BIOLOGICAL RESOURCES TECHNICAL REPORT

PROJECT NAME:

BALDWIN TENTATIVE MAP

TM 5502 - ENVIRONMENTAL LOG No. 06-01-002

FALLBROOK, CALIFORNIA

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GLOSSARY OF ACRONYMS

ACOE	U.S. Army Corps of Engineers
BOSE	Biological Open Space Easement
CDFG	California Department of Fish and Game
CEQA	California Environmental Quality Act
CNDDB	California Natural Diversity Data Base
CNPS	California Native Plant Society
CRWQCB	California Regional Water Quality Control Board
CSS	Coastal Sage Scrub
HLP	Habitat Loss Permit
NCCP	Natural Communities Conservation Plan
MSCP	Multiple Species Conservation Program
PAMA	Pre-Approved Mitigation Area
RPO	Resource Protection Ordinance
USFWS	U.S. Fish and Wildlife Service

SUMMARY

The Baldwin project is the subdivision of a 31.9 acre parcel in the community of Fallbrook into 14 single-family residential lots ranging in size from 1.07 to 7.25 acres. The project site is vacant and comprised of rolling hills with steep slopes on the northern boundary. The project is adjacent to the Country Town Area of Fallbrook and is approximately ½ mile from the downtown area of Fallbrook. The Camp Pendleton Marine Base is contiguous with the site on the West. The site is bordered on the North, South, and East by single-family residences. The site is essentially an "infill" project in an area of existing similar land uses.

The entire project site was burned in the Gavilan Mountain Fire of September 2000. A single family residence and outbuildings on the site were destroyed in the fire and have not been replaced.

Seven vegetation communities occur on-site, or occurred prior to the Gavilan Mountain Fire: Diegan Coastal Sage Scrub, Disturbed Habitat, Orchards and Vineyards, Urban / Developed, Southern Coast Live Oak Riparian Forest, Granitic Chamise Chaparral, and Coast Live Oak Woodland.

Focused/Directed surveys were conducted on-site for California Gnatcatchers, Burrowing Owls, and Stephens' Kangaroo Rats. All were negative.

The project will result in the loss on-site of 1.38 acres of Granitic Chamise Chaparral, and off-site of 0.30 acres of Southern Coast Live Oak Riparian Forest and 0.38 acres of Coast Live Oak Woodland. Mitigation for impacts to 1.38 acres of Granitic Chamise Chaparral will occur on-site within a Biological Open Space Easement. Impacts to 0.38 acres of Coast Live Oak Woodland will be made off-site.

Mitigation for impacts to 0.30 acres of Southern Coast Live Oak Riparian Forest (wetland habitat) will be made at a 3:1 ratio. This mitigation will occur off-site, and will include a 1:1 wetland creation component (= 0.3 acres of created wetland) and a 2:1 enhancement component (= 0.6 acres of enhanced wetland).

INTRODUCTION

The purpose of this report is to document the biological resources identified as present or potentially present in the project site; identify potential biological resource impacts resulting from the proposed project; and recommend measures to avoid, minimize, and/or mitigate significant impacts consistent with federal, state, and local rules and regulations including the California Environmental Quality Act (CEQA) and County of San Diego Resource Protection Ordinance (RPO).

This Biological Resources Report was prepared in response to the scoping letters of September 14, 2006 and January 27, 2009 from the County of San Diego to Mr. Charles Baldwin. This report provides specific information requested in those letters. In addition, this revised report includes additional information as requested after meeting and visiting the site with the Wildlife Agencies.

PROJECT DESCRIPTION

The project is a major residential subdivision (Tentative Map) located at 1030 De Luz Road in the Fallbrook Community Planning Area within unincorporated San Diego County. Approval of the subdivision will result in the division of 31.9 acres (APN 103-010-72) into 14 single-family residential lots ranging in size from 1.07 to 7.25 acres.

The project site is vacant and comprised of rolling hills with steep slopes on the northern boundary. The project is adjacent to the Country Town Area of Fallbrook and is approximately ½ mile from the downtown area of Fallbrook (Figures 1 and 2). The Camp Pendleton Marine Base is contiguous with the site on the West. The site is bordered on the North, South, and East by single-family residences (Figures 4 and 5). The site is essentially an "infill" project in an area of existing similar land uses. The site is situated between 500 and 680 feet above sea level. The approximate USGS coordinates of the site are 33°24'N, 117°15'W (Fallbrook 7.5 minute series quadrangle, Figure 3). Access to the site will be provided by a private road connecting to De Luz Road. This road will cross an adjacent parcel owned by the applicant, but not a part of the proposed project.

The entire project site was burned in the Gavilan Mountain Fire of September 2000. A single family residence and outbuildings on the site were destroyed in the fire and have not been replaced.

SURVEY METHODS AND LIMITATIONS

Prior to the initial visit, a variety of sources are reviewed to ascertain the potential and possible occurrence of sensitive species at the project site. First, soil types (Bowman 1973) are checked to determine if the site contains soils known to support sensitive plant species. Records searches for the USGS quadrangle and surrounding quads are done of the California Natural Diversity Data Base (CNDDB) and California Native Plant Society (CNPS) On-Line Inventory of Rare and Endangered Plants. Any sensitive species known to occur in the vicinity are given special attention, and available natural history information is reviewed. Seasonal occurrence

patterns (*e.g.,* annual plants, migratory birds) are factored into survey plans in the event that site visits are made during time periods when certain species are not present or conspicuous. Information sources include the Jepson Manual (1993), Rare Plants of San Diego (Reiser 1994), A Flora of San Diego County, California (Beauchamp 1986), San Diego Native Plants (Lightner 2006), U.S. Fish and Wildlife Service Recovery Plans for Threatened/Endangered Species, the San Diego County Bird Atlas (Unitt 2004), and numerous other references, publications, and on-line resources. Typically, 15-20 field guides to various taxa are taken into the field for quick reference if necessary.

A list of sensitive species with potential to occur at the site (Appendix D) was also reviewed prior to field work. All species on the list are reviewed, and those species requiring directed or focused protocol surveys are noted and given special attention.

In the field, potentially sensitive plants species not readily identified *in situ* are photographed and/or collected for identification via keys or other methods. For plant species still not identified, photographs and/or specimens are provided to knowledgeable botanists for identification.

To assess the biological resources of the project location, I visited the site on 17 May 2007. During the visit, I was able to examine the entire project site and adjacent areas. The visit lasted from 0930 to 1530. Conditions for observation were excellent, with temperatures in the low 70s, no cloud cover, and a 3-8 knot wind out of the west. Observations on-site were recorded as they were made, and form the basis of this report and the vegetation map. Animals were identified using scat, tracks, burrows, vocalizations, or direct observation with the aid of 10X42 Leica binoculars. Vegetation mapping was conducted in accordance with vegetation community definitions as described in Holland (1986) and Oberbauer (1996). In addition, vegetation mapping on-site was aided by the use of a digital aerial photograph. Digital photographs of the site were taken during the visit (Appendix C). It should be noted that all vegetation community mapping is verified on the ground to the greatest degree possible in the absence of a systematic land survey. All vegetation areas and boundaries are estimates subject to final delineation by a licensed professional land surveyor.

During site visit, all habitats were assessed for their suitability for occupation by any sensitive species with potential to occur. A Wetlands Survey was conducted using the wetland definition in the County's RPO. Wetland boundaries were mapped on the attached Biological Resources Map. Additional biological information was collected during focused protocol surveys for California Gnatcatchers conducted in November 2006 (Appendix E). A second set of surveys were conducted in the Fall of 2009 (Also Appendix E).

A second visit to the site was made on 21 August 2008, in order to re-assess wetland impacts resulting from necessary widening of De Luz Road. This visit lasted from 1430 to 1530.

Because the site was completely burned in 2000, it was necessary to conduct a forensic analysis to determine the likely habitat and vegetation communities on the site prior to the fire. To conduct the forensic analysis, color aerial and black and white digital satellite photographs taken prior to the fire were examined. Unburned areas of vegetation near the project site were

examined. A variety of factors were also considered, including slope, aspect, soils, drainage, and elevation.

RESULTS[1]

Soils

Based on soil conservation service maps (Bowman 1973), the soils for the project site consist mainly of Fallbrook-Vista rocky sandy loams, with 9-15% slopes (FvD), and Vista coarse rocky sandy loam, with 15-30% slopes (VsE). Although a detailed soil analysis is beyond the scope of this report, our on-site examination appeared to confirm the presence of this soil type.

Botany

Seven vegetation communities occur on-site, or occurred prior to the Gavilan Mountain Fire: Diegan Coastal Sage Scrub, Disturbed Habitat, Orchards and Vineyards, Urban / Developed, Southern Coast Live Oak Riparian Forest, Granitic Chamise Chaparral, and Coast Live Oak Woodland. A complete floral species list compiled from the site survey is provided in Appendix A.

Vegetation Communities (See Biological Resources Map)

Diegan Coastal Sage Scrub (Holland Code 32500) - 3.25 Acres

Forensic analysis suggests that steeper south-facing slopes on the project site contained this habitat type. This is consistent with the distribution of unburned habitat types in the vicinity. South-facing slopes typically receive more direct sunlight and thus often rapidly lose surface soil moisture leading to low and less dense vegetation, and dominance by herbaceous plants and smaller woody shrubs. Areas on the project site given this designation show few burned branches of larger woody shrubs (Photographs 3 and 4).

Disturbed Habitat (Holland Code 32500) - 16.51 Acres

A significant portion of the project site contains this habitat type. According to the applicant, prior to the Gavilan Mountain Fire, this area was dry farmed for many years. Since the fire, the area is frequently and routinely disked for fire abatement purposes. According to the County of San Diego Report Format and Content Guidelines for Biological Resources (2006), "Disturbed Land includes areas in which the vegetative cover comprises less than 10 percent of the surface area and where there is evidence of soil surface disturbance and compaction from previously legal human activity." There appears to be no legal prohibition of the fire abatement activity that has taken place within this formerly farmed area, thus the disking appears to be legal

[1] Scientific and common names for plant species are derived from The Jepson Manual, 1993, U.C. Press; scientific and common names for birds from the A.O.U. Check-list of North American Birds, 1998, Allen Press, Inc.

activity. During the site visit, the area met the criteria of less than 10 percent vegetative cover (Photographs 5 and 6). At the request of the Wildlife Agencies, vegetation community mapping was revisited in Fall 2009. In particular, an area along the east boundary between areas of Chamise Chaparral was re-examined. This area has not been tilled as recently as the remainder of the area classified as Disturbed. Widely scattered native shrubs are emerging in this area. It should be remembered that the vegetation mapping overall is a forensic analysis of the vegetation types on the site prior to the Gavilan Mountain Fire. Examination of a series of aerial images dating as far back as 1946 (www.historicaerials.com) indicate that the area in question has been without scrub vegetation or woody shrubs at least as far back as 1964, and perhaps longer. At present, even though there are scattered emergent shrubs in this area, there is no evidence that the area has either the functions or values of scrub vegetation communities. Thus, the vegetation mapping as presented in previous submittals has not been altered.

Orchards and Vineyards (Holland Code 18100) - 1.36 Acres

An "L" shaped area located in the southwest corner of the project site was planted with avocados within the last five years. The trees are watered and tended and it is anticipated that the trees will reach producing age within the next three years.

Urban / Developed (Holland Code 12000) - 4.15 Acres

The forensic analysis revealed that the area along the southern site boundary was occupied by a single family residence and outbuildings prior to the Gavilan Mountain Fire. The foundation of the house remains, as well as extensive mature ornamental landscape plantings (Photographs 1 and 2) and debris.

Southern Coast Live Oak Riparian Forest (Holland Code 61310) - 0.19 Acres

The area designated as being within a wetland on the Biological Resources Map contains this habitat type. Mature Coast Live Oak *Quercus agrifolia* trees dominate, with scant understory other than Poison Oak *Toxicodendron diversilobum* and Wild Grape *Vitis girdiana*. This habitat type is contained within the confines of a well-defined drainage feature. The proposed off-site private road needed to provide access to the site unavoidably crosses and impacts 0.30 acres of this habitat type (See Impacts section below). All of this habitat type on the project site, and not located within existing utility easements, is proposed for inclusion within a Biological Open Space Easement (BOSE).

Granitic Chamise Chaparral (Holland Code 37210) - 6.00 Acres

Forensic analysis suggests that the north-facing slopes along the eastern portion of the site consisted of this habitat type. This is consistent with the distribution of unburned habitat types in the vicinity. North-facing slopes typically receive less direct sunlight and thus retain more surface soil moisture leading to denser and taller vegetation, and dominance by larger woody shrubs. Remnants of burned bushes indicate that vegetation in these areas in places reached heights of up to 10 feet, which is also consistent with this vegetation type.

Coast Live Oak Woodland (Holland Code 71160) - 0.44 Acres

A band of this habitat type separates other vegetation communities on and off the site from the majority of the project site itself. Coast Live Oaks predominate, with sparse intermittent non-native grasses and leaf litter understory. The proposed off-site private road needed to provide access to the site unavoidably crosses and impacts 0.38 acres of this habitat type. All of this habitat type on the project site is proposed for inclusion within a BOSE.

Zoology

Wildlife recorded during the surveys include common and expected species for the habitats that occur on-site. A total of 16 species of birds, two species of mammals, and two species of reptiles and amphibians were recorded during the site surveys. A complete list of animals detected on-site is provided in Appendix B. Additional wildlife species were recorded during the focused surveys for Stephen's Kangaroo Rats (Appendix F).

Sensitive Resources

Sensitive plants or animals are defined here as species of rare, threatened, or endangered status, or depleted or declining species according to the U.S. Fish and Wildlife Service (USFWS), California Department of Fish and Game (CDFG), or California Native Plant Society (CNPS). Sensitive habitats include those which are considered rare in the region, or support sensitive plants or animals. A list of species of concern to the County of San Diego with potential to occur on-site is presented in Appendix D.

