avoided until authorization is obtained from the USFWS and CDFG. Any unauthorized take of tortoise, although very unlikely, will be cause for immediate cessation of work until the issue is resolved.

6.2.2 - Coast Horned Lizard

The coast horned lizard has a high potential to occur within the project site; however, due to the small size of the project site any potential impacts to individuals of the San Diego horned lizard as a result of the project would not result in significant impacts to the species as a whole. No further actions are recommended.

6.3 - Nesting Birds

Birds and their nests are protected under the MBTA and CDFG codes. Since the project site contains suitable nesting bird habitat throughout, it is recommended that removal of vegetation or any other potential nesting habitat be conducted outside the avian nesting season (February through August). If construction occurs during the avian nesting season, a pre-construction nesting bird survey should be conducted seven days prior to any ground disturbing activities. If birds are found to be nesting inside or within 250 feet (500 feet for raptors) of the impact area, construction will need to be postponed until it is determined by a qualified biologist that the nest is no longer active.

SECTION 7: REFERENCES

- Burt, W.H., and Grossenheider, R.P., 1980. *Peterson Field Guides, Mammals*. Houghton Mifflin Company. New York, New York.
- California Department of Fish and Game. 2003 (September). *List of California Terrestrial Natural Communities Recognized by the California Natural Diversity Database*. California Department of Fish and Game, Wildlife and Habitat Data Analysis Branch. Sacramento, California.
- California Native Plant Society (CNPS). 2005. Inventory of Rare and Endangered Plants (online edition, v6-05a). California Native Plant Society. Sacramento, CA. Accessed on April. 7 from <http://www.cnps.org/inventory>
- California Natural Diversity Database (CNDDDB). January 18 2005. Wildlife & Habitat Data Analysis Branch, Department of Fish and Game.
- Hickman, J.C. 1993. *The Jepson Manual: Higher Plants of California*. University of California Press. Berkeley, California.
- Holland, R.F. 1986. *Preliminary Descriptions of the Terrestrial Natural Communities of California*. Non-game Heritage Program. California Department of Fish and Game. Sacramento, California.
- Michael Brandman Associates. July 2005. *Focused Desert Tortoise Survey Report*. Prepared for: Town of Yucca Valley, 58928 Business Center Drive, Yucca Valley, CA 92284, Contact: Shane Stueckle, Deputy Town Manager. Unpublished report.
- Michael Brandman Associates. July 2005. Letter, Subject: *Results of Joshua Tree Survey for Proposed Home Depot Site in Yucca Valley, California*. Prepared for: Town of Yucca Valley, 58928 Business Center Drive, Yucca Valley, CA 92284, Contact: Shane Stueckle, Deputy Town Manager. Unpublished report.
- Munz, P.A. 1974. *A Flora of Southern California*. University of California Press. Berkeley, California.
- National Geographic Society. 1987. *National Geographic Society Field Guide to the Birds of North America*. 2nd Edition. National Geographic Society, Washington D.C.
- Sawyer, J.O. and T. Keeler-Wolf. 1995. *A Manual of California Vegetation*. California Native Plant Society. Sacramento, California.

- Sibley, D.A. 2003. *The Sibley Field Guide to Birds of Western North America*. Alfred A. Knopf, New York, USA. 471 p.
- Skinner, M.W., and B.M. Pavlik. 1994. *California Native Plant Society's Inventory of Rare and Endangered Vascular Plants of California*. California Native Plant Society. Special Publication, No. 1, 5th ed.
- Stebbins, R.C. 1985. *A Field Guide to Western Reptiles and Amphibians*. 2nd. Ed. Houghton-Mifflin Company. Boston, Massachusetts.
- U.S. Army Corps of Engineers. 1998 (July 10). *Public Notice: Replacements for NWP 26*. U.S. Army Corps of Engineers. Sacramento, California.
- U.S. Department of Agriculture. 1971. *Soil Survey: San Bernardino County, California*. Department of the Interior. U.S. Government Printing Office. Washington, D.C.
- U.S. Fish and Wildlife Service (USFWS). 2000. *Federal Register*, Vol. 65, No. 206. Endangered and Threatened Wildlife and Plants; Final Determination of Critical Habitat for the Coastal California Gnatcatcher; Final Rule.
- U.S. Fish and Wildlife Service (USFWS). 2002. *Federal Register*, Vol. 67, No. 78. Endangered and Threatened Wildlife and Plants; Final Designation of Critical Habitat for the San Bernardino Kangaroo Rat; Final Rule
- U.S. Fish and Wildlife Service (USFWS). 2003. *Federal Register*, Vol. 68, No. 79. Endangered and Threatened Wildlife and Plants; Designation of Critical Habitat for the Coastal California Gnatcatcher (*Polioptila californica californica*) and Determination of Distinct Vertebrate Population Segment for the California Gnatcatcher (*Polioptila californica*); Proposed Rule.

Appendix A
Floral and Faunal Compendia

FLORAL AND FAUNAL COMPENDIA

Floral Compendium

Ephedraceae*Ephedra nevadensis***Ephedra Family**

Nevada ephedra

Asteraceae

Ambrosia dumosa
Calycoseris parryi
Chaenactis sp.
Ericameria linearifolia
Eriophyllum wallacei
Layia glandulosa
Stephanomeria exigua

Sunflower Family

Bur-sage
 Yellow tack-stem
 White pincushion
 Interior goldenbush
 Wallace's woolly daisy
 White tidy-tips
 Small wreathplant

Boraginaceae

Amsinckia menziesii
Pectocarya sp.

Borage Family

Common fiddleneck
 Pectocarya

Cactaceae

Opuntia ramosissima
Opuntia basilaris

Cactus Family

Pencil cholla
 Beaver-tail cactus

Euphorbiaceae*Croton californicus***Spurge Family**

California croton

Fabaceae

Lotus strigosus
Senna armata

Legume Family

Strigose lotus
 Desert senna

Onagraceae

Camissonia spp.
Camissonia brevipes

Evening Primrose Family

Yellow cups
 Yellow cups

Polemoniaceae*Loeseliastrum mathewsii***Phlox Family**

Desert calico

Polygonaceae

Cenrostegia thurberi
Chorizanthe brevicornu
Eriogonum spp.
Eriogonum inflatum
Eriogonum thomasii

Buckwheat Family

Thurber's spineflower
 Brittle spineflower
 Annual buckwheat
 Trumpet flower
 Thomas' buckwheat

Solanaceae*Lycium cooperi***Nightshade Family**

Peach thorn

Zygophyllaceae*Larrea divaricata***Caltrop Family**

Creosote bush

Poaceae

**Bromus diandrus*
 **Bromus hordeaceus*
 **Bromus madritensis* ssp. *rubens*
Pleuraphis rigida

Grass Family

Ripgut grass
 Soft chess
 Foxtail chess
 Big galleta

FLORAL AND FAUNAL COMPENDIA

Faunal Compendium

REPTILES**Iguanidae***Urosaurus graciosus graciosus***Iguanids**

Western brush lizard

BIRDS**Cathartidae***Cathartes aura***New World Vultures**

Turkey vulture

Tetraoaininae*Callipepla gambrii***Quail**

Gambel's quail

Columbidae*Zenaida macroura***Pigeons and Doves**

Mourning dove

Picidae*Colaptes auratus***Woodpeckers**

Northern flicker

Corvidae*Corvus corax***Jays and Crows**

Common raven

Trochilidae*Calypte costae***Hummingbirds**

Costa's hummingbird

Remizidae*Auriparus flaviceps***Verdin**

Verdin

Troglodytidae*Campylorhynchus brunneicapillus***Wrens**

Cactus wren

Mimidae*Toxostoma redivivum***Thrashers**

California thrasher

Sturnidae**Sturnus vulgaris***Starlings**

European starling

Emberizidae*Amphispiza bilineata***Wood Warblers, Tanagers, Buntings, and Blackbirds**

Black-throated sparrow

Fringillidae*Carpodacus mexicanus***Finches**

House finch

MAMMALS**Leporidae***Lepus californicus**Sylvilagus audubonii***Hares and Rabbits**

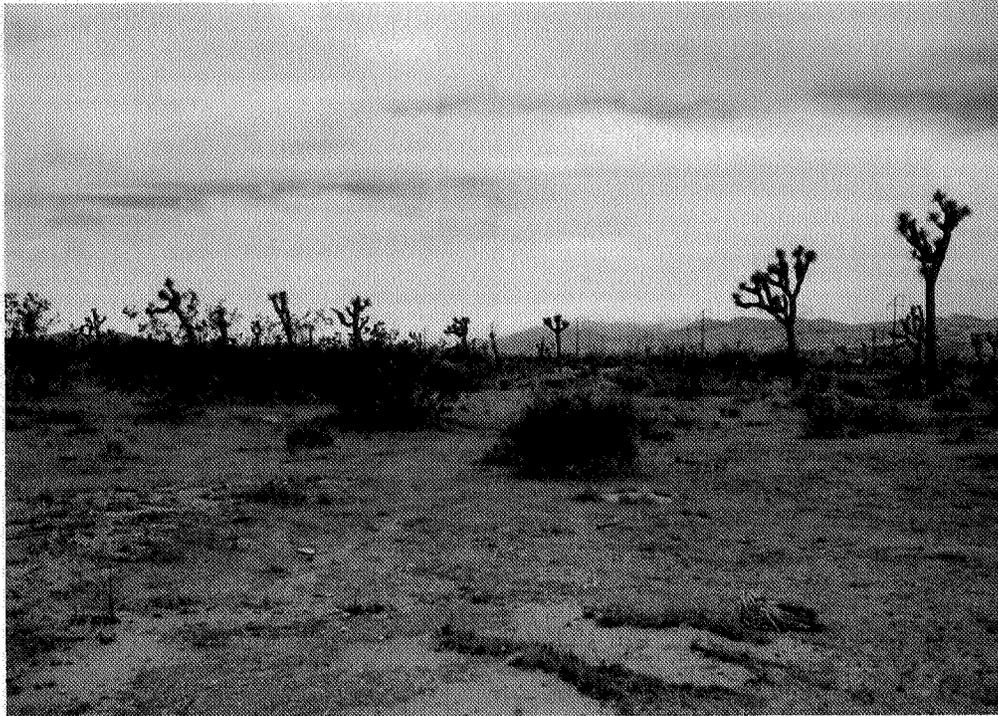
Black-tailed jackrabbit

Desert cottontail

Sciuridae*Ammospermophilus leucurus***Squirrels**

White-tailed antelope squirrel

Appendix B
Site Photographs



From northern project boundary, facing southeast



From center of property, facing southeast

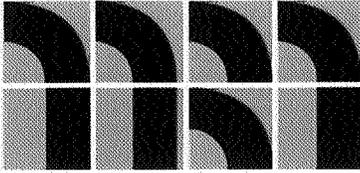


Michael Brandman Associates

Site Photographs

Home Depot Site, Yucca Valley

Appendix C
Joshua Tree Survey Results



Michael Brandman Associates

ENVIRONMENTAL SERVICES • PLANNING • NATURAL RESOURCES MANAGEMENT

August 2, 2005

Shane Stueckle, Deputy Town Manager
Town of Yucca Valley
58928 Business Center Drive
Yucca Valley, CA 92284

SUBJECT: Results of Joshua Tree Survey for Proposed Home Depot Site in Yucca Valley, California

Dear Mr. Stueckle:

At your request, Michael Brandman Associates (MBA) has prepared this letter report to document the results of our native desert plant survey for the proposed Home Depot site in Yucca Valley, California.

Project Location and Description

The project site includes approximately 29.3 acres of undeveloped land located on the eastern boundary of the Town of Yucca Valley, within the County of San Bernardino, California (Exhibit 1). The project site is bound on the north by Hwy 62 (Twentynine Palms Highway) and on the west by Avalon Avenue (Exhibit 2). The site is located in Section 32, Township 1 North, and Range 6 East of the Yucca Valley North 7.5 minute U.S. Geological Survey (USGS) quadrangle map.

It is our understanding that the proposed project would include a Home Depot home improvement center and garden center, as well as three (3) smaller retail stores and a restaurant and associated parking. Additionally, offsite improvements include an eastern extension of Palisade Drive, which would be adjacent to the southern portion of the project site, and other roadway and utility improvements (Exhibit 3).

Regulatory Framework

The Town of Yucca Valley General Plan recognizes the Joshua tree as a symbol of the Mojave Desert and Chapter 1, Desert Native Plant Protection, of Town Ordinance No. 140, the Plant Protection and Management Ordinance, aims to preserve and protect native plants unique to Yucca Valley. Plants protected by the Ordinance include all species of mesquites (*Prosopis* spp.), yuccas (*Yucca* spp.), creosote rings (10 feet or greater in diameter), Joshua trees (*Yucca brevifolia*), California juniper (*Juniperus californica*), desert willow (*Chilopsis linearis*), pinon pine (*Pinus monophyll*), Palo Verde (*Cercidium* spp.), and manzanita (*Arctostaphylos* spp.). The Ordinance states that protected desert native plants shall not be removed except under a permit issued by the Community Development Director. Prior to the issuance of a native tree or plant removal permit, a plot plan shall be approved by the Community Development Department indicating exactly which trees or plants are authorized to be removed or relocated. In the event that it is found to be unreasonable to maintain a Joshua tree in its original place, translocation onsite is one option, or the Town has established an adoption program to allow for members of the public to adopt Joshua trees.

Bakersfield 661.334.2755 * Irvine 714.508.4100 * Sacramento 916.296.4857 * San Bernardino 909.884.2255 * San Ramon 925.830.2733 * Santa Cruz 831.262.1731 * San Diego 619.823.4937 * Visalia 559.739.0400

www.brandman.com

e-mail: mba@brandman.com

Field Survey Methods

MBA biologists conducted a field survey during three visits to the project site: May 24 and 25, and June 7, 2005. The entire site was walked on foot, and all protected native desert plants within the project site and in the project impact area were documented. Aerial photographs, as well as GPS units (Magellan Platinum), were used for reference while conducting the survey.

Due to the prevalence of Joshua trees within the project site, the survey focused on documenting the potential for individual Joshua trees to be translocated. Based on accepted protocol¹, the following guidelines were used to assess if a tree was suitable for translocation:

- The tree's fork was 6 feet high or less;
- The tree had less than 6 branches;
- The tree's canopy was less than 4 feet in width;
- The branches were not widely spreading; and
- The trees were not leaning (generally defined as less than a 45 degree angle to the ground).

These guidelines are general and the potential for trees to be translocated was determined based on an individual basis, taking into account the apparent health and shape of each tree. Data recorded included the diameter at breast height (DBH), height to the first fork, overall height of the tree, crown diameter, number of branches, and suitability for translocation. Due to time constraints, not all data fields were recorded for all trees. In general, data was recorded for trees that were determined to not be suitable for translocation in order to document the reason for exclusion. Trees were tagged with round aluminum tags. Tags were numbered from 1 to 300 and were nailed onto the north side of the tree. Young trees could not be tagged due to the lack of bark. A GPS coordinate was taken for these trees and they were named beginning with the letters JT.

Existing Conditions

The proposed project site is a vacant lot with surrounding land uses including undeveloped land to the south, retail to the east and west, and residential development to the north. The site is relatively flat at an elevation of approximately 3,200 feet above mean sea level. It is dominated by Joshua trees and creosote bush (*Larrea tridentate*).

Results

The only species present within the project site that is protected by the Plant Protection and Management Ordinance is the Joshua tree. A total of 307 Joshua trees were tagged, with 235 mapped within the proposed project site impact area (Exhibit 4). Of these 307 Joshua trees, 69 were determined to be unlikely to survive after translocation, leaving 166 with a potential to be translocated successfully. The trees range from 5 to 23 feet in height, with an average height of approximately 12 feet (data for 176 trees). The DBH ranged from 6 inches to 12 inches with an average of 9.6 inches (data for 62 trees) (see Attachment 1, Data).

Recommendations

A Joshua tree salvage plan will be written prior to issuance of a grading permit. The plan will detail methods for removal, storage, transplantation, and maintenance of the Joshua trees. The project proposes

¹ Personal Communication, Paul Kielhold

Shane Stueckle, Deputy Town Manager
Town of Yucca Valley
August 2, 2005
Page 3

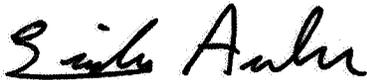
to use approximately 150 Joshua trees in its landscape plan. The trees that will be used on the project site will be stored separately. The remaining trees that are removed successfully will be made available for adoption pursuant to the Town's Joshua tree adoption program.

Final Conclusions

A native desert plant survey, consistent with the Town's Ordinance No. 140 was conducted for the proposed Home Depot Center site in Yucca Valley. Joshua tree is the only species protected by the ordinance present within the project site. Approximately 166 Joshua trees will be salvaged with approximately 150 trees utilized on site as part of the project's landscape plan. The remaining plants will be made available for adoption pursuant to the Town's native desert plant adoption program. A conservative approach was taken when determining if a tree could be salvaged and MBA makes no guarantees as to the likelihood of successful translocation for trees marked as salvageable.

Please feel free to call me at (909) 884-2255 if you have any questions concerning the information provided in this report. We look forward to continuing to assist you with work on this and other sites.

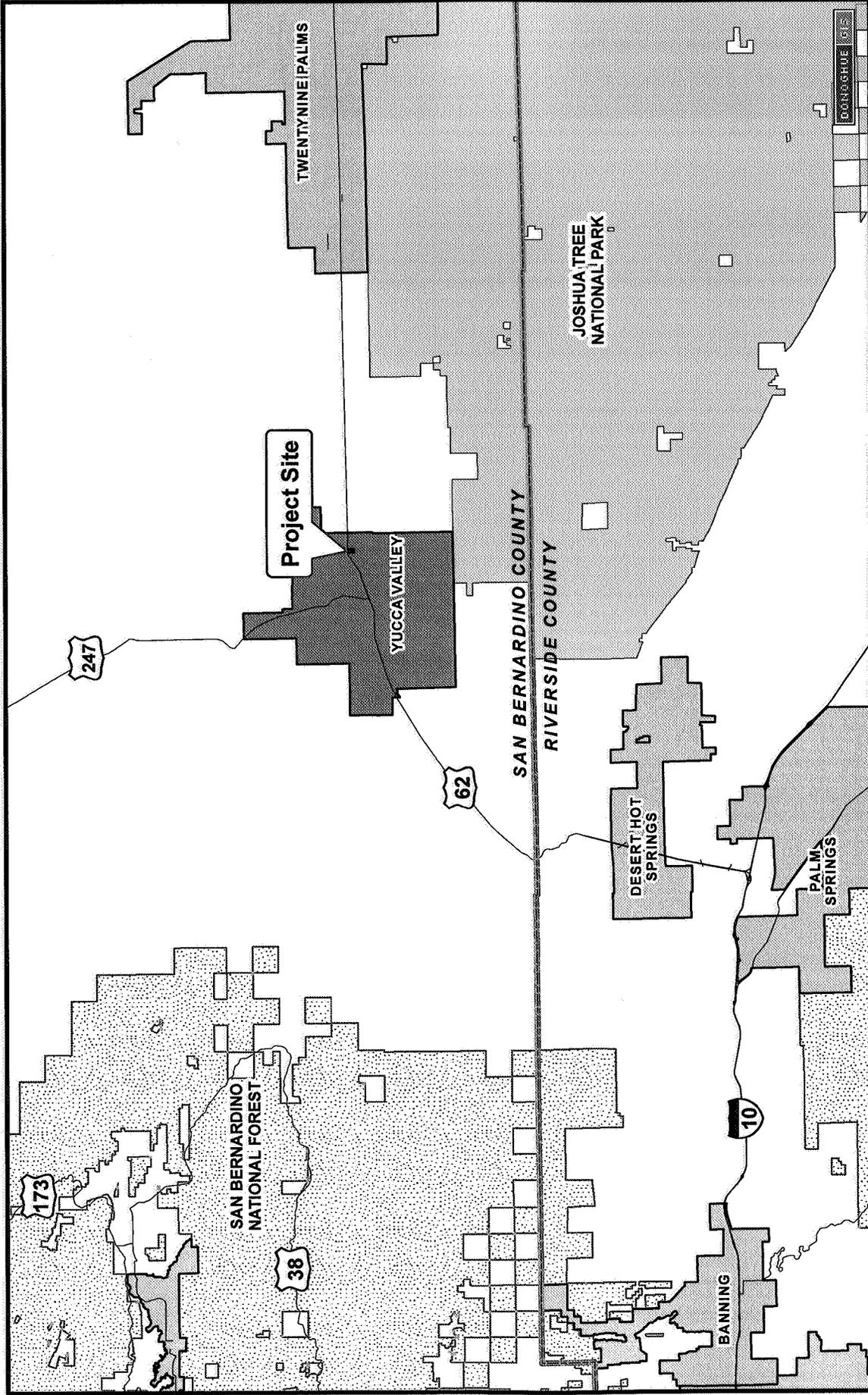
Sincerely,



Linda Archer, Project Biologist
Michael Brandman Associates
621 E. Carnegie Drive, Suite 100
San Bernardino, CA 92408