Sensitive Habitats

Diegan Coastal Sage Scrub, Southern Coast Live Oak Riparian Forest, Granitic Chamise Chaparral, and Coast Live Oak Woodland are considered sensitive habitats. Permanent removal of Diegan Coastal Sage Scrub can only be accomplished with a Habitat Loss Permit (HLP) and with suitable mitigation. The County and the Wildlife Agencies consider all these habitat types sensitive and, under the NCCP and CEQA, requires mitigation for impacts associated with development, even in the absence of threatened or endangered species.

As noted above, the survey was conducted with special attention to looking for plant and animal species and habitats that are considered sensitive according to the USFWS, CDFG, CNPS, that are listed on the CDFG's Natural Diversity Database (CNDDB) record for the Fallbrook 7.5 minute quadrangle, or are contained in the County list of potential sensitive species for the project (Appendix E). The site lacks the appropriate habitat to support most sensitive species.

Sensitive Plants

The only sensitive plant species detected on the project site is Engelmann Oak *Quercus engelmannii*. At least seven Engelmann Oak Trees were noted (See Biological Resources Map).

Engelmann Oak is included in List D of the County of San Diego Sensitive Plant List. That is, it is considered to have limited distribution and is uncommon, but not presently rare or endangered.

No other sensitive plant species were detected or are considered likely to occur.

Sensitive Wildlife

Those sensitive wildlife species recorded in similar habitats on the CNDDB for the Fallbrook USGS Quad, or that might be considered possible to occur on the project site, are discussed below:

LEGEND

Common Name *Scientific name*	CNDDB Status
	CS = County Sensitive
FE = Federal Endangered	SE = State Endangered
FT = Federal Threatened	ST = State Threatened
PE = Proposed Endangered	SR = State Rare
PT = Proposed Threatened	CSC = State Special Concern Species
FSC = Federal Special Concern Species	CEQA = Consideration required

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Red-shouldered Hawk — CS
Buteo lineatus

Red-shouldered Hawks are common and widespread residents and migrants in San Diego County, occurring in a wide variety of habitats including developed orchards and residential areas. Their population has increased dramatically in the last 100 years, and they are now extremely common in urban settings. It can be stated with a high degree of certainty that urbanization and agriculture have been beneficial for this species. The species was recorded during the SKR trapping effort, and the site may occasionally be used as nesting or foraging habitat. Project development is unlikely to have any adverse impacts because this species has a high degree of adaptability to human-altered habitats and human disturbance, especially in Southern California (Bloom, et. al. 1993).

Cooper's Hawk
Accipiter cooperi — CSC / CS

Cooper's Hawks often forage in search of small birds over a variety of habitats. This urban-adapted species also occurs in oak woodlands and developed/residential areas. They are a common resident and migrant species in San Diego County. Although this species has apparently declined throughout much of California, there is no evidence for a breeding population decline in San Diego County. The recently published San Diego County Bird Atlas (Unitt 2004) states that "Though Cooper's Hawk is still listed as a 'covered species' under San Diego's multiple-species

conservation plan, the idea that natural habitats and Cooper's Hawks are conserved together is now laughably obsolete."

Use of the project site by Cooper's Hawk would not be unusual, especially within the wooded areas that this species prefers for foraging. These areas will be preserved within a proposed BOSE, thus offering protection for the species should it occur.

Turkey Vulture — CS
Cathartes aura — CNDDB

Turkey Vultures forage for carrion over a variety of habitats. They are common migrants and winter residents in San Diego County, and were a formerly more common breeding species. The site is apparently occasionally used as foraging habitat for this species. However, impacts to this species are not anticipated. Turkey vultures are highly sensitive to disturbance at their nests. No suitable nesting habitat occurs on, near, or in the general vicinity of the project site. No impacts to this species are anticipated.

Coastal California Gnatcatcher
Polioptila californica — FT / CSC

The California Gnatcatcher is a federal threatened species, a state species of concern, and is a "target species" of the NCCP process. This species is a non-migratory resident whose range covers the coastal plains and foothills of Southern California and northern Baja California. In San Diego County, it is widespread in coastal lowlands below about 2,000 feet elevation and typically occurs in or near CSS. The California Gnatcatcher is seriously declining due to loss of habitat. Between 85% and 90% of this species' habitat has been lost to urban or agricultural development. It is almost extirpated from Ventura, San Bernadino, and Los Angeles counties. The population is estimated to be just under 5000 pairs. San Diego County appears to be the center of abundance within the United States for this species.

No California Gnatcatchers were detected during two sets (2006 and 2009) of focused protocol surveys of the project site. Although native vegetation is slowly regenerating after the Gavilan Mountain Fire, habitat for this species generally does not occur on the site. The reports on the U.S. Fish and Wildlife Service protocol surveys are included in this report (Appendix E).

Burrowing Owl — CS / CSC
Athene cunicularia

The Burrowing Owl is likely the most endangered bird species currently inhabiting San Diego County. It's distribution is extremely limited, with the largest local populations occurring on North Island Naval Air Station in Coronado and on Otay Mesa. The species has declined dramatically in the County in the last 20 years. This species is colonial, and highly is dependent on burrows created by ground squirrels. It is a conspicuous resident species, and could be readily detected by directed site surveys.

No Burrowing owls, and no signs of Burrowing Owls, were detected during the site survey or are considered likely to occur. Suitable habitat (burrows) does not occur on the site. No impacts to this species are anticipated as a result of site development.

Stephens' Kangaroo Rat (SKR) FE / ST
Dipodomys stephensi

At the request of the Wildlife Agencies Presence/Absence Trapping Studies were conducted on the project site. In part, this was due to the recent discovery of this species at the Fallbrook Airport, 2.5 miles south of the site.

Trapping was conducted in Fall 2009 by Philippe Vergne (USFWS Permit TE068072-2, Appendix G). Based on the trapping study results, SKR does not occur on the site. Considering this, impacts to this species from project implementation are not anticipated.

Northwestern San Diego Pocket Mouse CS
Chaetodipus fallax fallax

The Northwestern San Diego pocket mouse inhabits Coastal Sage Scrub, sage scrub/grassland ecotones, and chaparral communities. It inhabits open, sandy areas of both the Upper and Lower Sonoran life-zones of southwestern California and northern Baja California. The highest populations of the San Diego pocket mouse occur in Coastal Sage Scrub supporting a mixture of California sagebrush *Artemisia californica* and California buckwheat *Eriogonum fasciculatum*. The species is known to occur on the Naval Weapons Station, Fallbrook Annex in northwestern San Diego County.

This species was detected during the Presence/Absence Trapping Studies for SKR. According to Philippe Vergne, impacts to this species from project implementation are not significant since most of the known occupied habitat in the County is being preserved and the amount of take on a regional basis is negligible.

Coastal Western Whiptail County Group 2
Aspidoscelis tigris stejnegeri (= *Cnemidophorus tigris multiscutatus*)

Coastal Western Whiptails occur in Chaparral, Riparian, and Oak Woodland habitats. The subspecies *stejnegeri* occurs from Point Conception south into Baja California. The species is on the County's Group 2 sensitive species list, but is otherwise not on the California Special Animals List, or any other government or conservation group's listings. This suggests that on a statewide basis, there are no significant conservation concerns for the species. This species was observed on-site during the SKR surveys. County guidelines require that in order not to be considered a significant impact, the project should not impact the local long-term survival of the species. Given the contiguous vast area of Camp Pendleton, and the nearby extensive Cleveland National Forest, it is unlikely this project would have a local significant impact.

Wildlife Movement Corridors and Nursery Sites

A wildlife corridor can be defined as a linear landscape feature allowing animal movement between two larger patches of habitat. Connections between extensive areas of open space are integral to maintain regional biodiversity and population viability. In the absence of corridors, habitats become isolated islands surrounded by development. Fragmented habitats support significantly lower numbers of species and increase the likelihood of local extinction for select species when they are restricted to small isolated areas of habitat. Areas that serve as wildlife movement corridors are considered biologically sensitive.

Wildlife corridors can be defined in two categories: regional wildlife corridors and local corridors. Regional corridors link large sections of undeveloped land and serve to maintain genetic diversity among wide-ranging populations. Local corridors permit movement between smaller patches of habitat. These linkages effectively allow a series of small, connected patches to function as a larger block of habitat and perhaps result in the occurrence of higher species diversity or numbers of individuals than would otherwise occur in isolation. Target species for wildlife corridor assessment typically include species such as bobcat, mountain lion, and mule deer.

To assess the function and value of a particular site as a wildlife corridor, it is necessary to determine what areas of larger habitats it connects, and to examine the quality of the corridor as it passes through a variety of settings. High quality corridors connect extensive areas of native habitat, and are not degraded to the point where free movement of wildlife is significantly constrained. Typically, high quality corridors consist of an unbroken stretch of undisturbed native habitat.

The project site is surrounded on three sides by long-established commercial (plant nursery on south side) and residential development. High chain-link fence and extensive fire breaks on Camp Pendleton border the site on the west [the fence effectively precludes both small and large mammal movement to and from the project site and the extensive open space of Camp Pendleton], and the site is otherwise isolated from significant tracts of undeveloped land in the vicinity. Existing residential development on the north and south boundaries precludes wildlife movement to or from these areas. The riparian drainage that will be crossed by the proposed private access road could be considered a minor local corridor (it's upper terminus is several hundred feet south on the east side of De Luz Road, ending in a highly populated area of downtown Fallbrook), but this crossing will not present any significant barriers to wildlife movement. The access road will not be fenced, and the proposed 48" culvert will allow passage of wildlife that would not otherwise simply cross the access road. As such, no significant impacts to wildlife movement corridors are anticipated.

Native Wildlife Nursery Sites, which are considered sensitive resources that require protection, are defined in the County of San Diego Guidelines for Determining Significance - Biological Resources as "sites where wildlife concentrate for hatching and/or raising young, such as rookeries, spawning areas, and bat colonies". Features such as individual raptor or woodrat nests do constitute places where wildlife *concentrate*, thus they do not meet this definition and are therefore not considered Native Wildlife Nursery Sites. Nesting raptors will be

protected by seasonal construction limitations. No Native Wildlife Nursery Sites will be impacted by project implementation.

WETLANDS SURVEY

Introduction

The County of San Diego requires that wetland surveys be completed using the wetlands definition within the County's Resource Protection Ordinance (RPO). This definition includes:

> All lands which are transitional between terrestrial and aquatic systems where the water table is usually at or near the surface or where the land is covered by water. All lands having one or more of the following attributes are "wetlands":
>
> > a. At least periodically, the land supports predominantly hydrophytes (plants whose habitat is water or very wet places);
> >
> > b. The substratum is predominantly undrained hydric soil; or
> >
> > c. The substratum is nonsoil and is saturated with water or covered by water at some time during the growing season each year.

Other pertinent definitions from the RPO include:

> Mature Riparian Woodland - A grouping of sycamores, cottonwoods and/or oak trees having substantial biological value, where at least ten of the trees have a diameter of six inches or greater.
>
> Riparian Habitat - An environment associated with the banks and other land adjacent to freshwater bodies, rivers, streams, creeks, estuaries, and surface-emergent aquifers (such as springs, seeps, and oases). Riparian habitat is characterized by plant and animal communities which require high soil moisture conditions maintained by transported freshwater in excess of that otherwise available through local precipitation.

It should also be noted that the County's definition of wetlands varies from the U.S. Army Corps of Engineers' (USACE) definition. The USACE frequently requires that formal or informal wetland delineations be conducted under guidelines set forth in the 1987 Corps of Engineers Wetland Delineation Manual. The USACE defines a wetland as "an area... inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions." Typically, USACE wetlands are characterized by the presence of hydrophytic vegetation, hydric soils, and wetland hydrology.

In addition to regulating jurisdictional wetlands, Section 404 of the Clean Water Act (33 U.S.C. 1344) requires authorization for discharges of dredged or fill material into Waters of the United States. For non-tidal Waters of the U.S. the extent of jurisdiction is defined as the

Ordinary High Water Mark, which is defined as: "the line on the shore established by the fluctuations of water and indicated by physical characteristics such as a clear, natural lines impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation or presence of litter and debris."

Thus, an area determined to be a non-wetland may still be under USACE jurisdiction if certain criteria are met. To aid in identifying characteristics of Waters of the U.S., the USACE has prepared guidelines (USACE 2001) and a matrix detailing potential Waters of the U.S. based on apparent flow regimes, geomorphic features, and surface flow indicators. In addition, determination that a wetland or water body is a Waters of the United States also requires that the area in question is subject to interstate commerce. These criteria were considered as they apply to the project site.

California Department of Fish and Game Wetlands

Typically, the extent of CDFG wetlands is determined by the limits of riparian vegetation as it extends from a stream, creek, river, pond, lake, or other water feature. Often, CDFG and RPO wetlands have identical boundaries.

Methods

The wetland survey was conducted during the site visit on 17 May 2007. Survey methods were based on the County wetland definition and additionally generally followed the protocol as set forth by the 1987 Army Corps of Engineers Wetland Delineation Manual (Wetland Training Institute 1995).

In addition, wetland/vegetation mapping on-site was aided by the use of aerial and satellite photographs. The USGS 7.5 minute topographical map for the area was also reviewed.

Results

The only County of San Diego or other jurisdictional wetland that was identified during the survey of the project site is contained within the incised drainage that generally parallels De Luz Road. The extent of wetland is shown as Southern Coast Live Oak Riparian Forest on the project Biological Resources Map.

Conclusions

The project site contains a very small area (0.19 acres) of wetland as defined by the County RPO and other jurisdictional agencies, and off-site improvements will unavoidably impact 0.30 acres) of wetland. All wetland areas <u>on</u> the project site, not located within existing utility easements, will be protected in a dedicated BOSE.