Attachments: Exhibit 1: Regional Vicinity Map
Exhibit 2: Local Vicinity Map
Exhibit 3: Site Plan
Exhibit 4: Joshua Tree Survey
Attachment 1: Joshua Tree Data
Attachment 2: Site Photos

LMA:sep
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Data Sources: Riverside County, San Bernardino County



Exhibit 1 Regional Vicinity Map





Data Sources: San Bernardino County, Carter-Burgess
Aerial Photo: AirPhotoUSA Copyright: 2002 - 2004 - All Rights Reserved



Project Site



Michael Brandman Associates

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Exhibit 2 Local Vicinity Map

HOME DEPOT JOSHUA TREE SURVEY - YUCCA VALLEY, CA

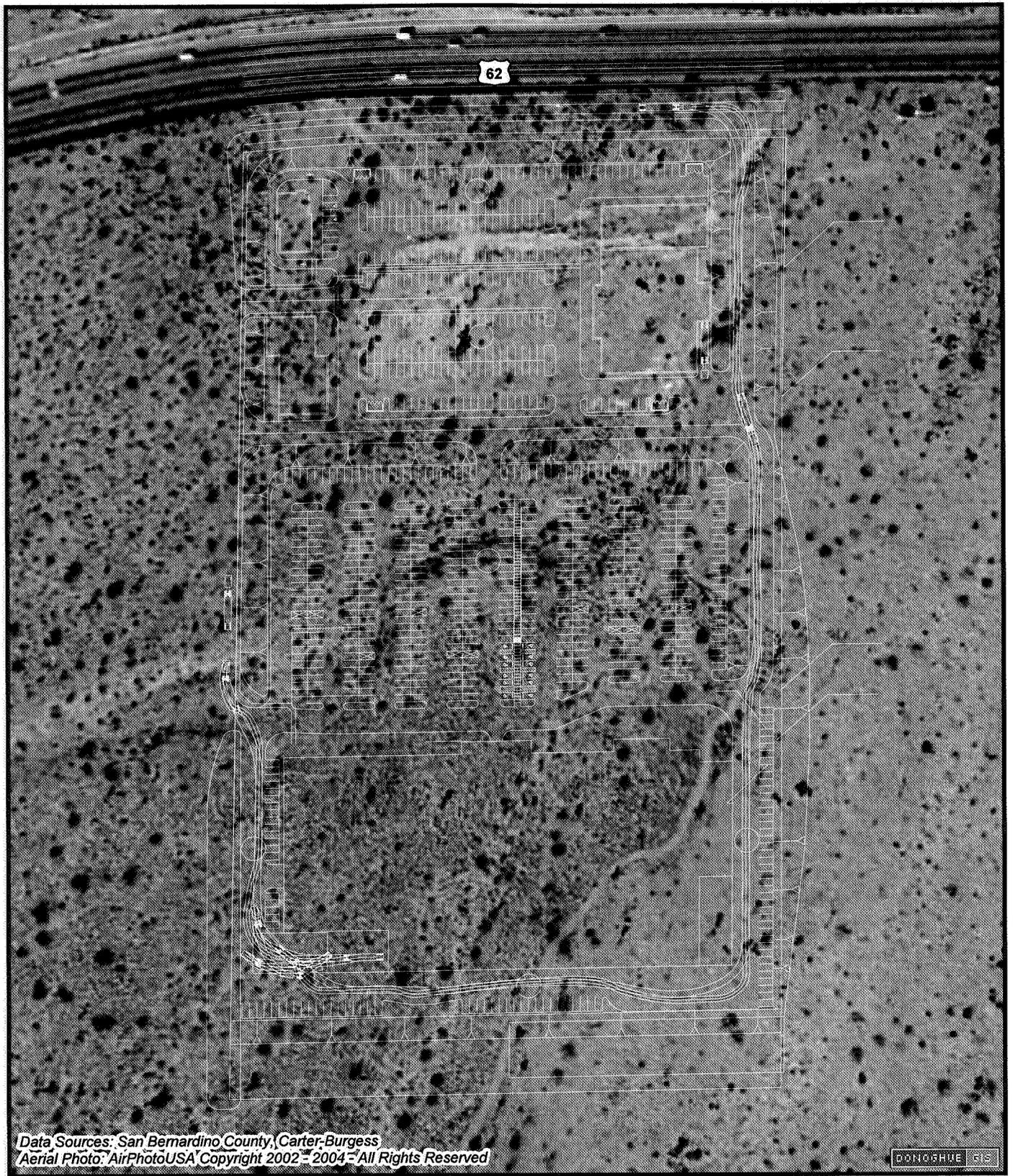


Exhibit 3
Site Plan



Map Legend

- 106 Joshua Trees in Project Site
 - 36 Trees Not Salvagable
 - 70 Trees Translocatable
- 235 Joshua Trees in Impact Area
 - 69 Trees Not Salvagable
 - 166 Trees Translocatable
- Site Plan
- Revised Impact Area
- Project Site

Data Sources: MBA, Carter-Burgess, San Bernardino County
 Aerial Photo: AirPhotoUSA Copyright 2002 - 2004 - All Rights Reserved

DONOGHUE GIS

Michael Brandman Associates

0 100 200 400 Feet

27900001 • 07/2005 | Ex4_Tree_Survey.mxd

Exhibit 4
Joshua Tree Survey

Attachment 1: Joshua Tree Data

Joshua Tree Data

Tag #	DBH (in)	Est. Height to Fork (ft)	Est. Total Height (ft)	Crown diameter (ft)	# Branches	Translocatable?	Notes
1	6		10	2.5	2	Y	Branches little
2	7.9	7.5	13.5	6.3	4 forks	Y	3 Forks, not wide
3	8.2		11	2	2 forks	Y	Small JT immediately adjacent tagged
4	9.3	0	13	4.4	1	N	Hollow, 2 trunks (smaller one 8.0 DBH), 1 branch infested
5	8.8		10.5	2.9	0	Y	
6	7.8		9.5	3.5	1	Y	
7	7.7		7	3	0	Y	No distinct branches, although NP beginning
8	6.5		10.5	6	1	N	Crown too highly bent
9	7.2		12	3.4	3	Y	1 primary, 2 secondary
10	8		13.5	6.8	5	Y	Branches spread
11	8.3		9.5	13.5		N	Too bent. Second trunk 8.2" DBH
JTA	NA		5.5		0	Y	Resprout
12	12.8		18	11.9	13	N	
13	11.6		17	11.4	11	N	
14	6.9		12	6	4	Y	2 trunks + 1 resprout, 2nd trunk 5.3 DBH, 1 branch
15	8.5		12	5.4	4	Y	3 primary, 2 secondary

Joshua Tree Data

Tag #	DBH (in)	Est. Height to Fork (ft)	Est. Total Height (ft)	Crown diameter (ft)	# Branches	Translocatable?	Notes
16	10.6		14	9.2	11	N	3 primary, 8 secondary
17	10.2	9	12		3	Y	
18	14				Many	N	Highly branched
19	11.3	9.5	17	8.3	6	Y	Branches long but vertical
20	11.9	11	14	7	3	Y	Vertical
21	8.5	4.5	8	4	3	Y	3 branches on main trunk, + 2 resprouts. (OK to trans. w/ 3 small trunks?)
22	14	9	18	11	7	N	Branching too wide
23	9.9	10	16	5.5	4	Y	Marginal
24	6.6	6	11	5	3	Y	
25	7	NA	11	NA	0	Y	
26	7.7	8	15	3.8	5	Y	Marginal?
27	9.8				8	N	Too many branches, widely branched
JTB	NA	4.5				Y	Small
28	6.4	5	9	5	4	Y	
29	8	6	9.5	5.5	2	Y	Leaning-prob?
30	7.5		10		1	Y	Leans around 5'-prob?

Joshua Tree Data

Tag #	DBH (in)	Est. Height to Fork (ft)	Est. Total Height (ft)	Crown diameter (ft)	# Branches	Translocatable?	Notes
31	8		10		1	Y	
32	6.6	8	10	3	2	Y	Leans at 6; somewhat scawny, sickly?
33	7.3	7.5	12	5.5	3	Y	Marginal
34	7.7	6.5	12	2	3	Y	Vertical...Branches, 3 remaining/2 broken
35	6.3	6	9	4	3	Y	
36	5		6	NA	1	Y	
37	9.6	10	15		7	N	Widely branched
38	8.6	12	15	5	4	Y	
39	6.6		8		0	Y	Leaning at approximately 35°
40			8		0	N	Leaning at 45°
41	7.5	10	14	5	4	Y	Marginal
42	6.9	12	15		2	Y	Two trunks, 2nd trunk 10' to fork, 13' overall ht. Two branches per trunk
43	8.3	12	15		3	N	Heavily leaning at the top
44	8.3	9	10.5		0	Y	branch beginning
45	6.7	8	11	6	3	Y	Vertical (3 main branches)
46	10.2	11	18		6	N	2 trunks

Joshua Tree Data

Tag #	DBH (in)	Est. Height to Fork (ft)	Est. Total Height (ft)	Crown diameter (ft)	# Branches	Translocatable?	Notes
47	10.5	12	19	7	10	N	
48	14.5	11	18		6	N	2nd trunk-7.7' DBH
49	7.5	11	17	9	11	N	Leaning
50						N	Bent
51	8.3		9		0	Y	
52	8.8	6.5			2	N	Many branched, leaning
53						N	Top leaning at 60°
JTC		4.5				Y	Adjacent to tree #53
54	9.2	7.5	14	5	10	N(?)	
55		12		8	4	N	Ess. Same as JT53
56	9.1	11	15	5	2	Y	Marginal/Vertical
57		11		10	9	N(Y)	Widely spreading. 2 trunks, 2nd one small and translocatable
58	18.6	0			Many	N	Lying on the ground
59						Y	6 trunks
60	11	8	14	10.8	7	N	Photo
61						Y	

Joshua Tree Data

Tag #	DBH (in)	Est. Height to Fork (ft)	Est. Total Height (ft)	Crown diameter (ft)	# Branches	Translocatable?	Notes
62	10.7	4.5	13	9.6	6	Y	2nd trunk lying on the ground
63	8.8	6.5	10		2	Y	
64						Y	
65						Y	
66						Y	Leaning
67		10.5	15			Y	2 bends (original 7)
68						Y	
69						Y	
70						Y	
71		10	15		6	N	
72		12	17		3	Y	
73						Y	
74						Y	
JTD						Y	4 trunks-smallest 6'
75		10	15		3	Y	
JTE						Y	Leaning

Joshua Tree Data

Tag #	DBH (in)	Est. Height to Fork (ft)	Est. Total Height (ft)	Crown diameter (ft)	# Branches	Translocatable?	Notes
76						Y	2nd trunk approx. 3'
77		6	10		7	Y	Fairly spreading, but low
78						Y	
79						Y	
80					12	N	4 primary, 8 secondary, Leaning at 45°
81		10	15	12	4	Y	Main trunk no, but resprout approx. 2'; holes in trunk. Photo
82						Y	3 trunks-tallest 8'
83		4	8		5	N	Leaning at > 45°
84						Y	
JTF		4.6				Y	
85						Y	
JTG		3				Y	
JTH		3.5				Y	
86					2	N	Leaning @ approx. 30° otherwise okay
87						Y	
88						Y	

Joshua Tree Data

Tag #	DBH (in)	Est. Height to Fork (ft)	Est. Total Height (ft)	Crown diameter (ft)	# Branches	Translocatable?	Notes
89		6.5				Y	
90					2	Y	
91						N	Leaning at approximately 30° from ground
92		7				N	Bent 90° at fork
93						N	Leaning at approximately 35°
94					7	N	leaning at approximately 35°
95		10	15		2	Y	
96						Y	
97		11	17		11	N	
98						Y	
99		9	15		7	Y	4 primary branches, 3 secondary, Marginal
100		8			6	Y	Probably not the main trunk, but resprout 3 trunks (1 single, 1-1 fork)
101						Y	
102		10	15		6	Y	Fairly vertical
JTI		7				Y	
103					0	Y	Bent at top (prev. branch broken off)

Joshua Tree Data

Tag #	DBH (in)	Est. Height to Fork (ft)	Est. Total Height (ft)	Crown diameter (ft)	# Branches	Translocatable?	Notes
104						Y	
105	12.2	7	16		10	N	Animal? Hole at the base, leaning at 25°
106		7	15	10.6	>10	N	
107	12.6	4.5	11		5	Y	Vertical, center of gravity low
108						Y	
109						Y	
110						Y	
111						N	Dying, multi-branched-fire damage
112						N	Dying, leaning, fire damage
113						N	Dying, leaning, fire damage
114						Y	Size fine, some fire damage
JTJ		3.5				N	Dead?
115		7				Y	Some fire damage, resprouting
116	12.3	11	15		6	Y	Marginal
117		8	15		11	N	
118						Y	

Joshua Tree Data

Tag #	DBH (in)	Est. Height to Fork (ft)	Est. Total Height (ft)	Crown diameter (ft)	# Branches	Translocatable?	Notes
119		8	16		8	Y	Main trunk questionable but resprout good - approx. 5.5'
120						Y	
121						Y	
122						Y	
123		9.5	15		7	Y	3 trunks + resprout. Main trunk questionable but resprout good.
JTK						Y	Just mass head 2.5-3'
124		9	16	6.4	15	N	
125		11	18		10	N	Not healthy
126					5	Y	Wide spreading, not healthy
127						N	
JTL			8.5			Y	
128						Y	
129		7	16		4	Y	Marginal, leaning
130		7.5				Y	
131		7.5	14		6	Y	Marginal
132						Y	

Joshua Tree Data

Tag #	DBH (in)	Est. Height to Fork (ft)	Est. Total Height (ft)	Crown diameter (ft)	# Branches	Translocatable?	Notes
133						Y	
JTM			5			Y	
134			7			Y	
135						Y	2 trunks, 2nd small
136		12	17		10	N	too many branches, not hearty
137		15	18		3	N	
JTN		3				Y	
138					8	Y	Branches twisted, all on one side, but 2nd trunk 6"-moveable
139		6.5	14		6	Y	
140						Y	
141		7.5				Y	
142						Y	
143						Y	
144						Y	
145						Y	
146						Y	

Joshua Tree Data

Tag #	DBH (in)	Est. Height to Fork (ft)	Est. Total Height (ft)	Crown diameter (ft)	# Branches	Translocatable?	Notes
147		5.5	13		8	Y	Multibranching, but low, vertical. Good tree
JTO						Y	
148						Y	
149						Y	
JTP						Y	
JTQ						Y	
150						N	Marginal, leaning at 45°
151						Y	
152						Y	
153						Y	
154						N	Leaning at approximately 45°
155		11	17		4	Y	Marginal, vertical not spreading
156						Y	
157						Y	
158						Y	
159						N	Leaning at 45°

Joshua Tree Data

Tag #	DBH (in)	Est. Height to Fork (ft)	Est. Total Height (ft)	Crown diameter (ft)	# Branches	Translocatable?	Notes
160						Y	
161						Y	
162	13.2		18	13.8	15	N	Photo
163					6	N	Branches all on one side
164						Y	
165						Y	
166						Y	
167		15	23		16	N	Branches spindly
168		6.5				Y	Dying?
169		11	19		4 (main)	Y	2 trunks-fork on main is high, 2nd trunk is good
170		4.5	11		4	Y	
JTR			3.5			Y	
171						Y	
172		7.5	16		9	Y	Marginal- more yes
173		7	13		8	Y	Branches low and sturdy.
174						Y	Sprout of 173?

Joshua Tree Data

Tag #	DBH (in)	Est. Height to Fork (ft)	Est. Total Height (ft)	Crown diameter (ft)	# Branches	Translocatable?	Notes
175		7.5	13		8	Y	Multibranched, but branches low and thick.
176					4	Y	
JTS			1			Y	
178						Y	
179						Y	
180						Y	
181						Y	
182						Y	
183					2	N	Branches 30° from each other, unhealthy looking
184					2	N	Branches 30° from each other, unhealthy looking
185					1	N	leaning at 40°
186					1	Y	
187					1	Y	
188		9	13			Y	primary trunk branches at 9 feet; 2 trunks, 1 common stem
189				8	4	N	1 primary branch, 3 secondary branches
190						Y	Single stem

Joshua Tree Data

Tag #	DBH (in)	Est. Height to Fork (ft)	Est. Total Height (ft)	Crown diameter (ft)	# Branches	Translocatable?	Notes
191						Y	Single stem
192						Y	Single stem
193						Y	Single stem
194				13	13	N	
JT1						N	4'
195						N	Falling Over
JT2						Y	
196			11			Y	1 trunk
197			13		3	Y	1 primary, 2 secondary
198			15		13	N	Too many branches
199			8		12	N	Too many branches Photo
200						N	Branching, off center/leaning
201			11			Y	Fire damage -not too healthy
202			11		8	N	Too widely spreading
203						Y	
204						Y	

Joshua Tree Data

Tag #	DBH (in)	Est. Height to Fork (ft)	Est. Total Height (ft)	Crown diameter (ft)	# Branches	Translocatable?	Notes
205					6	N	Leaning at 45°-burned
206						Y	Marginal, fire damage
JTT		5				Y	
JTU		3				Y	
207		11	17		3	Y	Marginal, fork high, but branches narrow
208						Y	
209						Y	
210					7	Y	2 trunks, 2nd trunk salvageable, first trunk not - too many branches on one side
211			4		3	N	Lying on the ground
212			12		6	Y	
213			7		2	N	Leaning at 60°
214			14		2	Y	
215			15		3	N	Leaning at 30°
216			8		2	Y	
217			14		8	N	R 6' Branch
218			13		2	Y	

Joshua Tree Data

Tag #	DBH (in)	Est. Height to Fork (ft)	Est. Total Height (ft)	Crown diameter (ft)	# Branches	Translocatable?	Notes
219			18		6	Y	2 main stems
220			13		1	Y	
221			13		1	N	Unhealthy
222			13		2	Y	
223			8		1	Y	
224			14		4	N	Too widely branching
225			12		1	Y	
JT3			3		1	Y	
226			8.5		1	Y	
227			15		1	Y	
228			14		1	N	Leaning at 40°
229			9		1	Y	
JT4			7.5		1	Y	
230			12		5	Y	
JT5			6		1	Y	
231	9.9		20		11	N	Crown too large

Joshua Tree Data

Tag #	DBH (in)	Est. Height to Fork (ft)	Est. Total Height (ft)	Crown diameter (ft)	# Branches	Translocatable?	Notes
232			7.5		5	Y	
233			13		1	Y	
234			13		3	Y	
235			10		1	N	Leaning at 40°
236			7.5		1	Y	
237			7		1	Y	
238			7.5		1	Y	
239	11.4		18	10.3	11	N	Too many branches
240			15		5	Y	
241			13		2	Y	
JT6			6		1	Y	
242			10		2	Y	
243			11		1	Y	
244			7		1	N	Unhealthy
245			18		9	N	Large
246			10		1	N	Unhealthy