APPLICABLE REGULATIONS

As noted above, Diegan Coastal Sage Scrub is sensitive and protected. Permanent removal of this habitat can only be accomplished with a Habitat Loss Permit (HLP) and with suitable mitigation. However, the project currently proposes that all CSS on the project site be placed into a Biological Open Space Easement, thereby avoiding all impacts and obviating the need for a Habitat Loss Permit. Impacts to wetland habitats will require a permit from the U. S. Army Corps of Engineers, Certification from the California Regional Water Quality Control Board, and a Streambed Alteration Agreement with the California Department of Fish and Game.

PROJECT IMPACTS

Direct Impacts

Impacts associated with the project include the unavoidable loss on-site of 1.38 acres of Granitic Chamise Chaparral, and off-site impacts to 0.30 acres of Southern Coast Live Oak Riparian Forest and 0.38 acres of Coast Live Oak Woodland. A tabulation of habitats on the project site is presented in Table 1.

Table 1. Existing, impacted, and preserved habitat on the project site

PLANT COMMUNITY	ACREAGE ON-SITE	ACREAGE IMPACTED ON-SITE	ACREAGE IMPACTED OFF-SITE	IMPACT NEUTRAL **	ACREAGE PRESERVED ON-SITE	TOTAL MITIGATION REQUIRED (Ratio)	ON-SITE MITIGATION	OFF-SITE MITIGATION
DIEGAN COASTAL SAGE SCRUB	3.25	0	0	0	3.25	0	0	0
DISTURBED HABITAT	16.51	N / A	N / A	N / A	N / A	0	0	0
ORCHARDS AND VINEYARDS	1.36	N / A	0	N / A	0	0	0	0
URBAN / DEVELOPED	4.15	N / A	N / A	N / A	N / A	0	0	0
SOUTHERN COAST LIVE OAK RIPARIAN FOREST	0.19	0	0.30	0.12	0.06	0.90 (3:1)	0*	0.90
GRANITIC CHAMISE CHAPARRAL	6.00	1.38	0	0	4.62	0.69 (0.5:1)	0.69	0
COAST LIVE OAK WOODLAND	0.44	0	0.38	0.03	0.43	1.14 (3:1)	0*	1.14
TOTAL	31.90	1.38	0.68	0.15	8.37	2.73	0.69	2.04

* RPO avoidance requirement, on-site mitigation is considered impact neutral
** Within IOD area for De Luz Road

The only feasible access to the project site is off of De Luz Road, over a narrow wetland through property owned by the project applicant (this property is on a separate parcel which is not a part of the project). In order to satisfy sight distance requirements, this proposed access road will be located approximately 300 feet north of the existing narrow access point. The current proposed access location was designed with participation of County staff, in order to

meet Department of Public Works requirements and to minimize wetland impacts to the greatest degree possible.

The County's Resource Protection Ordinance (RPO) sets forth requirements governing when, where, and how wetlands may be impacted. Section 86.604(a)(5) of the RPO requires that unavoidable wetland impacts meet the following five criteria:

(aa) There is no feasible alternative that avoids the wetland;
Based on extensive discussions with DPW staff, there are no alternate access routes that do not impact wetlands. The current location of the proposed access road is dictated by sight distance requirements. No potential areas with less impact are available.

(bb) The crossings are limited to the minimum number feasible;

Only one crossing is proposed.

(cc) The crossings are located and designed in such a way as to cause the least impact to environmental resources, minimize impacts to sensitive species and prevent barriers to wildlife movement (e.g., crossing widths shall be the minimum feasible and wetlands shall be bridged where feasible);

As noted above, no alternative crossing sites with less wetland impacts are available. No sensitive species are known to occur in the vicinity. Crossing is designed at minimum width standards. Bridging is not feasible because proposed crossing site is at grade, in a previously disturbed area with existing undersized culverts.

(dd) The least damaging construction methods are utilized (e.g., staging areas shall be located outside of sensitive areas, work shall not be performed during the sensitive avian breeding season, noise attenuation measures shall be included and hours of operation shall be limited so as to comply with all applicable ordinances and to avoid impacts to sensitive resources);

These conditions will be required as part of project approval and permit issuance.

(ee) There must be no net loss of wetlands and any impacts to wetlands shall be mitigated at a minimum ratio of 3:1 (this shall include a minimum 1:1 creation component, while restoration/enhancement of existing wetlands may be used to make up the remaining requirements for a total 3:1 ratio).

Proposed mitigation complies with these requirements.
Based on the findings pertinent to this section of the RPO, the proposed project is in compliance and the proposed wetland impacts are permitted.

The project will also result in the loss of at least seven Engelmann Oak trees.

Indirect Impacts

There is the potential for indirect impacts to occur as a result of implementation of the proposed project. The areas where indirect impacts have the potential to occur could extend from the development areas into sensitive habitat due to such activities as excessive landscape irrigation, vegetation trampling outside developed areas, and introduction of non-native species (*e.g.,* argentine ants, cats, non-native invasive plant species). These indirect impacts are referred to as "edge effects." There is the potential for indirect impacts on animals as a result of an increase in noise, dust, and light during permitted activities and from vehicle use. These indirect impacts are considered unavoidable due to the nature of the project, existing uses on-site, and existing surrounding land uses.

Indirect impacts from edge effects are considered adverse, but not significant, because the area where activities will take place is isolated and existing edge effects are already impacting the site. Additional effects, if any, would be incremental and less than significant. These indirect impacts will be adequately mitigated by the preservation off-site of similar habitat at appropriate ratios.

Cumulative Impacts

Cumulative impacts consider the potential regional effects of a project and how a project may affect an ecosystem or one of its sensitive components beyond the project limits and on a regional scale. Section 15064 of the State CEQA Guidelines governs the determination of significant environmental impacts caused by a project. The evaluation of a project's cumulative impacts is discussed in Section 15064(h) of the CEQA Guidelines. Cumulative impacts must be discussed when project impacts, although individually limited, may be cumulatively considerable. "Cumulatively considerable" means that the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects affecting the same resource (CEQA Guidelines §15064(h)(1)).

A lead agency may determine in an initial study that "a project's contribution to a significant cumulative impact will be rendered less than cumulatively considerable and thus is not significant". When a project might contribute to a significant cumulative impact, but the contribution will be rendered less than cumulatively considerable through mitigation measures set forth in a mitigated negative declaration, the initial study shall briefly indicate and explain how the contribution has been rendered less than "cumulatively considerable" (CEQA Guidelines §15064(h)(2)). The mere existence of significant cumulative impacts caused by other projects alone shall not constitute substantial evidence that the proposed project's incremental effects are cumulatively considerable (CEQA Guidelines §15064 (h)(4)).

To assess potential cumulative impacts for this project, several factors were considered. First, the project site is surrounded on three sides by of existing low-density residential development. The site is not located within a proposed Pre-Approved Mitigation Area (PAMA), suggesting that in the regional context, it will not be an area slated for long-term preservation.

Thus, take of sensitive upland habitat in the area (and required off-site mitigation) is likely to be supported as a means of funding and acquiring important tracts of habitat that will ultimately lead to assembly of a regional preserve system consisting of core habitat areas and the linkages that connect them, including habitat that can support candidate, sensitive, or special status species, none of which are found on the project site.

In the absence of adequate mitigation, the Baldwin project would have the potential to significantly degrade the quality of the environment. Other effects that would be considered cumulatively considerable would include substantial reduction the habitat of a fish or wildlife species that cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, or significantly reduce the number or restrict the range of a rare or endangered plant or animal species. None of these other effects apply to the Baldwin project.

In addition, similar projects in the vicinity that have either been approved, are in process, or were in process but were withdrawn were examined to assess their actual or potential contributions to cumulative impacts. Projects within, or on the fringes of the mostly developed areas of Fallbrook roughly within a radius of five miles were deemed sufficient for this analysis, because that area encompasses most of the projects sharing similar existing land uses and habitat types. The projects are:

TPM 20331 - Approved in 1998. This project was deemed by the County to have no direct or indirect impacts to sensitive resources, and no resulting contribution to cumulative impacts in the region.

TPM 20621 - Approved in 2003. This project was deemed by the County to have no direct or indirect impacts to sensitive resources, and no resulting contribution to cumulative impacts in the region.

TPM 20687 - Approved in 2003. Determined to be exempt from CEQA. No adverse impacts or contribution to cumulative impacts.

TPM 20708 Approved in 2003. This project was deemed by the County to have no direct or indirect impacts to sensitive resources, and no resulting contribution to cumulative impacts in the region.

TPM 20795 - Approved in 2005. This project was deemed by the County to have no direct or indirect impacts to sensitive resources, and no resulting contribution to cumulative impacts in the region.

TPM 21010 - In Process. No sensitive resources onsite. If approved as proposed, would have no direct or indirect impacts to sensitive resources, and no resulting contribution to cumulative impacts in the region.

TPM 20731 - Approved in 2007. This project was deemed by the County to have no direct or indirect impacts to sensitive resources, and no resulting contribution to cumulative impacts in the region.

TPM 20911 - Withdrawn in 2007.

TPM 20134 - Approved in 1998. This project was deemed by the County to have no direct or indirect impacts to sensitive resources, and no resulting contribution to cumulative impacts in the region.

TPM 20532 - Denied in 2001, inadequate progress.

TPM 20641 - Approved in 2005. This project was deemed by the County to have no direct or indirect impacts to sensitive resources, and no resulting contribution to cumulative impacts in the region.

TPM 20952 - Withdrawn in 2008.

TPM 20373 - Approved in 1998. This project was deemed by the County to have no direct or indirect impacts to sensitive resources, and no resulting contribution to cumulative impacts in the region.

TPM 20427 - Approved in 1999. This project was deemed by the County to have no direct or indirect impacts to sensitive resources, and no resulting contribution to cumulative impacts in the region.

TPM 20381 - Approved in 2000. This project was deemed by the County to have no direct or indirect impacts to sensitive resources, and no resulting contribution to cumulative impacts in the region.

TPM 21040 - In process. If approved as proposed, this project would result in the loss of two acres of Non-Native Grassland, but the County has tentatively determined that this loss would have no substantial effects, and thus no contribution to cumulative impacts.

TPM 20853 - In process. This project has been inactive since 2005, but if it resumes activity as currently proposed it would result in the loss of 8.77 acres of Non-Native Grassland. This loss would require off-site mitigation.

TPM 20736 - In process. If approved as proposed, this project would result in the loss of 19.85 acres of Scrub Oak Chaparral and 3.24 acres of Non-Native Grassland. Impacts would be mitigated offsite, reducing direct, indirect, and cumulative impacts to a level below significant.

TM 5449 - In process. If approved as proposed, this project would result in the loss of 8.25 acres of Non-Native Grassland. This loss would require off-site mitigation.

TM 5284 - In process. If approved as proposed, this project will have no direct or indirect impacts to sensitive resources, and no resulting contribution to cumulative impacts in the region.

These projects, together with impacts from this project (TM 5502), would result in losses of 17.02 acres of Non-Native Grassland (none on this project site), 1.38 acres of Granitic Chamise Chaparral (all on this project site), 19.85 acres of Scrub Oak Chaparral (none on this project site), 0.30 acres of Southern Coast Live Oak Riparian Forest (all as a result of this project), and 0.38 acres of Coast Live Oak Woodland (all as a result of this project). However, these impacts are not considered cumulatively significant, because mitigation for these impacts will contribute to the preservation of biologically viable off-site habitat that can support candidate, sensitive, or special status species, none of which are found on the project site.

As stated, the project could result in cumulatively considerable impacts (in the absence of adequate mitigation). However, because all project impacts will be mitigated to a level that is "less than significant", the Baldwin project will not result in impacts that are cumulatively considerable.

SIGNIFICANCE CRITERIA

Direct impacts occur when biological resources are altered or destroyed during the course of, or as a result of, project implementation. Examples of such impacts include removal or grading of vegetation, filling wetland habitats, or severing or physically restricting the width of wildlife corridors. Other direct impacts may include loss of foraging or nesting habitat and loss of individual species as a result of habitat clearing. Indirect impacts may include elevated levels of noise or lighting, change in surface water hydrology within a floodplain, and increased erosion or sedimentation. These types of indirect impacts can affect vegetation communities or their potential use by sensitive species. Permanent impacts may result in irreversible damage to biological resources. Temporary impacts are interim changes in the local environment due to construction and would not extend beyond project-associated construction, including revegetation of temporarily disturbed areas adjacent to native habitats.

The California Environmental Quality Act Guidelines define "significant effect on the environment" as a "substantial, or potentially substantial adverse change in the environment." The CEQA Guidelines further indicate that there may be a significant effect on biological resources if the project will:

A. Substantially affect an endangered, rare or threatened species of animal or plant or the habitat of the species.

B. Interfere substantially with the movement of any resident or migratory fish or wildlife species to the extent that it adversely affects the population dynamics of the species.

C. Substantially diminish habitat for fish, wildlife, or plants.

As noted above, impacts to sensitive habitat types are considered significant and will be mitigated to reduce impacts to below a level of significant. No impacts to Special Status Wildlife

Species are anticipated. The project will result in the loss of at least seven isolated Engelmann Oak Trees, but this loss of a Group D plant species will not jeopardize the regional long-term survival of this species. No mitigation is required for the loss of these trees.

MITIGATION AND RECOMMENDATIONS

As proposed, the project will result in the loss on-site of 1.38 acres of Granitic Chamise Chaparral, and off-site of 0.30 acres of Southern Coast Live Oak Riparian Forest and 0.38 acres of Coast Live Oak Woodland. The following mitigation measures are recommended to offset the loss of sensitive habitat:

1. Mitigation for impacts to 1.38 acres of Granitic Chamise Chaparral will take place on the project site within an area to be designated as a Biological Open Space Easement. At a mitigation ratio of 0.5:1 this requires that a minimum of 0.69 acres be protected on-site. A total of 4.62 acres of Granitic Chamise Chaparral will be preserved on-site, greatly exceeding the mitigation requirement. On-site mitigation is desirable because the area preserved will likely be designated as part of a Pre-Approved Mitigation Area (PAMA) within the North County MSCP, which is currently in draft form but is anticipated to be approved within the next year.

2. Because all (3.25 acres) of the CSS on-site is being preserved on-site, it should not be necessary to apply for or be issued a Habitat Loss Permit (HLP).

3. Impacts to 0.38 acres of Coast Live Oak Woodland, which must be mitigated at a 3:1 ratio, requires that 1.14 acres of similar habitat be preserved in perpetuity. This mitigation liability will be met off-site at a location to be determined. The NCCP requires that certain Findings be made under the NCCP and that habitat to be acquired off-site shall be the same habitat type and comparable in biological function and value to the habitat that is being impacted and, to the maximum extent feasible, be located in the unincorporated area, and in the same "ecoregion" as the proposed project. The project applicant will provide specific documentation of compliance with this condition prior to all grading, clearing, or any other disturbance to areas of the site not currently disturbed.

4. County and jurisdictional agency policy requires that impacts to 0.30 acres of Southern Coast Live Oak Riparian Forest (wetland habitat) be mitigated at a 3:1 ratio. This mitigation will occur off-site, and will include a 1:1 wetland creation component (= 0.3 acres of created wetland) and a 2:1 enhancement component (= 0.6 acres of enhanced wetland). The location of the mitigation will be determined, and documentation provided to the County, prior to any disturbance of the wetland and prior to issuance of a grading permit to install the offsite improvements for the project. The ideal location for mitigation would be within the same watershed as the project. If that is not possible, mitigation should occur within the same ecoregion as the project. The project will be conditioned to acquire applicable wetland disturbance permits from the USACE, the California Regional Water Quality Control Board (RWQCB), and CDFG prior to disturbance of wetland.

5. Clearing and construction for the access road will be monitored by a qualified biologist when wetland resources will be impacted. Monitoring will assure that impacts do not extend beyond the wetland area slated for construction. Temporary construction fencing will demarcate the approved wetland impact area. A biological monitor will be required on-site during all brushing, clearing, grading, and construction activities within 100 feet from the proposed open space.

6. All brushing, clearing, and grading will occur outside of the migratory bird breeding season (1 February through 1 July) unless otherwise approved by the Director of Planning and Land Use.

7. Areas of open space on the project site will be fenced to exclude human intrusion and will have County-approved signage at 100' intervals.

8. In order to prevent any adverse impacts to any off-site resources, it is recommended that adequate measures (Best Management Practices) be taken during construction to prevent runoff from entering the adjacent parcels. These measures should be sufficient to help reduce any possible indirect impacts of the proposed project to a level well below significant.

The mitigation as proposed is deemed to be adequate to reduce the overall impacts of the proposed project to a level below significant.

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PLANT COMMUNITY	ACREAGE ON-SITE	ACREAGE IMPACTED ON-SITE	ACREAGE IMPACTED OFF-SITE	IMPACT NEUTRAL **	ACREAGE PRESERVED ON-SITE	TOTAL MITIGATION REQUIRED (Ratio)	ON-SITE MITIGATION	OFF-SITE MITIGATION
DIEGAN COASTAL SAGE SCRUB	3.25	0	0	0	3.25	0	0	0
DISTURBED HABITAT	16.51	N / A	N / A	N / A	N / A	0	0	0
ORCHARDS AND VINEYARDS	1.36	N / A	0	N / A	0	0	0	0
URBAN / DEVELOPED	4.15	N / A	N / A	N / A	N / A	0	0	0
SOUTHERN COAST LIVE OAK RIPARIAN FOREST	0.19	0	0.30	0.12	0.06	0.90 (3:1)	0*	0.90
GRANITIC CHAMISE CHAPARRAL	6.00	1.38	0	0	4.62	0.69 (0.5:1)	0.69	0
COAST LIVE OAK WOODLAND	0.44	0	0.38	0.03	0.43	1.14 (3:1)	0*	1.14
TOTAL	31.90	1.38	0.68	0.15	8.37	2.73	0.69	2.04

* RPO AVOIDANCE REQUIREMENT, ON-SITE MITIGATION IS CONSIDERED IMPACT NEUTRAL

** WITHIN IOD AREA FOR DE LUZ ROAD

LOG NO. 06-01-002

BIOLOGICAL RESOURCES MAP
BALDWIN PROJECT
TM 5502 RPL - APN 103-010-72

EXISTING, IMPACTED, AND PRESERVED HABITAT ON THE PROJECT SITE

PLANT COMMUNITY	ACREAGE ON SITE	ACREAGE IMPACTED ON-SITE	ACREAGE IMPACTED OFF-SITE	ACREAGE PRESERVED ON-SITE	TOTAL MITIGATION REQUIRED (Ratio)	ON SITE MITIGATION	OFF-SITE MITIGATION
DIEGAN COASTAL SAGE SCRUB	3.25	0	0	3.25	0	0	0
DISTURBED HABITAT	18.51	N/A	N/A	N/A	0	0	0
ORCHARDS AND VINEYARDS	1.20	N/A	0	0	0	0	0
URBAN / DEVELOPED	4.15	N/A	N/A	N/A	0	0	0
SOUTHERN COAST LIVE OAK RIPARIAN FOREST	0.16	0	0.20	0.16	0.90 (3:1)	0*	0.90
GRANITIC CHAMISE CHAPARRAL	6.00	1.35	0	4.65	0.69 (0.5:1)	0.69	0
COAST LIVE OAK WOODLAND	0.44	0	0.38	0.44	1.14 (3:1)	0*	1.14
TOTAL	21.90	1.35	0.58	8.50	2.73	0.69	2.04

BIOLOGICAL RESOURCES AND PROPOSED BIOLOGICAL OPEN SPACE EASEMENT MAP PREPARED BY:

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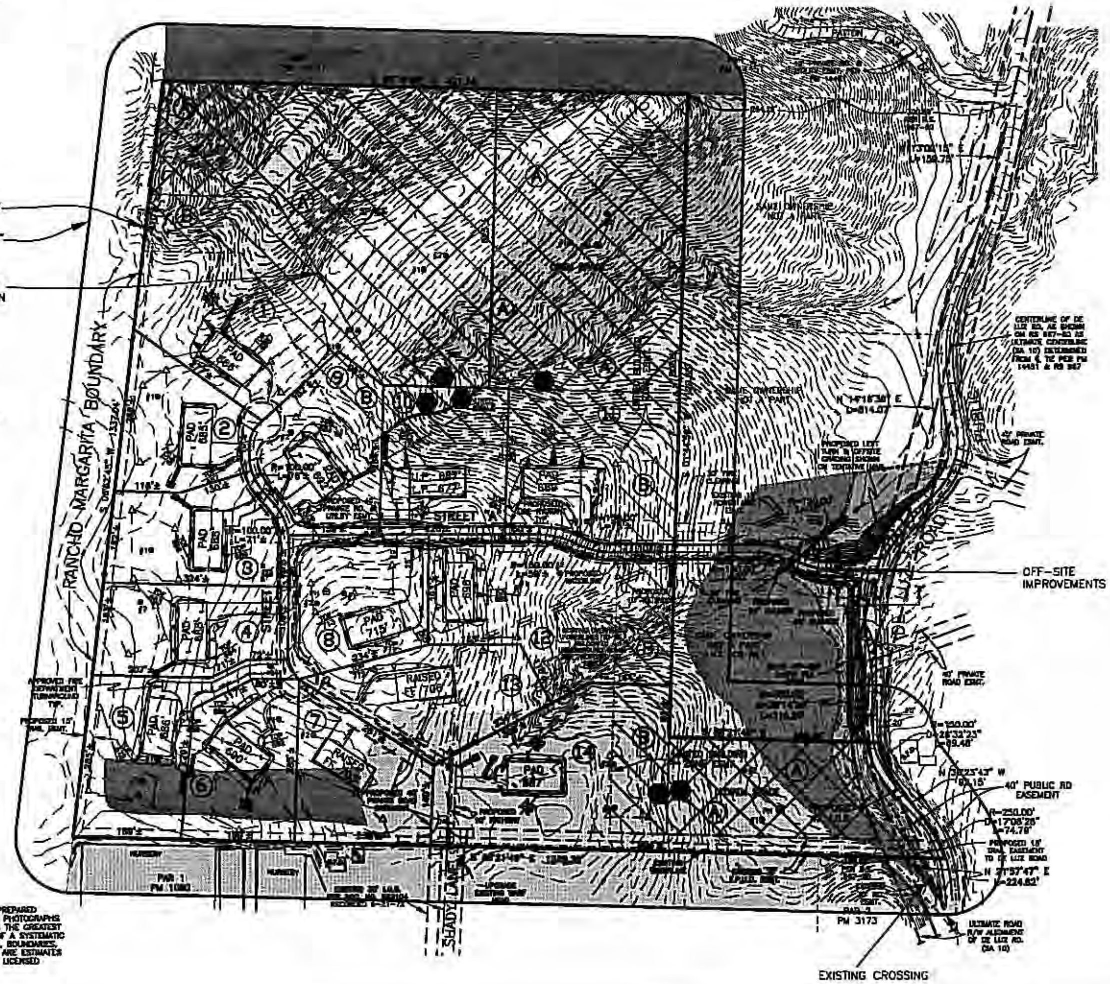
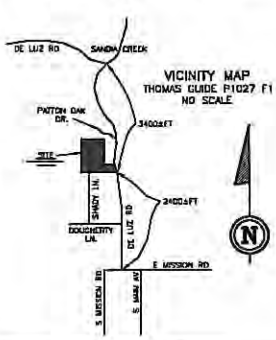


NOTE: THE ENTIRE PROJECT SITE WAS BURNED IN THE GAVILAN MOUNTAIN FIRE OF SEPTEMBER 2000. VEGETATION MAPPING PROVIDED HERE RESULTS FROM A FORENSIC ANALYSIS OF THE PLANT COMMUNITIES THAT EXISTED BEFORE THE FIRES. A SINGLE FAMILY RESIDENCE LOCATED AT THE SOUTHERN END OF THE PARCEL WAS ALSO DESTROYED IN THE FIRE. AREAS DESIGNATED AS DISTURBED ARE DISKED ON A REGULAR BASIS FOR FIRE ABATEMENT PURPOSES.

0' 100' 200' 300' 400'
GRAPHIC SCALE: 1" = 100'



VICINITY MAP
THOMAS GUIDE P1027 F1
NO SCALE

NOTES:

VEGETATION COMMUNITY MAPPING IS PREPARED USING OVERLAYS OF CURRENT AERIAL PHOTOGRAPHS AND IS VERIFIED ON THE GROUND TO THE GREATEST DEGREE POSSIBLE IN THE ABSENCE OF A SYSTEMATIC LAND SURVEY. ALL VEGETATION AREAS, BOUNDARIES, AND FUEL MODIFICATION ZONE LIMITS ARE ESTIMATES SUBJECT TO FINAL DELINEATION BY A LICENSED PROFESSIONAL LAND SURVEYOR.

LEGEND

- DIEGAN COASTAL SAGE SCRUB HOLLAND CODE 32500
- DISTURBED HABITAT HOLLAND CODE 11300
- ORCHARDS AND VINEYARDS HOLLAND CODE 18100
- URBAN / DEVELOPED HOLLAND CODE 12000
- SOUTHERN COAST LIVE OAK RIPARIAN FOREST HOLLAND CODE 61310
- GRANITIC CHAMISE CHAPARRAL HOLLAND CODE 37210
- COAST LIVE OAK WOODLAND HOLLAND CODE 71160
- (A) PROPOSED BIOLOGICAL OPEN SPACE EASEMENT INCLUDING AVERAGE 100' BIOLOGICAL BUFFER
- (B) LIMITED BUILDING ZONE - 100'
- ENGELMANN OAKS *Quercus engelmannii*
- COUNTY OF SAN DIEGO AND CDF&G WETLAND BOUNDARY

E\83188\VEGETATION BASE MAP.DWG

APPENDIX A

PLANT SPECIES OBSERVED ON THE PROJECT SITE

Family	Scientific Name	Common Name
Dicotyledoneae		
Anacardiaceae - Sumac Family		
	Malosma laurina	Laurel Sumac
	Schinus terebinthifolius	Brazilian Pepper Tree
	Toxicodendron diversilobum	Poison Oak
Apiaceae (Umbelliferae) - Carrot Family		
	Foeniculum vulgare	Sweet Fennel
Asteraceae (Compositae) - Sunflower Family		
	Ambrosia psilostachya	Western Ragweed
	Artemisia californica	California Sagebrush
	Baccharis pilularis	Coyote Brush
	Centaurea melitensis	Tocalote
	Cirsium sp.	Thistle
	Conyza bonariensis	Conyza
	Conyza canadensis	Horseweed
	Eriophyllum confertiflorum	Flat-topped Golden Yarrow
	Gnaphalium bicolor	Cudweed
	Gnaphalium californicum	California Everlasting
	Hazardia squarrosa var. *grindelioides*	Saw-toothed Goldenbush
	Heterotheca grandiflora	Telegraph Weed
	Isocoma menziesii	San Diego Goldenbush
	Sonchus asper	Prickly Sow Thistle
	Sonchus oleraceus	Sow Thistle
Boraginaceae - Borage Family		
	Plagiobothrys sp.	Popcorn Flower