Joshua Tree Data

Tag #	DBH (in)	Est. Height to Fork (ft)	Est. Total Height (ft)	Crown diameter (ft)	# Branches	Translocatable?	Notes
247			10		1	Y	
248			11		2	Y	
249			11		4	Y	
250			10		2	N	Too widely branching
251			13		3	N	Leaning at 35°
252			8		7	N	Too widely branching
253			7		1	Y	Sprouting at the base
254			15		3	N	Unhealthy
JT7			6		1	Y	
255			18		8	N	Too widely branching
JT8			3			Y	
256			9		2	Y	2 branches, 1 stem
257			7		1	N	Leaning at 40°
JT9			3		1	N	Too small
258			10		1	Y	
259			13		2	N	Unhealthy

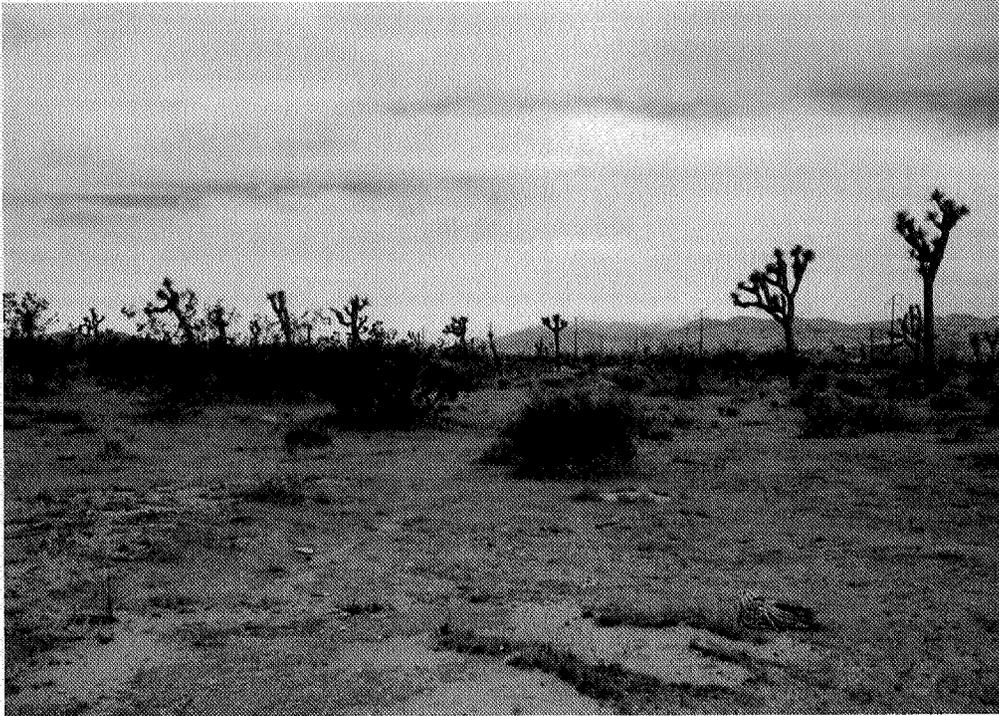
Joshua Tree Data

Tag #	DBH (in)	Est. Height to Fork (ft)	Est. Total Height (ft)	Crown diameter (ft)	# Branches	Translocatable?	Notes
260			9		1	Y	
261			11		2	Y	
262			14		2	Y	
263			22		6	N	Too tall, too widely branching
264	12.4		18		>10	N	2 trunks
265	13.5		14		2	N	Unhealthy
266			14		3	N	Unhealthy
267			14		6	N	Too many branches
268			15		5	N	Too many branches
269			15		7	N	Too many branches
JT10			9			Y	
270			10		3	N	Leaning at 35°
271			12		6	Y	2 trunks, 1 salvageable
272			13		5	Y	
273			13		3	Y	
274			20		11	N	Too many branches

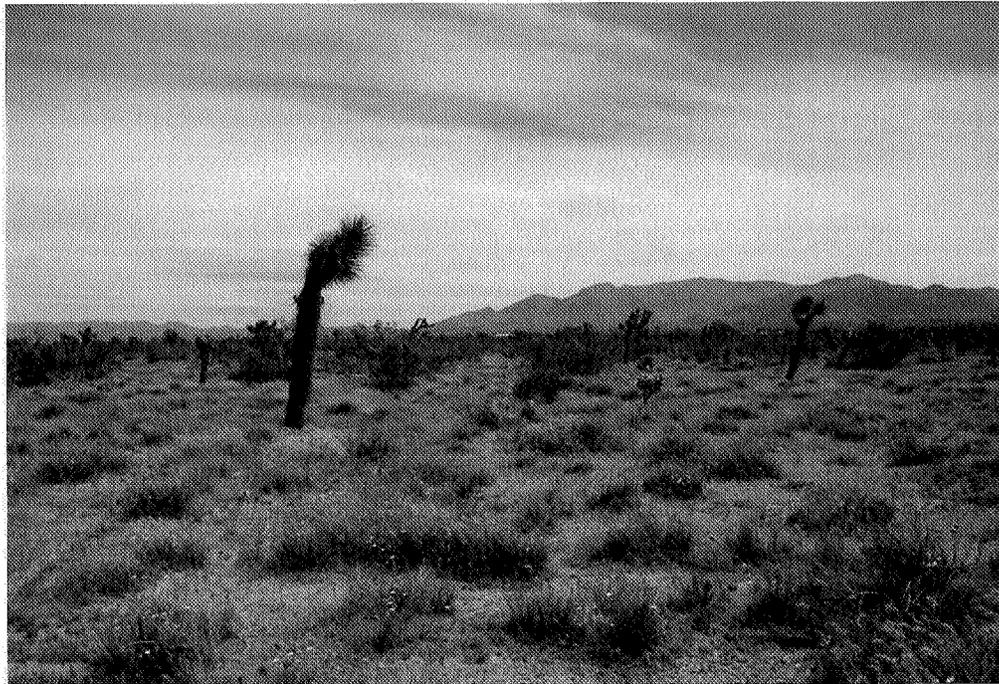
Joshua Tree Data

Tag #	DBH (in)	Est. Height to Fork (ft)	Est. Total Height (ft)	Crown diameter (ft)	# Branches	Translocatable?	Notes
275			18		4	N	High center of gravity
JT11			2.5		1	Y	
Sum	597	704.6	2150.5				
Total	62	89	176				
Average	9.6	7.9	12.2				

Attachment 2: Site Photographs



From northern project boundary, facing southeast



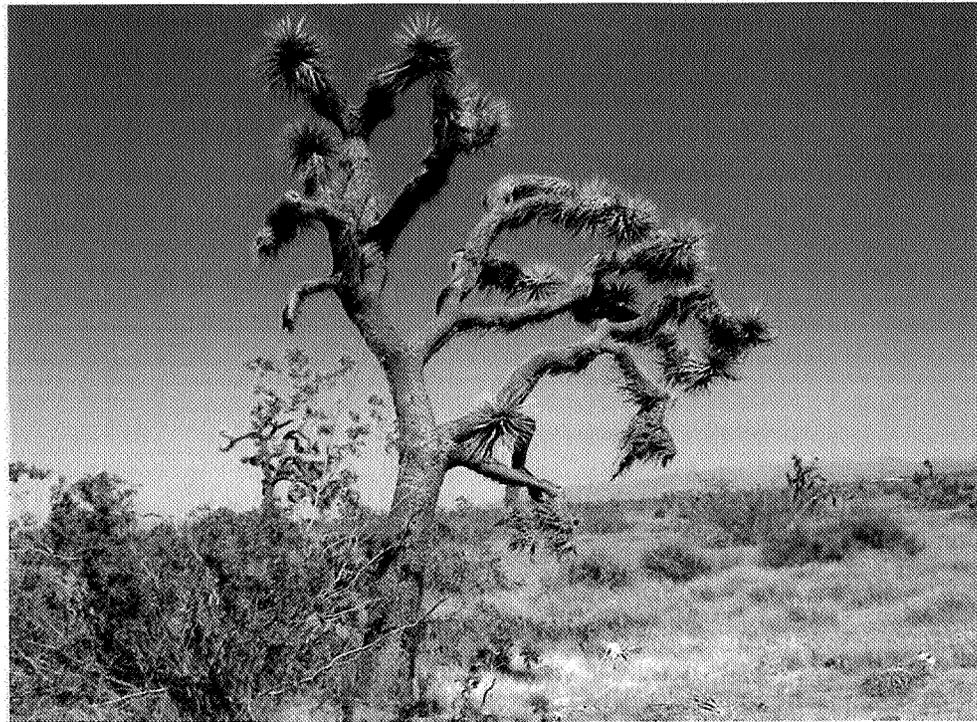
From center of property, facing southeast



Michael Brandman Associates

Site Photographs

Home Depot Site, Yucca Valley



Michael Brandman Associates

Site Photographs

Home Depot Site, Yucca Valley

Appendix D
Focused Desert Tortoise Survey Report

**Focused Desert Tortoise Survey Report
for an 29.3-Acre Site in the Town of Yucca Valley,
San Bernardino County, California**

Prepared for:

Town of Yucca Valley
58928 Business Center Drive
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Contact: Shane Stueckle
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George Wirtes



August 2, 2005

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APPENDICES

Appendix A – Floral and Faunal Compendia

SECTION 1: EXECUTIVE SUMMARY

Michael Brandman Associates (MBA) conducted a focused desert tortoise (*Gopherus agassizii*) survey of an 29.3-acre site in the Town of Yucca Valley, California. This effort was intended to assess the presence of desert tortoise and identify the potential for impacts to this species as a result of the proposed development.

This desert tortoise survey by MBA was conducted according to standard protocols set forth by the U.S. Fish and Wildlife Service (USFWS) (January 1992). These surveys require 100 percent coverage of the project site, and surveys in the Zone of Influence (ZOI) around the site. Because the project site falls within potential suitable habitat, but outside of designated critical habitat for the desert tortoise, the ZOI extends to 2,400 meters (7,874 feet) beyond the project site boundary.