Brassicaceae (Cruciferae) - Mustard Family

Brassica sp.	Mustard
Raphanus sativus	Wild Radish

Cactaceae - Cactus Family

Opuntia ficus-indica	Indian Fig

Caprifoliaceae - Honeysuckle Family

Sambucus mexicana	Mexican Elderberry

Chenopodiaceae - Goosefoot Family

Chenopodium californicum	California Pigweed
Salsola tragus	Russian Thistle

Crassulaceae - Stonecrop Family

Dudleya pulverulenta	Chalk Lettuce

Cuscutaceae - Dodder Family

Cuscuta sp.	Witch's Hair, Dodder

Euphorbiaceae - Spurge Family

Chamaesyce albomarginata	Rattlesnake Weed
Ricinus communis	Castor Bean

Fabaceae (Leguminosae) - Pea Family

Lotus scoparius ssp. *scoparius*	Deerweed

Fagaceae - Oak Family

Quercus agrifolia var. *agrifolia*	Coast Live Oak
Quercus berberidifolia	Scrub Oak
Quercus engelmannii	Engelmann Oak

Geraniaceae - Geranium Family

Erodium cicutarium	Red-stem Filaree

Grossulariaceae - Gooseberry Family

Ribes indecorum	White-flowered Currant

Lamiaceae (Labiatae) - Mint Family

Marrubium vulgare	Hore-Hound
Salvia apiana	White Sage
Salvia mellifera	Black Sage

Malvaceae - Mallow Family

Sphaeralcea sp.	Apricot Mallow

Nyctaginaceae - Four O'clock Family

Mirabilis californica var. *californica*	Wishbone Bush

Polygonaceae - Buckwheat Family

Eriogonum fasciculatum ssp. *fasciculatum*	California Buckwheat

Rosaceae - Rose Family

Adenostoma fasciculatum	Chamise
Cercocarpus betuloides	Mountain Mahogany
Heteromeles arbutifolia	Toyon

Salicaceae - Willow Family

Salix gooddingii var. *gooddingii*	Black Willow
Salix lasiolepis	Arroyo Willow

Scrophulariaceae - Figwort Family

Mimulus aurantiacus	Red Bush Monkey-Flower
Scrophularia californica var. *floribunda*	Bee Plant

Solanaceae - Nightshade Family

Nicotiana glauca	Tree Tobacco

Vitaceae - Grape Family

Vitis girdiana	Wild Grape

Monocotyledoneae

Agavaceae - Agave Family

Yucca whipplei ssp. *whipplei*	Our Lord's Candle

Poaceae (Gramineae) - Grass Family

Arundo donax	Giant Reed
Avena sp.	Wild Oats
Avena barbata	Slender Wild Oat
Bromus carinatus	California Brome
Bromus diandrus	Ripgut Grass
Bromus hordeaceus	Soft Chess
Bromus madritensis ssp. *rubens*	Red Brome

NOTE: Numerous ornamental landscape plants associated with the house burned down in the Gavilan Mountain fire persist, including:

Oleander
Cactus
Pine
Palm
Lemon Tree
Pepper Tree
Banana Tree
Jacaranda
Eugenia
Jade Plant
Aspidestra
Olive
Misc. Fruit Trees

APPENDIX B

WILDLIFE SPECIES OBSERVED OR DETECTED ON THE PROJECT SITE

BIRDS

Mourning Dove	*Zenaida macroura*
Anna's Hummingbird	*Calypte anna*
Acorn Woodpecker	*Melanerpes formicivorus*
Killdeer	*Charadrius vociferous*
Western Scrub-Jay	*Aphelocoma californica*
American Crow	*Corvus brachyrhynchos*
Bushtit	*Psaltriparus minimus*
Northern Mockingbird	*Mimus polyglottos*
Oak Titmouse	*Baeolophus inornatus*
Ash-throated Flycatcher	*Myiarchus cinerascens*
Phainopepla	*Phainopepla nitrens*
Spotted Towhee	*Pipilo maculatus*
California Towhee	*Pipilo crissalis*
Song Sparrow	*Melospiza melodia*
Lesser Goldfinch	*Carduelis psaltria*
House Finch	*Carpodacus mexicanus*

MAMMALS

California Ground Squirrel *Spermophilus beecheyi*	Observed
Botta's Pocket Gopher *Thomomys bottae*	Burrows

AMPHIBIANS AND REPTILES

Western Fence Lizard
Sceloporus occidentalis

Side-blotched Lizard
Uta stansburiana

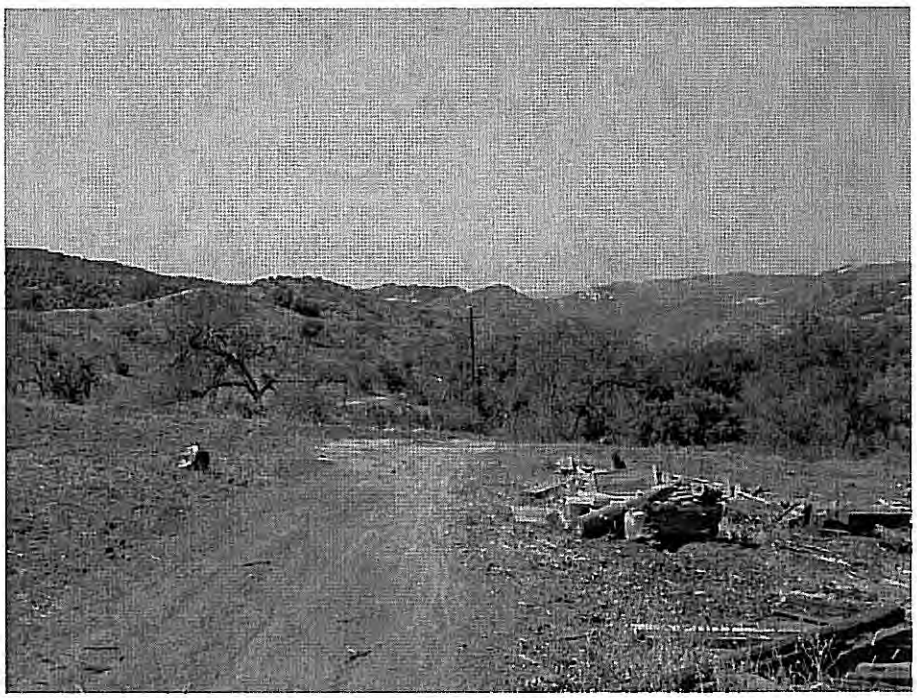
APPENDIX C

PHOTOGRAPHS OF THE PROJECT SITE

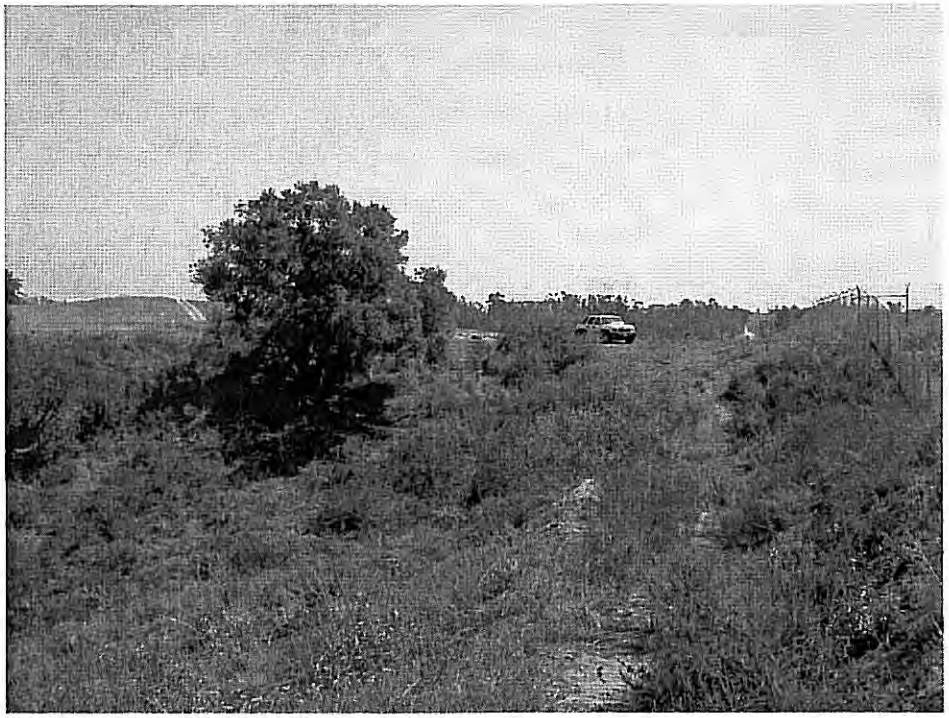
All photographs taken 2007 by W.T. Everett

INDEX TO LOCATIONS AND DIRECTIONS FROM WHICH THE FOLLOWING PHOTOGRAPHS WERE TAKEN

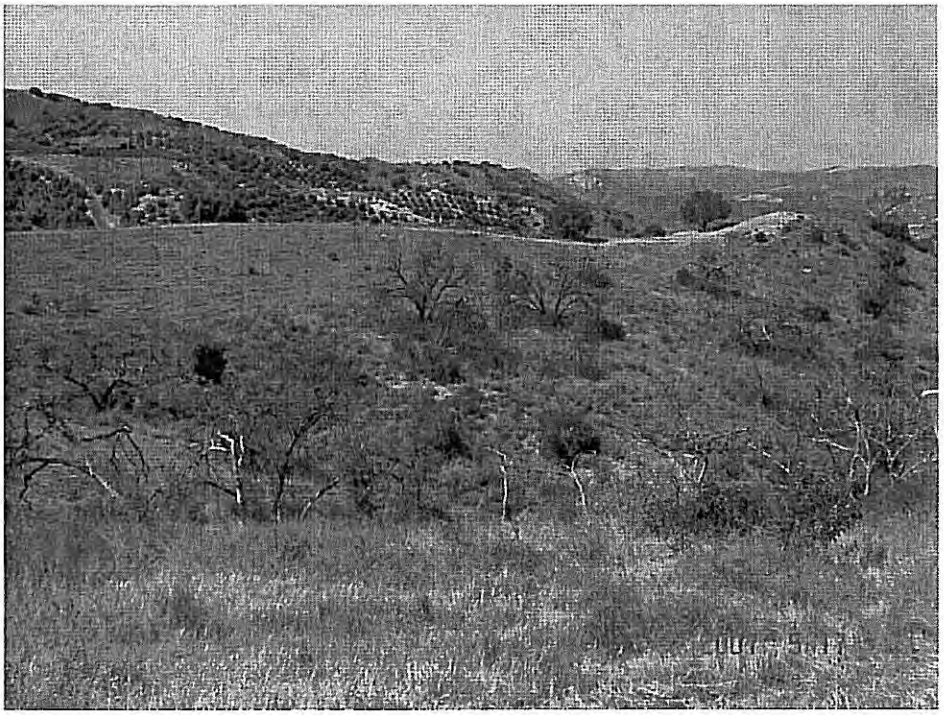
Photograph 1. View of the area where a single-family residence existed prior to the Gavilan Mountain Fire.



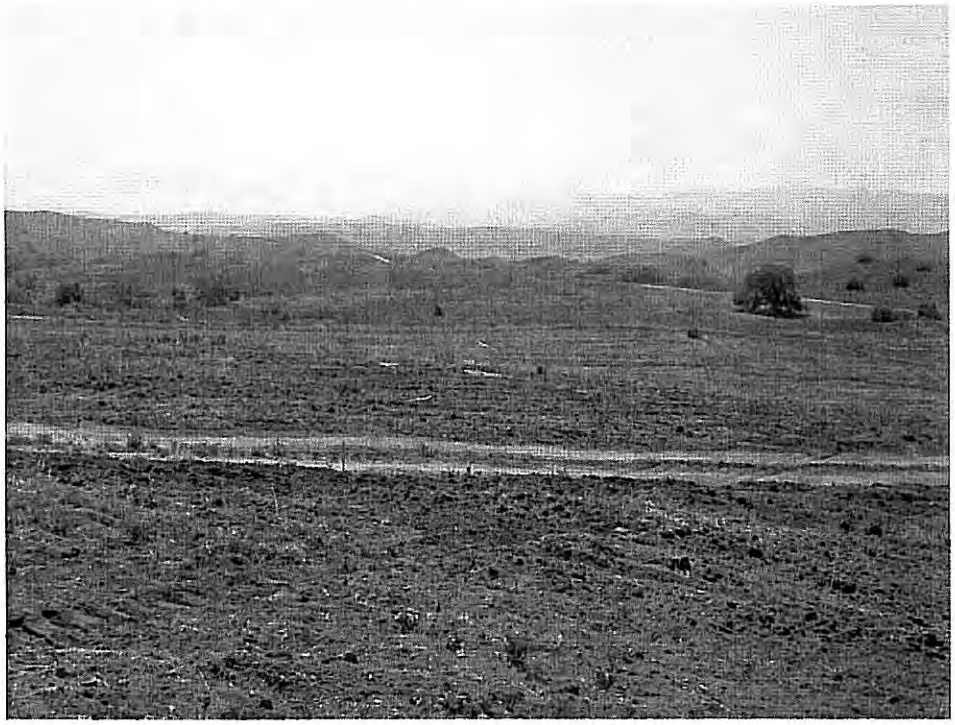
Photograph 2. View of the area below where the single-family residence existed prior to the Gavilan Mountain Fire.



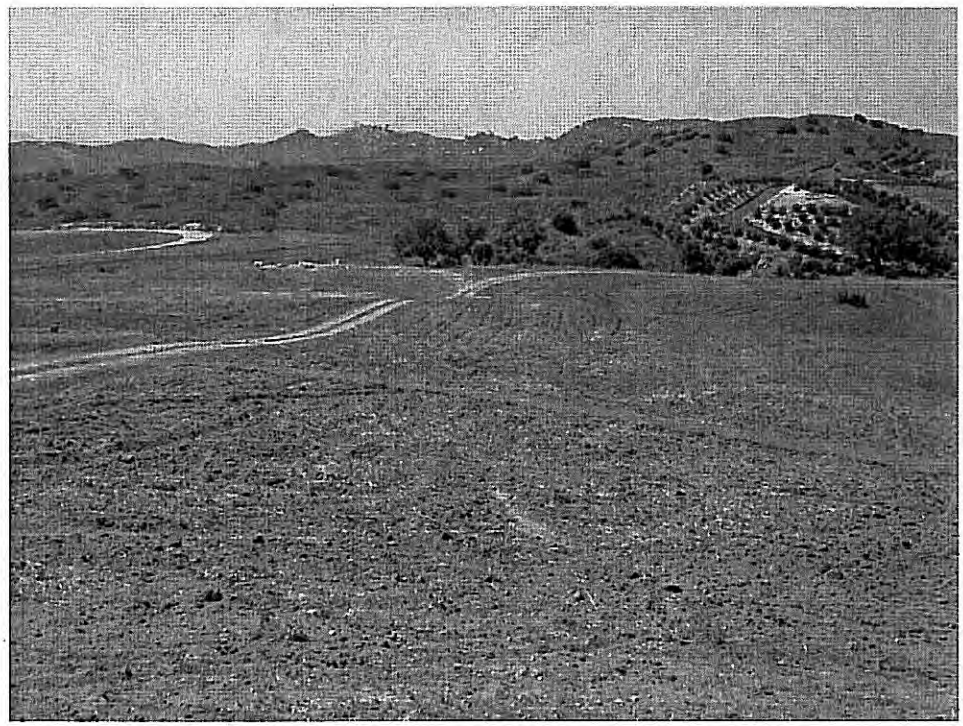
Photograph 3. View of the area in the extreme northwest corner of the site mapped as Coastal Sage Scrub.



Photograph 4. View of a south-facing slope in the northern portion of the site determined to contain Coastal Sage Scrub prior to the Gavilan Mountain Fire.



Photograph 5. View of the central portion of the project site containing Disturbed Habitat.



Photograph 6. Alternate view of the central portion of the project site containing Disturbed Habitat.

APPENDIX D

COUNTY LIST OF SENSITIVE SPECIES WITH POTENTIAL TO OCCUR ON THE PROJECT SITE

Legend

Status

1 = Federally Endangered
2 = Federally Threatened
3 = State Endangered
4 = State Threatened
5 = State Rare
6 = MSCP Narrow Endemic
7 = Not State or Federal Listed
8 = County Sensitive Plant List Designation (A-D)
Ext = Extirpated

Potential to Occur On-site

L = Low
M = Moderate
H = High
U = Unknown (Sufficient data are not available on the status, distribution, abundance, or natural history of the species to make a reliable determination of the probability of occurring on-site.)

Rationale

1 = Would likely have been detected during focused surveys if present
2 = Appropriate suitable habitat not present on-site
3 = Insufficient natural history information is available to determine is presence is likely

Common Name	Scientific Name	Status	Observed On-Site (Y or N)	Potential to Occur Onsite - Rationale	Habitat Preferences
Orcutt's brodiaea	*Brodiaea orcutti*	7, 8A	N	L - 1	Grassland, Riparian, Oak Woodland, Chamise Chaparral, Vernal Pools

Sticky Dudleya	*Dudleya viscida*	7	N	L - 1	Coastal Sage Scrub, Mixed Chaparral, Chamise Chaparral
Monarch butterfly	*Danaus plexippus*	7	N	L - 2	Grassland, Oak Woodland, Montane Meadow
San Diego banded gecko	*Coleonyx variegatus abbottii*	7	N	L - 2	Coastal Sage Scrub, Grassland, Chamise Chaparral
San Diego horned lizard	*Phrynosoma coronatum blainvillei*	7	N	L - 2	Coastal Sage Scrub, Mixed Chaparral, Grassland, Riparian, Chamise Chaparral, Mixed Conifer
Orange-throated whiptail	*Cnemidophorus hyperythrus*	7	N	L - 2	Coastal Sage Scrub, Mixed Chaparral, Grassland, Riparian, Chamise Chaparral
Coastal western whiptail	*Cnemidophorus tigris multiscutatis*	7	N	L - 2	Mixed Chaparral, Riparian, Oak Woodland, Chamise Chaparral
San Diego ringneck snake	*Diadophis punctatus similis*	7	N	L - 2	Coastal Sage Scrub, Mixed Chaparral, Riparian, Oak Woodland, Chamise Chaparral, Mixed Conifer, Closed Cone Forest
Coastal rosy boa	*Charina trivirgata roseoffusca*	7	N	L - 2	Coastal Sage Scrub, Mixed Chaparral, Oak Woodland, Chamise Chaparral
Northern red diamond rattlesnake	*Crotalus ruber ruber*	7	N	L - 2	Coastal Sage Scrub, Mixed Chaparral Chamise Chaparral, Pinon Juniper, Desert Scrub
Coast patch-nosed snake	*Salvadora hexalepis virgultea*	7	N	L - 2	Coastal Sage Scrub, Mixed Chaparral, Chamise Chaparral, Freshwater Marsh

Western spadefoot toad	*Scaphiopus hammondii*	7	N	L - 2	Coastal Sage Scrub, Mixed Chaparral, Grassland, Riparian, Oak Woodland, Chamise Chaparral, Freshwater Marsh, Vernal Pools
California leaf-nosed bat	*Macrotus californicus*	7	N	U - 3	Coastal Sage Scrub, Mixed Chaparral, Riparian, Desert Scrub, Desert Wash
Yuma myotis	*Myotis yumanensis*	7	N	U - 3	Coastal Sage Scrub, Mixed Chaparral, Grassland, Riparian, Oak Woodland, Chamise Chaparral, Mixed Conifer, Closed Cone Forest, Pinon-Juniper, Freshwater Marsh, Salt or Alkali Marsh, Vernal Pools, Montane Meadow, Lakes and Bays
Small-footed myotis	*Myotis ciliolabrum*	7	N	U - 3	Mixed Chaparral, Riparian, Oak Woodland, Chamise Chaparral, Mixed Conifer, Closed Cone Forest, Pinon-Juniper, Desert Wash, Montane Meadow
Townsend's big-eared bat	*Corynorhinus townsendii*	7	N	U - 3	Mixed Chaparral, Grassland, Riparian, Oak Woodland, Chamise Chaparral, Mixed Conifer, Closed Cone Forest, Pinon-Juniper, Desert Scrub, Desert Wash, Montane Meadow

Pallid bat	*Antrozous pallidus*	7	N	U - 3	Coastal Sage Scrub, Mixed Chaparral, Grassland, Riparian, Oak Woodland, Chamise Chaparral, Mixed Conifer, Closed Cone Forest, Pinon-Juniper, Desert Scrub, Desert Wash, Montane Meadow
Big free-tailed bat	*Nyctinomops macrotis*	7	N	U - 3	Coastal Sage Scrub, Mixed Chaparral, Grassland, Riparian, Oak Woodland, Chamise Chaparral, Mixed Conifer, Closed Cone Forest, Pinon-Juniper, Freshwater Marsh, Desert Scrub, Desert Wash, Salt or Alkali Marsh, Vernal Pools, Montane Meadow, Lakes and Bays
Pocketed free-tailed bat	*Nyctinomops femorosaccus*	7	N	U - 3	Coastal Sage Scrub, Mixed Chaparral, Grassland, Riparian, Oak Woodland, Chamise Chaparral, Mixed Conifer, Closed Cone Forest, Pinon-Juniper, Freshwater Marsh, Desert Scrub, Desert Wash, Salt or Alkali Marsh, Vernal Pools, Montane Meadow, Lakes and Bays
Western red bat	*Lasiurus blossevillii*	7	N	U - 3	Riparian, Oak Woodland, Mixed Conifer, Closed Cone Forest, Montane Meadow

Greater western mastiff bat	*Eumops perotis californicus*	7	N	U - 3	Coastal Sage Scrub, Mixed Chaparral, Grassland, Riparian, Oak Woodland, Chamise Chaparral, Mixed Conifer, Closed Cone Forest, Pinon-Juniper, Freshwater Marsh, Desert Scrub, Desert Wash, Salt or Alkali Marsh, Vernal Pools, Montane Meadow, Lakes and Bays
San Diego black-tailed jackrabbit	*Lepus californicus bennettii*	7	N	L - 2	Coastal Sage Scrub, Mixed Chaparral, Grassland, Oak Woodland, Chamise Chaparral, Mixed Conifer, Closed Cone Forest
San Diego desert woodrat	*Neotoma lepida intermedia*	7	N	L - 2	Coastal Sage Scrub, Riparian, Oak Woodland, Chamise Chaparral
Southern grasshopper mouse	*Onychomys torridus Ramona*	7	N	L - 2	Coastal Sage Scrub, Mixed Chaparral, Grassland, Chamise Chaparral
Northwestern San Diego pocket mouse	*Chaetodipus fallax fallax*	7	N	L - 2	Coastal Sage Scrub, Mixed Chaparral, Grassland, Chamise Chaparral, Desert Scrub, Salt or Alkali Marsh
Dulzura California pocket mouse	*Chaetodipus californicus femoralis*	7	N	L - 2	Coastal Sage Scrub, Mixed Chaparral, Grassland, Oak Woodland, Chamise Chaparral, Mixed Conifer

Southern mule deer	*Odocoileus hemionus*	7	N	L - 2	Coastal Sage Scrub, Mixed Chaparral, Grassland, Riparian, Oak Woodland, Chamise Chaparral, Mixed Conifer, Closed Cone Forest, Pinon-Juniper, Desert Scrub, Desert Wash, Montane Meadow
Ringtail	*Basariscus astutus*	7	N	L - 2	Mixed Chaparral, Chamise Chaparral
American badger	*Taxidea taxus*	7	N	L - 2	Coastal Sage Scrub, Mixed Chaparral, Grassland, Oak Woodland, Chamise Chaparral, Mixed Conifer, Pinon-Juniper, Desert Scrub, Desert Wash, Montane Meadow
Mountain lion	*Felis concolor*	7	N	L - 2	Coastal Sage Scrub, Mixed Chaparral, Riparian, Oak Woodland, Chamise Chaparral, Mixed Conifer, Closed Cone Forest, Pinon-Juniper, Desert Scrub, Desert Wash, Montane Meadow
Golden eagle	*Aquila chrysaetos*	6	N	L - 2	Coastal Sage Scrub, Mixed Chaparral, Grassland, Oak Woodland, Chamise Chaparral, Mixed Conifer, Closed Cone Forest, Pinon-Juniper
Red-shouldered Hawk	*Buteo lineatus*	7	N	H	Riparian, Oak Woodland
Cooper's Hawk	*Accipiter cooperi*	7	N	M	Grassland, Riparian, Oak Woodland
Sharp-shinned Hawk	*Accipter striatus*	7	N	L - 2	Coastal Sage Scrub, Oak Woodland, Mixed Conifer

Turkey Vulture	*Cathartes aura*	7	N	L - 2	Coastal Sage Scrub, Mixed Chaparral, Grassland, Riparian, Oak Woodland, Chamise Chaparral, Mixed Conifer, Closed Cone Forest
Great blue heron	*Ardea herodias*	7	N	L - 2	Grassland, Freshwater Marsh, Lakes and Bays
California Gull	*Larus californicus*	7	N	L - 2	Lakes and Bays
Common barn-owl	*Tyto alba*	7	N	L - 2	Riparian, Oak Woodland
Loggerhead shrike	*Lanius ludovicianus*	7	N	L - 2	Coastal Sage Scrub, Grassland, Riparian, Oak Woodland, Desert Scrub, Desert Wash
Western Bluebird	*Sialia mexicana*	7	N	L - 2	Riparian, Oak Woodland

EVERETT AND ASSOCIATES
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ESTABLISHED IN 1975

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(760) 765-3113 FACSIMILE

APPENDIX E

5 December 2006

Mr. Charlie Baldwin
224 North Wolf Road
Sunnyvale, California 94085

Re: Report on the Baldwin Project (TM 5502 : APN 103-010-72) Coastal California Gnatcatcher Presence/Absence Surveys, Fallbrook, California.

Dear Mr. Baldwin,

This report presents the results of three focused presence/absence surveys that I recently conducted for the federally threatened Coastal California Gnatcatcher *Polioptila californica californica*. The surveys were conducted within and adjacent to the above-referenced property located in the northwest corner of Fallbrook in the County of San Diego (Figures 1-2).

The California Gnatcatcher is a federal threatened species, a state species of concern, and is a "target species" of the NCCP process. This species is a non-migratory resident whose range covers the coastal plains and foothills of Southern California and northern Baja California. In San Diego County, it is widespread in coastal lowlands below about 2,000 feet elevation and typically occurs in or near Coastal Sage Scrub (CSS). The California Gnatcatcher is seriously declining due to loss of habitat. Between 85% and 90% of this species' habitat has been lost to urban or agricultural development. It is almost extirpated from Ventura, San Bernadino, and Los Angeles counties. The population is estimated to be just under 5000 pairs. San Diego County appears to be the center of abundance within the United States for this species.

The parcel surveyed is adjacent to the Fallbrook Naval Weapons Station north of West Mission Road and west of De Luz Road. The approximate USGS coordinates of the site are 32°24'N, 117°15'W (Fallbrook 7.5 minute series quadrangle, see Figure 3), as determined on-site by Global Positioning System receiver.

SITE CONDITIONS AND VEGETATION COMMUNITIES

The flat, upper portions of the project site have a long history of disturbance, either from use as the location of a former residence or from annual tilling for fire abatement purposes. Most of the parcel was burned in the Gavilan Mountain Fire of September 2000, which destroyed the single family residence on the site and most of the native vegetation. At present, north-facing slopes are re-growing Southern Mixed Chaparral, and south-facing slopes are re-growing CSS. All CSS and Chaparral habitats were surveyed.