MBA did not detect desert tortoise or any sign of their presence within the project footprint or within the ZOI. Based on the field findings, the project will have a low potential to directly impact desert tortoise habitat and have a very low potential for indirect impacts to desert tortoise.

SECTION 2: INTRODUCTION

In support of a habitat assessment, MBA conducted this focused desert tortoise survey of a project site for a proposed retail development in the town of Yucca Valley, California. The survey was conducted by qualified MBA biologists, Marnie McKernan and George Wirtes, on May 30, 2005.

2.1 - PROJECT LOCATION

The project site includes approximately 29.3 acres of undeveloped land located on the eastern boundary of the Town of Yucca Valley, within the County of San Bernardino, California. The project site is bound on the north by Highway 62 (Twenty-nine Palms Highway) and on the west by Avalon Avenue. The project site extends to Indio Avenue to the east and Palisades Drive to the south. The site is located in Section 32, Township 1 North, and Range 6 East of the Yucca Valley North 7.5-minute U.S. Geological Survey (USGS) quadrangle map (Exhibit 1).

2.2 - PROJECT DESCRIPTION

The project consists of a retail development complex that includes a Home Depot with a house plant enclosure/outdoor garden center, restaurant and parking area. Implementation of the project will include mass grading, associated infrastructure, and the construction of offsite utility and highway/roadway improvements. Offsite improvements include an eastern extension of Palisades Drive, which would be adjacent to the southern portion of the project site, and other utility improvements.

2.3 - ENVIRONMENTAL SETTING

The project site is a vacant lot with surrounding land uses including undeveloped land to the south, retail to the east and west, and residential development to the north. The site is relatively flat at an elevation of approximately 3,200 feet above mean sea level. It is dominated by Joshua trees (*Yucca brevifolia*) and creosote bush (*Larrea tridentata*).

2.4 - DESERT TORTOISE LIFE HISTORY

Habitat

The desert tortoise is widely distributed in the Mojave and Sonoran Deserts from below sea level to 2,200 m (7,217 ft). This species occurs most commonly in desert scrub, desert wash, and Joshua tree

habitats, but occurs in almost every desert habitat except those on the most sheer slopes. Highest densities of tortoise typically occur in creosote bush communities with extensive annual wildflower blooms, such as those which occur in the western Mojave region. Tortoises can also be found in areas with extensive lava formations, alkali flats, and most other desert habitats.

Tortoises require friable, sandy, well-drained soil for excavation of nests and burrows. Burrows are crucial to survival, especially in areas of extreme temperatures. In hot weather, direct rays of the sun can kill a tortoise in an hour or less. Burrows are also extensive in the northern part of the range where winter temperatures are coldest. For shelter, this species normally excavates a burrow under bushes, overhanging soil or rock formations, and may dig into open soil in a clearing. On occasion, a tortoise will take cover under a bush or any natural shelter.

Desert tortoises are mostly herbivorous, eating both annual forbs and grasses. In general, forbs are preferred over grasses and green vegetation is preferred over dry. Rabbits and a few rodents likely compete with tortoises for these available food resources. Desert tortoises have been observed eating carrion and feces as well as excavating and eating calcium carbonate mineral deposits. Water is not required for tortoises, but they will drink it if it is available.

Home range size seems to depend upon the quality of the habitat. In the western Mojave, home ranges include approximately 2-15 hectares (ha) (5-38 acre), but in the eastern Mojave, home ranges may be 10 times as large. Tortoise densities can vary greatly ranging from 3.5 per kilometer² (km²) (9.2 per mile²) in the eastern Mojave to more than 1,000 per km² (2,600 per mile²) in the western Mojave (CDFG 2005).

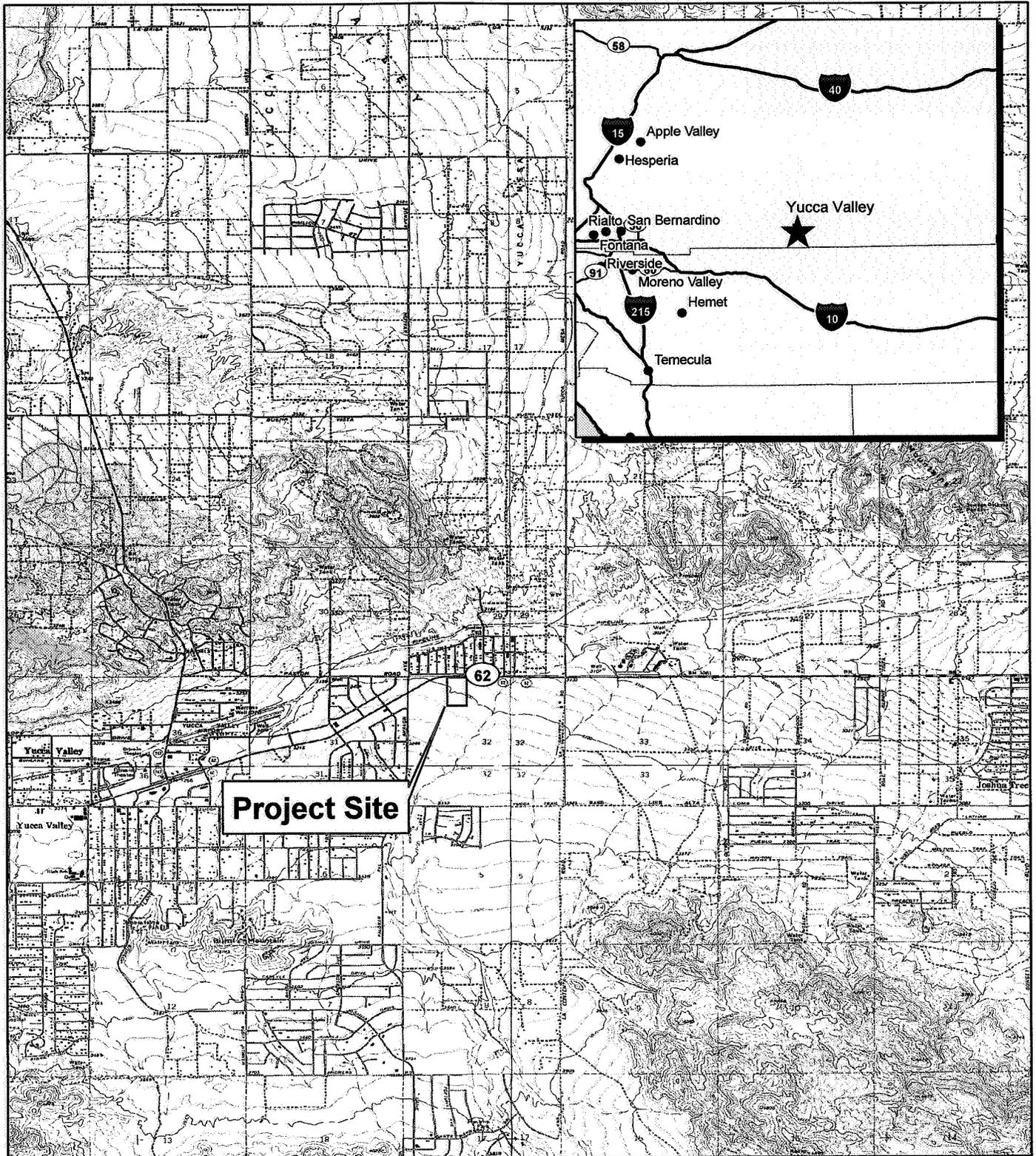
Behavior

Tortoises may be active at any time of year, but most activity takes place between March and June; and to a lesser extent, in late summer in areas with summer rains (eastern Mojave). In early spring, they may be active all day, but by late spring, activity is typically reduced to less than an hour in early morning. In Utah, tortoises are known to migrate from winter dens to summer feeding areas, but this is not known to occur in California populations.

Tortoises are aggressive and may defend their home territories. Mating begins shortly after the tortoises become active in late March or early April, and eggs are laid in early summer (late May to July) with clutches averaging 2-9 eggs per nest. These clutches take approximately 3-4 months to hatch. Nests are often constructed at the entrance to burrows, and the absence of rainfall for

prolonged periods of time and consequent scarcity of annual plants may result in a decrease in reproduction.

When tortoises are young and vulnerable, they are often eaten by many different predators including ravens, eagles, coyotes, and foxes. As adults, they have few enemies; however, coyotes may attack, when food is scarce.



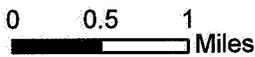
Source: CA GIS Library and ESRI 2005

Exhibit 1

Local Vicinity and Regional Location

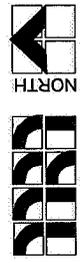


Michael Brandman Associates





Source: City of Yucca Valley, San Bernardino County



Project Design

Impact Area

Exhibit 2 Site Plan

DESERT TORTOISE FOCUSED SURVEY
YUCCA VALLEY, CA

27900001 | Ex2_Site_DT.mxd | 07-13-2005

SECTION 3: REGULATORY BACKGROUND

3.1 - FEDERAL ENDANGERED SPECIES ACT

The U.S. Fish and Wildlife Service (USFWS) administers the federal Endangered Species Act (FESA) that provides a process for listing species as either threatened or endangered, and methods of protecting listed species. The FESA defines as “endangered” any plant or animal species that is in danger of extinction throughout all or a significant portion of its range. A “threatened” species is a species that is likely to become endangered in the foreseeable future. A “proposed” species is one that has been officially proposed by USFWS for addition to the federal threatened and endangered species list.

Section 9 of the FESA prohibits “take” of threatened or endangered species. The term “take” means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in such conduct. The presence of any federally threatened or endangered species that are in a project area generally imposes severe constraints on development, particularly if development would result in “take” of the species or its habitat. Under the regulations of the FESA, the USFWS may authorize “take” when it is incidental to, but not the purpose of, an otherwise lawful act.

3.2 - CALIFORNIA ENDANGERED SPECIES ACT

The California Department of Fish and Game (CDFG) administers the California Endangered Species Act (CESA). The State of California considers an endangered species as one whose prospects of survival and reproduction are in immediate jeopardy. A threatened species is considered as one present in such small numbers throughout its range that it is likely to become an endangered species in the near future in the absence of special protection or management. A rare species is one that is considered present in such small numbers throughout its range that it may become endangered if its present environment worsens. State threatened and endangered species are fully protected against take, as defined above.