5 December 2006

METHODS

I surveyed the parcel three times in conformance with current U.S. Fish and Wildlife Service (USFWS) guidelines. The surveys were conducted under the authority granted to me by USFWS permit # TE-788036. The surveys were conducted by slowly walking routes within and adjacent to the parcels (See Figure 4). After stopping, listening, and observing at intervals of approximately 30 meters, recorded Coastal California Gnatcatcher vocalizations were played for 30 seconds. After the vocalizations were played, an additional two minutes were spent observing and listening before moving to the next observation site. Weather conditions and time of day were appropriate for the detection of Coastal California Gnatcatchers (Table 1).

TABLE 1
SCHEDULE OF SURVEYS AND CONDITIONS
FALLBROOK PARCEL

Date	Time (hours)	Temperature (°F)	Wind Speed (mph)	Cloud Cover (%)
11/10/06	0830-1030	68-73	0-5	0
11/17/06	0900-1100	66-72	0	0
11/27/06	0815-1015	66-74	3-5	0

RESULTS

No Coastal California Gnatcatchers were detected on-site during the surveys. It appears that the CSS on-site is not sufficiently recovered from the Gavilan Mountain Fire of 2000 to support gnatcatchers.

Thank you very much for the opportunity to conduct this work and prepare this report. Please contact me if I can provide any additional information or clarification.

Sincerely,

William T. Everett
Certified Biological Consultant
U.S. Fish & Wildlife Service California Gnatcatcher
Survey Authorization Permit # TE-788036

cc: USFWS

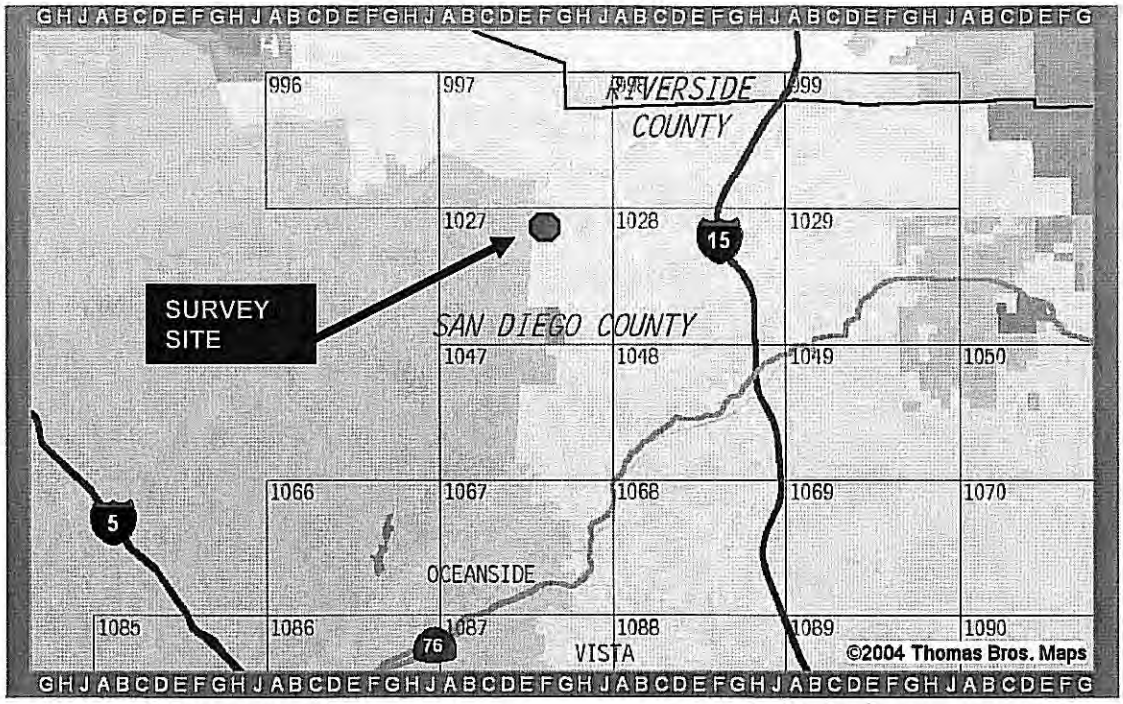

Figure 1. Location of survey site in regional context. Thomas Bros. Map page #1027, F1.

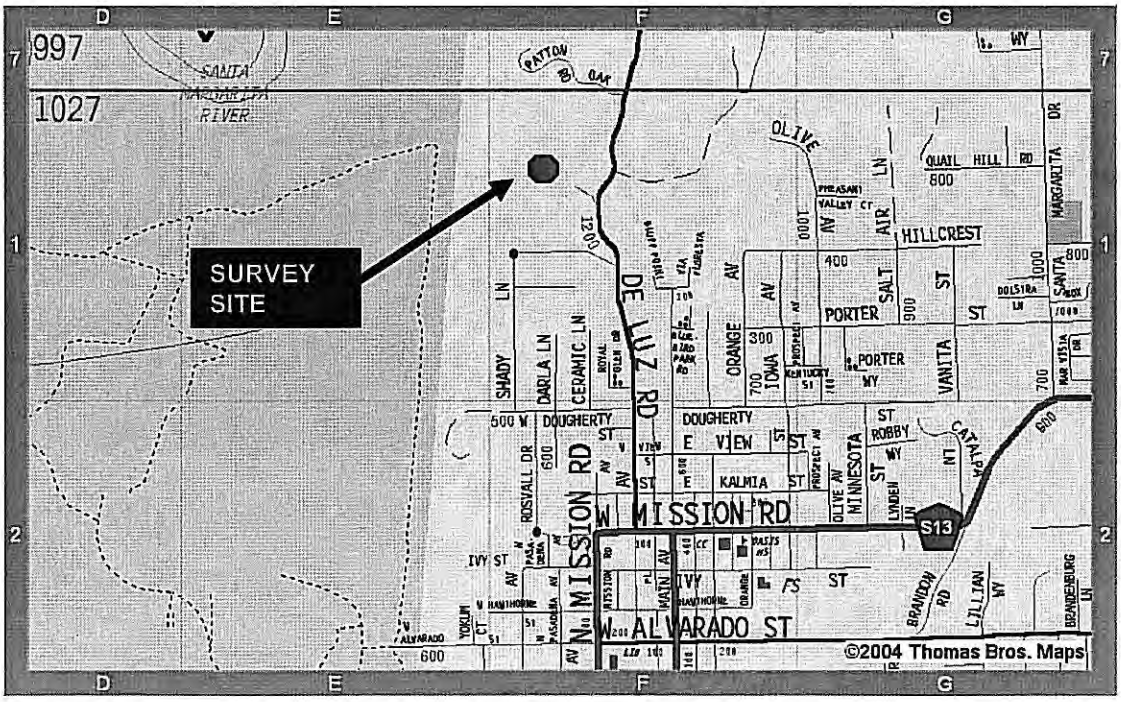

Figure 2. Detail location map of survey site. Thomas Bros. Map page #1027, F1.

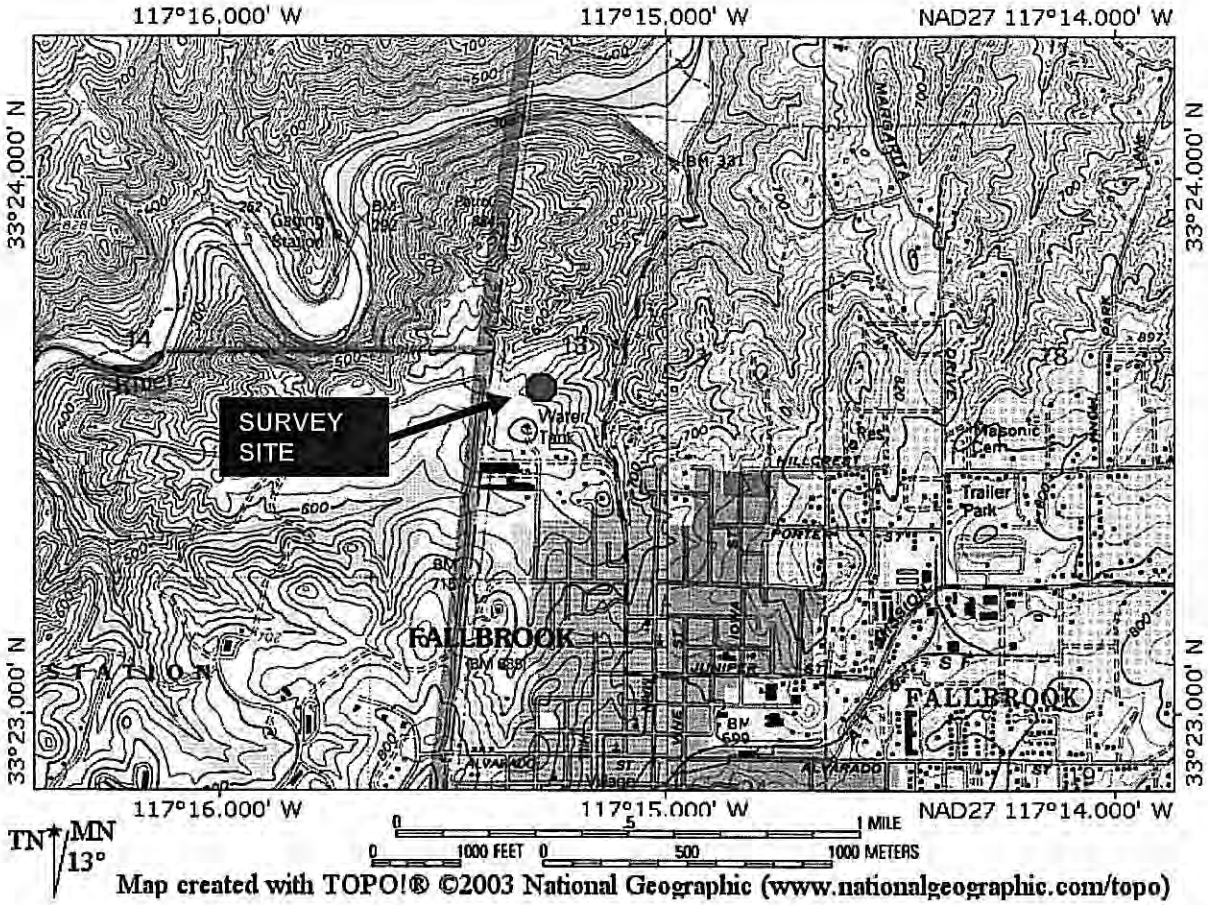

Figure 3. Topographical map showing survey site location. Taken from USGS Fallbrook 7.5 minute series quadrangle.

Figure 4. Arial photograph of the survey site. Approximate parcel boundaries are outlined in red. The yellow dotted line indicates the route walked during surveys for Coastal California Gnatcatchers

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8 December 2009

Mr. Charlie Baldwin
224 North Wolf Road
Sunnyvale, California 94085

Re: Report on the Baldwin Project (TM 5502 : APN 103-010-72), Second Set of Coastal California Gnatcatcher Presence/Absence Surveys, Fallbrook, California.

Dear Mr. Baldwin,

This report presents the results of three focused presence/absence surveys that I recently conducted for the federally threatened Coastal California Gnatcatcher *Polioptila californica californica*. The surveys were conducted within and adjacent to the above-referenced property located in the northwest corner of Fallbrook in the County of San Diego (Figures 1-2). hese surveys update the first set of focused gnatcatcher surveys conducted in November of 2006.

The California Gnatcatcher is a federal threatened species, a state species of concern, and is a "target species" of the NCCP process. This species is a non-migratory resident whose range covers the coastal plains and foothills of Southern California and northern Baja California. In San Diego County, it is widespread in coastal lowlands below about 2,000 feet elevation and typically occurs in or near Coastal Sage Scrub (CSS). The California Gnatcatcher is seriously declining due to loss of habitat. Between 85% and 90% of this species' habitat has been lost to urban or agricultural development. It is almost extirpated from Ventura, San Bernadino, and Los Angeles counties. The population is estimated to be just under 5000 pairs. San Diego County appears to be the center of abundance within the United States for this species.

The parcel surveyed is adjacent to the Fallbrook Naval Weapons Station north of West Mission Road and west of De Luz Road. The approximate USGS coordinates of the site are 32°24'N, 117°15'W (Fallbrook 7.5 minute series quadrangle, see Figure 3), as determined on-site by Global Positioning System receiver.

SITE CONDITIONS AND VEGETATION COMMUNITIES

The flat, upper portions of the project site have a long history of disturbance, either from use as the location of a former residence or from annual tilling for fire abatement purposes. Most of the parcel was burned in the Gavilan Mountain Fire of September 2000, which destroyed the single family residence on the site and most of the native vegetation. At present, north-facing slopes are re-growing Southern Mixed Chaparral, and south-facing slopes are re-growing CSS. All CSS and Chaparral habitats were surveyed.

8 December 2009

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TABLE 1
SCHEDULE OF SURVEYS AND CONDITIONS
FALLBROOK PARCEL

Date	Time (hours)	Temperature (°F)	Wind Speed (mph)	Cloud Cover (%)
09/17/09	0915-1115	68-73	0	0
10/08/09	0815-1015	64-68	0-3	0
10/20/09	0715-0915	63-66	0	25

RESULTS

No Coastal California Gnatcatchers were detected on-site during the surveys. It appears that the CSS on-site is not sufficiently recovered from the Gavilan Mountain Fire of 2000 to support gnatcatchers.

Thank you very much for the opportunity to conduct this work and prepare this report. Please contact me if I can provide any additional information or clarification.