3.3 - THE DESERT TORTOISE RECOVERY PLAN

The Bureau of Land Management (BLM) adopted The Desert Tortoise Recovery Plan in 1994 designed to “achieve a 50 percent probability of survival for the tortoise for 500 years”. Drawing from concepts outlined in the federal Endangered Species Act, six population units, called “recovery units,” were identified in the Mojave and Sonoran deserts using published and unpublished data. The

specified goal for each recovery unit is to reach a target of 50,000 breeding adult tortoises. Within the recovery units, the team recommended the establishment of 14 reserves or Desert Wildlife Management Areas (DWMAs), ranging from 415 to 3,367 km².

3.4 - THE WEST MOJAVE PLAN

Spearheaded by the Bureau of Land Management (BLM), the West Mojave Plan (WMP) is a Multiple Species Habitat Conservation Plan (MSHCP) developed by several local, state, and federal agencies aimed at minimizing impacts to sensitive plants and animals in the region as development occurs and the population expands. The BLM describes the WMP as “an attempt at defining a regional strategy for conserving plant and animal species and their habitats and to define an efficient, equitable, and cost-effective process for complying with threatened and endangered species laws.” The BLM’s stated goal is to provide conservation solutions for all the plants and animals in a single plan, while allowing development to occur “in a responsible manner.”

According to the 1994 USFWS Desert Tortoise Recovery Plan, the WMP will implement desert tortoise recovery in the West Mojave Desert Tortoise Recovery Unit.

SECTION 4: METHODOLOGY

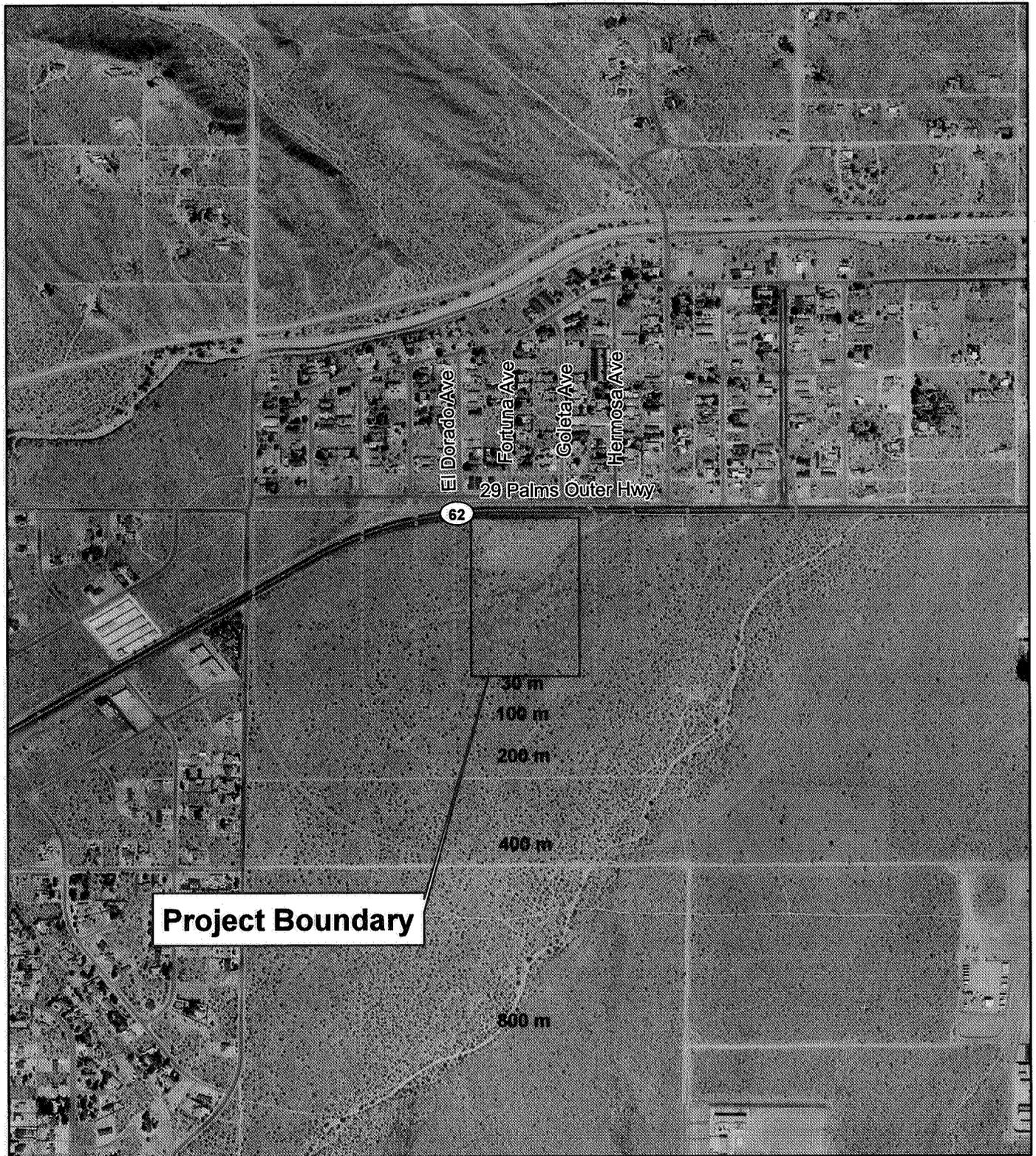
4.1 - LITERATURE REVIEW

MBA reviewed available documents and graphics describing desert tortoise biology, its habitat, and mapped distribution in the Yucca Valley area. The literature review included a review of field guides, web sites, and texts describing the desert tortoise as well agency documentation identifying designated critical habitat. A complete list of references is included at the end of this report.

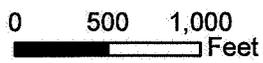
4.2 - FIELD SURVEYS

The biologists surveyed the property using USFWS protocol survey techniques developed for the desert tortoise. Belt transects approximately 10 meters (30 feet) wide were walked in a zigzag fashion based on suitable habitat from the northern portion of the site to the south over the entire area within the project boundary. Within the project's ZOI, 10-meter wide transects were walked at distances of 30 meters (98 feet), 100 meters (328 feet), 200 meters (656 feet), 400 meters (1,312 feet), and 800 meters (2,624 feet) (Exhibit 3).

During this focused survey, signs indicating the presence of desert tortoise were surveyed for and include nests, tracks, scat, burrows, drinking depressions, carcass remains, and live tortoises. During the survey, notes were taken on the plant and animal species observed, site surface characteristics, project area topography, and the suitability of the habitat for the desert tortoise.



Source: CA GIS Library and ESRI 2005



27900001 | SurveyMethod_Exh3.mxd | June 2005

Exhibit 3

Conceptual Survey Method

DESERT TORTOISE FOCUSED SURVEY
YUCCA VALLEY, CA

SECTION 5: RESULTS

5.1 - LITERATURE REVIEW

The site is located approximately 2 miles north of the Joshua Tree DWMA of the West Mojave Recovery Unit. The project site is not within USFWS designated Critical Habitat, which is located approximately 23 miles southeast of the project site. The nearest recorded desert tortoise observation is approximately 1.5 miles east of the project site (Exhibit 4).

5.2 - SITE SURVEY

During the survey, the weather was warm, with an average temperature of 85° F (degrees Fahrenheit), with gentle breezes (5-10 miles per hour) from the northeast. The skies were clear throughout the survey, and there had been no rain in the region for several weeks.

Soils and Topography

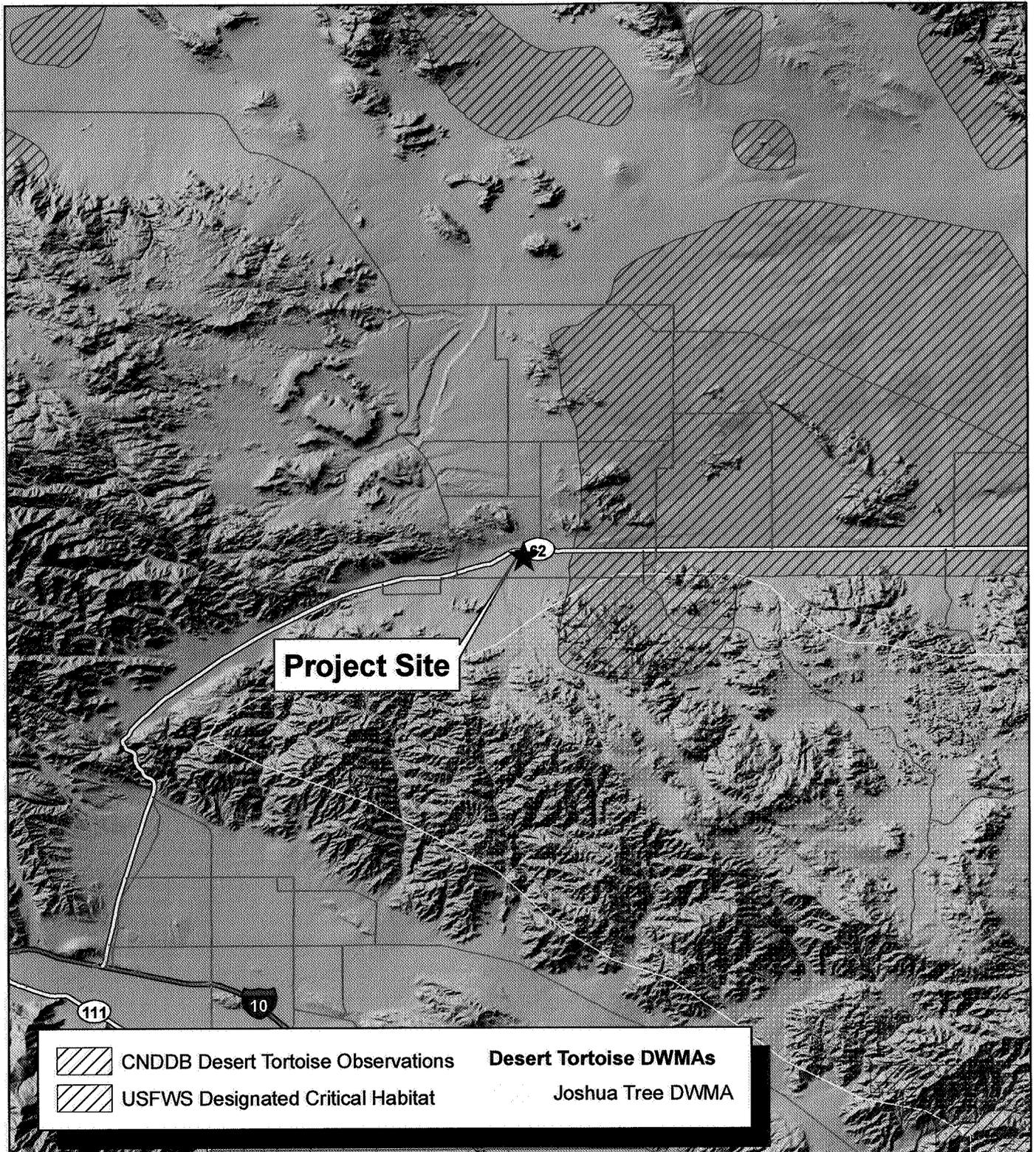
The project site is located on a moderately north sloping surface within the Yucca Valley floor. The soils are fairly uniform over the project site, consisting primarily of alluvial deposits originating from the foothills on either side of Yucca Valley. These granitic soils are sandy, occasionally friable, well draining and appear to be suitable for burrowing; however the presence of dense forbs and annual grasses may not be conducive to such activity.

Plant Communities

The project site is located within Joshua tree/creosote bush scrub habitat dominated by creosote bush, Joshua tree and Nevada ephedra (*Ephedra nevadensis*). Other common species observed include burro bush (*Ambrosia dumosa*), purple-bell phacelia (*Phacelia affinis*), desert senna (*Senna armata*), fiddleneck (*Amsinckia mensiezii*) and silver cholla (*Opuntia echinocarpa*). Scrub cover is approximately 10-15 percent, with an average shrub height of 1.5 meter (3 feet). A complete list of plant species observed on the project site can be found in Appendix A.

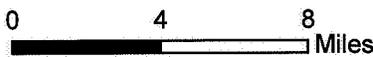
Wildlife

Wildlife observations made during the survey were dominated by avian species. Other observations of wildlife presence included scat, tracks, burrows, nests, calls, and individual animals. No amphibians were observed due to the lack of available surface water. Common mammal species observed included the desert cottontail (*Sylvilagus audubonii*), antelope ground squirrel



Source: CA GIS Library, CNDDDB, and USFWS 2005

Exhibit 4



CNDDDB Occurrences, DWMA's, and USFWS Critical Habitat

27900001 | CritHabMap_Exh4.mxd | June 2005

DESERT TORTOISE FOCUSED SURVEY
YUCCA VALLEY, CA

(*Ammospermophilus leucurus*), and black-tailed jackrabbit (*Lepus californicus*). Common bird species observed included the common raven (*Corvus corax*), black-throated sparrow (*Amphispiza bilineata*), and cactus wren (*Campylorhynchus brunneicapillus*). A complete list of wildlife species recorded during the surveys can be found in Appendix A.

Disturbance

Disturbances within the project site are mostly attributed to off-road vehicle use and illegal dumping. There are occasional OHV trails cutting across the site and many residential dwellings/properties as well as roads exist within the ZOI. The level of disturbance is low to moderate within the project site as well as within the ZOI that is not developed.

Sensitive Biological Resources

As previously indicated, the project site contains creosote brush scrub, but contained a significant amount of non-native, weedy vegetation. Although the soil medium was conducive to burrowing, the dense invasive grasses are likely a deterrent to occupation by the desert tortoise due to its thick cover and nutritional inferiority. No desert tortoises were observed during the survey, and no sign was found on the project site or within the 2,400 foot ZOI. There is a low potential for the desert tortoise to occupy the area within the project site.

With the exception of Joshua trees, which are protected by the Town of Yucca Valley, no sensitive plant or bird species were observed within the proposed project site or the vicinity of the site.

SECTION 6: RECOMMENDATIONS

There was no sign of desert tortoise on the project site. Although desert tortoise have been observed within the local vicinity in the past, the lack of sign (scat, burrows, carcasses, etc.) is indicative that the site and surrounding area is not likely occupied by desert tortoise; the project would, therefore, have little or no significant impact on the desert tortoise. However, due to the known presence of desert tortoise within two miles of the project site, the following measures are recommended to minimize potential impacts to the tortoise:

- All grading and clearing limits must be staked to minimize surface disturbance. The area of disturbance should utilize previously disturbed areas as much as practical and must be confined to the smallest practical area.
- A preconstruction clearance survey should be conducted within thirty days prior to construction. If the clearance survey is positive, incidental take permits will be required from the USFWS and the CDFG. The permits would stipulate required actions such relocation of the tortoises, installation of a tortoise proof fence, etc.
- In order to minimize impacts due to increased numbers of common ravens on desert tortoise, all trash containers should be raven proof. In addition, to reduce littering, signage should be posted throughout the project site stating fines for trash dumping in open areas.
- Handling or other inappropriate treatment of tortoises must be avoided until authorization is obtained from the USFWS and CDFG. Any unauthorized take of tortoise, although very unlikely, will be cause for immediate cessation of work until the issue is resolved.

This report and recommended mitigation measures should minimize impacts to desert tortoise, but are not considered compensation or authorization for incidental take of desert tortoise. USFWS and/or CDFG must be consulted and provide approval for the loss of habitat prior to construction activities. It should also be noted that the general practice of the USFWS is to recognize the validity of tortoise survey findings for a period of one year, after which time the findings are considered to be outdated.

SECTION 7: REFERENCES

- Bureau of Land Management, 1996. *Biological Evaluation for Programmatic Consultation on Activities Resulting in Small Disturbances of Desert Tortoise Habitat in the California Desert*. Report prepared by Dr. Larry D. Foreman, Bureau of Land Management, California Desert District Office.
- Bureau of Land Management and California Department of Fish and Game, 1992. *California Statewide Desert Tortoise Management Policy*.
- California Department of Fish and Game, 2005. California Habitat Wildlife Relationships software (Version 8).
- Desert Tortoise Council, 1996. "Guidelines for Handling Desert Tortoises during Construction Projects".
- Holland, R.F. 1986. Preliminary Descriptions of the Terrestrial Natural Communities of California. Nongame- Heritage Program. California Department of Fish and Game, Sacramento, Ca.
- Jennings, M.R. and M.P. Hayes, 1994. Amphibians and Reptile Species of Special Concern in California. Inland Fisheries Division, California Department of Fish and Game.
- Latting, J. and P.G. Rowlands, eds. 1995. The California Desert: An Introduction to Natural Resources and Man's Impact. June Latting Books, Riverside, California.
- Laudenslayer, Jr., W.F., W.E. Grenfell, Jr., and D.C. Zeiner, 1991. "A Check-list of the Amphibians, Reptiles, Birds and Mammals of California". California Fish and Game 77:109-141.
- Munz, P.A., 1974. A Flora of Southern California. University of California Press, Berkeley, California.
- Skinner, M.W. and B.M. Pavlik, 1994. Inventory of Rare and Endangered Vascular Plants of California. California Native Plant Society, Spec. Pub. No. 1 (5th edition), Berkeley, California.
- Stebbins, R.C., 1985. A Field Guide to Western Reptiles and Amphibians, Houghton Mifflin Company, Boston.
- U.S. Fish and Wildlife Service, 1996. "Review of plant and animal taxa for listing as endangered or threatened species; notice of review". Federal Register Vol. 61, No. 40.
- U. S. Geological Survey 2005. "Impact of exotic invasive plants on selected reptiles -- Desert tortoise", <http://www.werc.usgs.gov/hq/invasive/tortoise.html> accessed June 14, 2005.

Appendix A: Floral and Faunal Compendium

FLORAL AND FAUNAL COMPENDIUM

PLANTS

Asteraceae
Ambrosia dumosa

Sunflower Family
bur-sage

Bignoniaceae
Chilopsis linearis

Trumpet Creeper Family
desert willow

Boraginaceae
Amsinckia menziesii

Borage Family
common fiddleneck

Cactaceae
Opuntia echinocarpa
Opuntia ramosissima
Opuntia basilaris

Cactus Family
silver cholla
pencil cholla
beavertail cactus

Ephedraceae
Ephedra nevadensis

Ephedra family
Nevada ephedra

Fabaceae
Senna armata

Legume Family
Desert senna

Hydrophyllaceae
Phacelia affinis

Waterleaf Family
Purple-bell phacelia

Polygonaceae
Eriogonum inflatum

Buckwheat Family
desert trumpet

Liliaceae
Yucca brevifolia
Yucca schidigera

Lily Family
Joshua tree
Mojave yucca

Poaceae
Schismus barbatus
Bromus diandrus

Grass Family
Mediterranean schismus
Ripgut brome

FLORAL AND FAUNAL COMPENDIUM

ANIMALS

REPTILES

Iguanidae

Urosaurus graciosus graciosus

Iguanids

Western brush lizard

BIRDS

Cathartidae

Cathartes aura

New World Vultures

Turkey vulture

Columbidae

Zenaida macroura

Pigeons and Doves

Mourning dove

Corvidae

Corvus corax

Jays and Crows

Common raven

Troglodytidae

Campylorhynchus brunneicapillus

Wrens

Cactus wren

Sturnidae

**Sturnus vulgaris*

Starlings

European starling

Emberizidae

Amphispiza bilineata

Wood Warblers, Tanagers, Buntings, and Blackbirds

Black-throated sparrow

Fringillidae

Carpodacus mexicanus

Finches

House finch

MAMMALS

Leporidae

Lepus californicus

Sylvilagus audubonii

Hares and Rabbits

Black-tailed jackrabbit

Desert cottontail

Sciuridae

Ammospermophilus leucurus

Squirrels

White-tailed antelope squirrel