Sincerely,

William T. Everett
Certified Biological Consultant
U.S. Fish & Wildlife Service California Gnatcatcher
Survey Authorization Permit # TE-788036

cc: USFWS

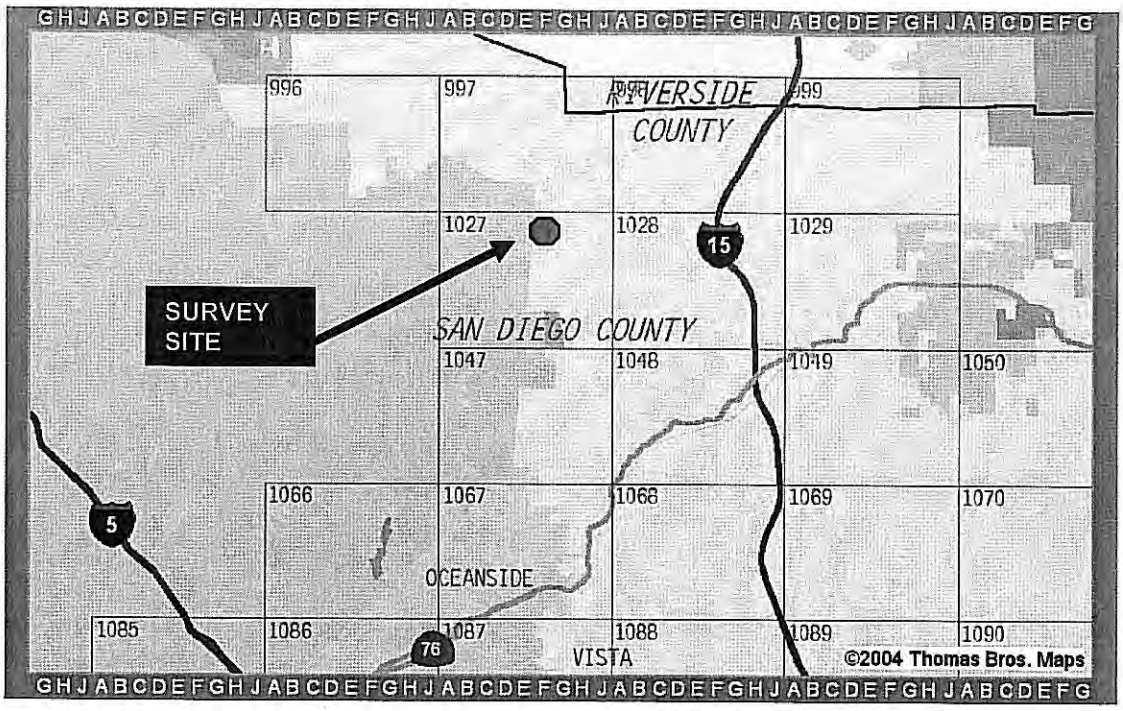

Figure 1. Location of survey site in regional context. Thomas Bros. Map page #1027, F1.

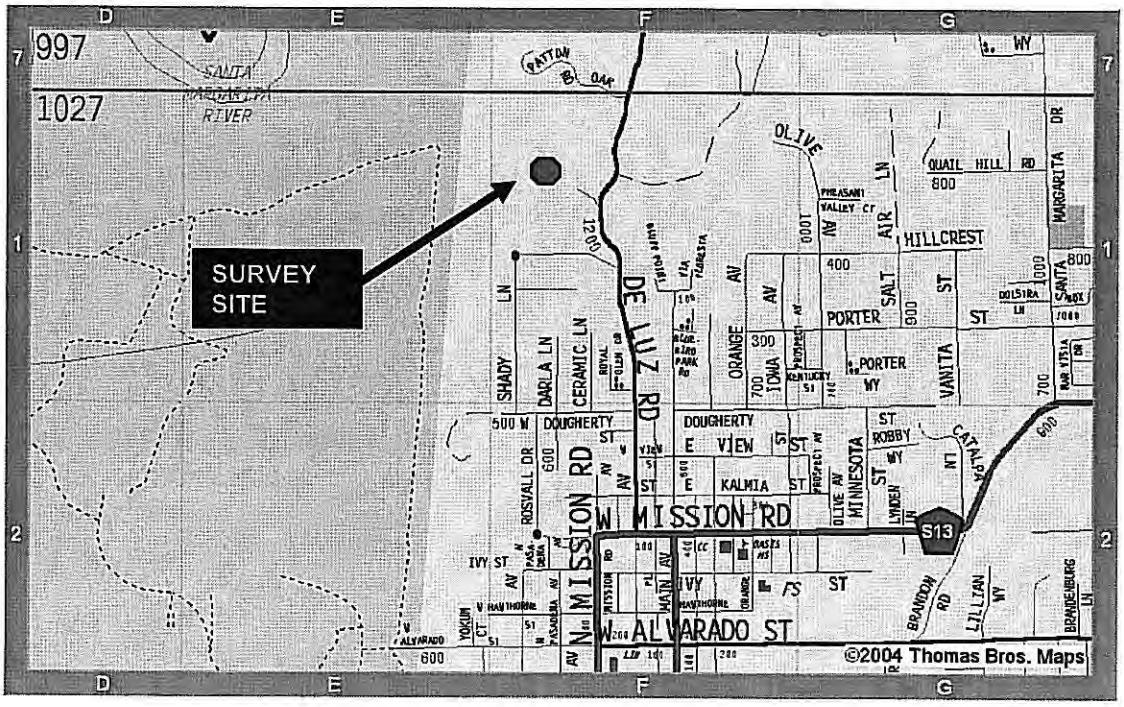

Figure 2. Detail location map of survey site. Thomas Bros. Map page #1027, F1.

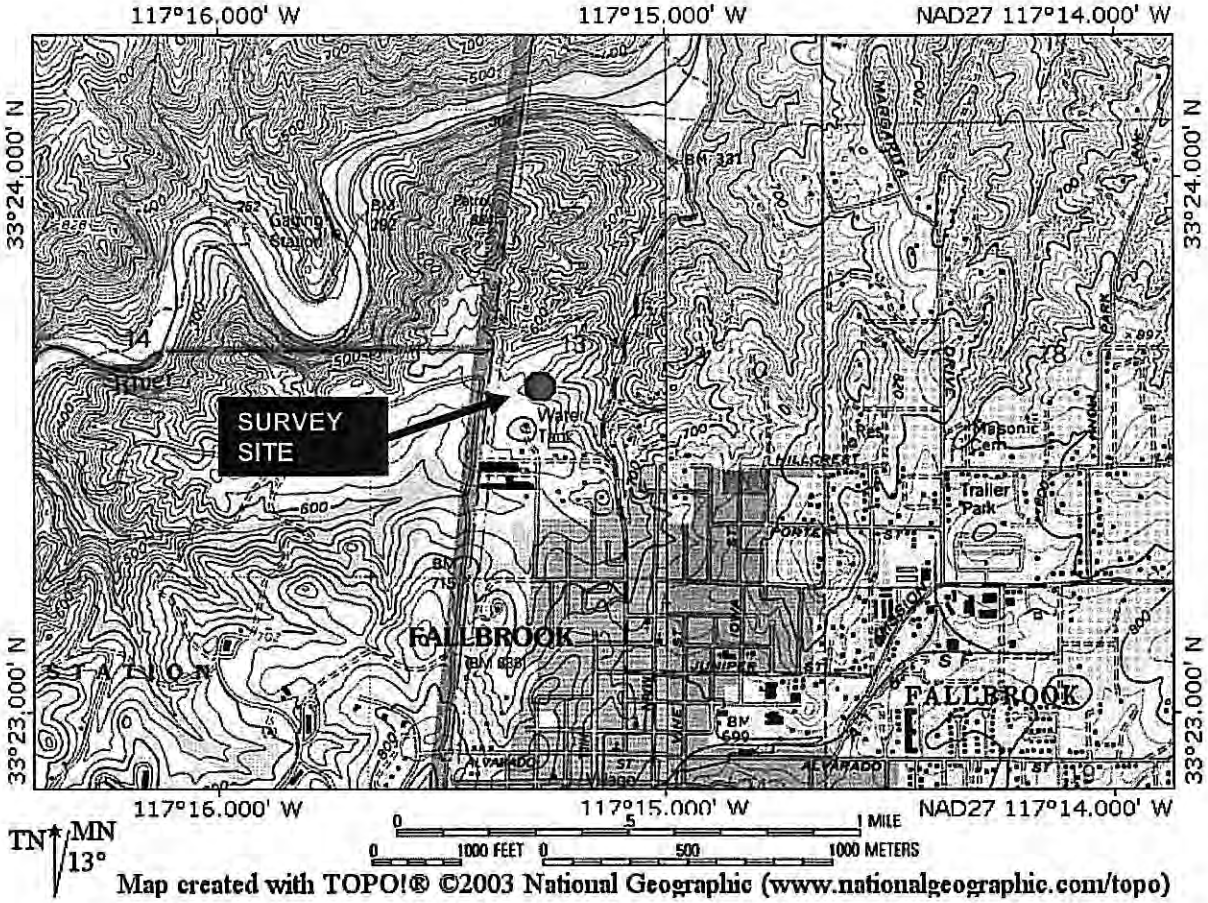

Figure 3. Topographical map showing survey site location. Taken from USGS Fallbrook 7.5 minute series quadrangle.

Figure 4. Arial photograph of the survey site. Approximate parcel boundaries are outlined in red. The yellow dotted line indicates the route walked during surveys for Coastal California Gnatcatchers.

APPENDIX F

REPORT ON FOCUSED SURVEYS FOR STEPHEN'S KANGAROO RATS

STEPHENS' KANGAROO RAT AND OTHER POTENTIAL SENSITIVE MAMMAL SPECIES PRESENCE/ABSENCE TRAPPING STUDIES ON BALDWIN FALLBROOK PROPERTY COUNTY OF SAN DIEGO, CALIFORNIA

TM 5502

Total Project Acreage: 31.9 acres

Total Acres Surveyed: 31.9 acres

Prepared for:

Mr. Charles Baldwin

Prepared by:

Philippe Vergne
ENVIRA
P. O. Box 2612
Ramona, California 92065
Telephone (619) 885-0236
E-mail: phvergne@aol.com

Survey Dates: October 31 to November 5, 2009

Report Date: December 2, 2009

This report was prepared in accordance with professional requirements and recommended protocols for small mammal trapping studies (USFWS Permit TE068072-2).

Philippe Jean Vergne, Field Biologist and Author

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1.0 INTRODUCTION

Philippe Jean Vergne was contracted by Mr. Charles Baldwin to conduct a live-trapping effort for the Stephens' kangaroo rat (*Dipodomys stephensi*) (SKR) and other potential sensitive species on the proposed Baldwin TM5502 Fallbrook project site.

The Baldwin project is the subdivision of a 31.9 acre parcel in the community of Fallbrook into 12 single-family residential lots ranging in size from 2.01 to 4.21 acres. The project site is vacant and comprised of rolling hills with steep slopes on the northern boundary. The project is adjacent to the Country Town Area of Fallbrook and is approximately ½ mile from the downtown area of Fallbrook. The Camp Pendleton Marine Base is contiguous with the site on the West. The site is bordered on the North, South, and East by single-family residences.

This report describes the existing conditions of the project site, general biological resources observed during the survey, and the results of the trapping studies.

A literature review and records check were conducted for sensitive resources within the vicinity of the proposed project. In addition to the literature review, a general field survey of the project area was conducted. The field survey provided information on the existing conditions of the site and the potential for sensitive resources to be present. Focused trapping surveys for the SKR and other potential sensitive species were conducted in areas containing potential habitat, suitable soils, and small mammal sign.

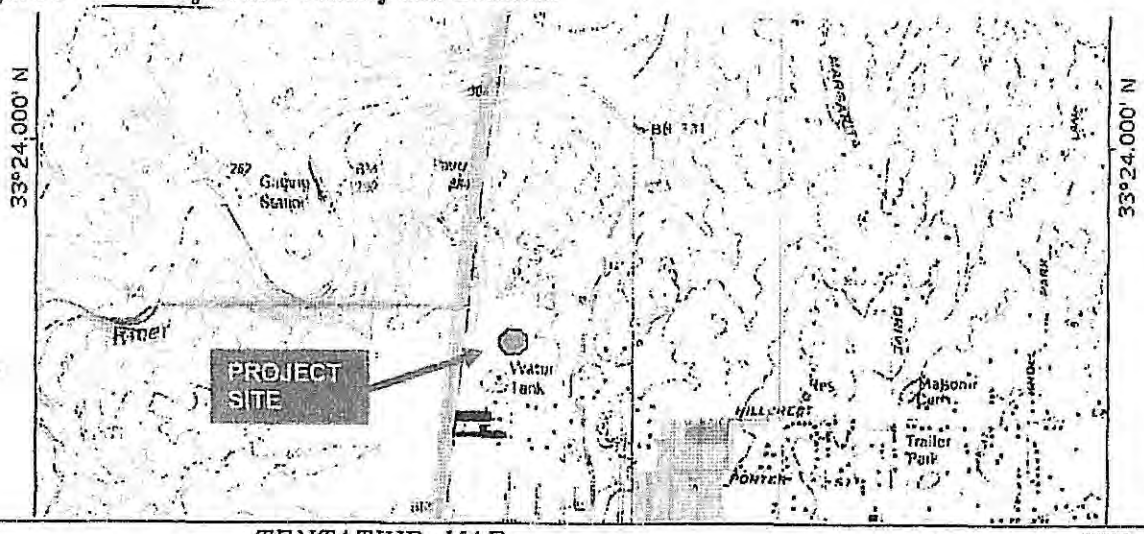
Three sensitive mammal species were identified as potentially present in the vicinity of the project site: the SKR, the northwestern San Diego pocket mouse (*Chaetodipus fallax fallax*), and the San Diego desert woodrat (*Neotoma lepida intermedia*).

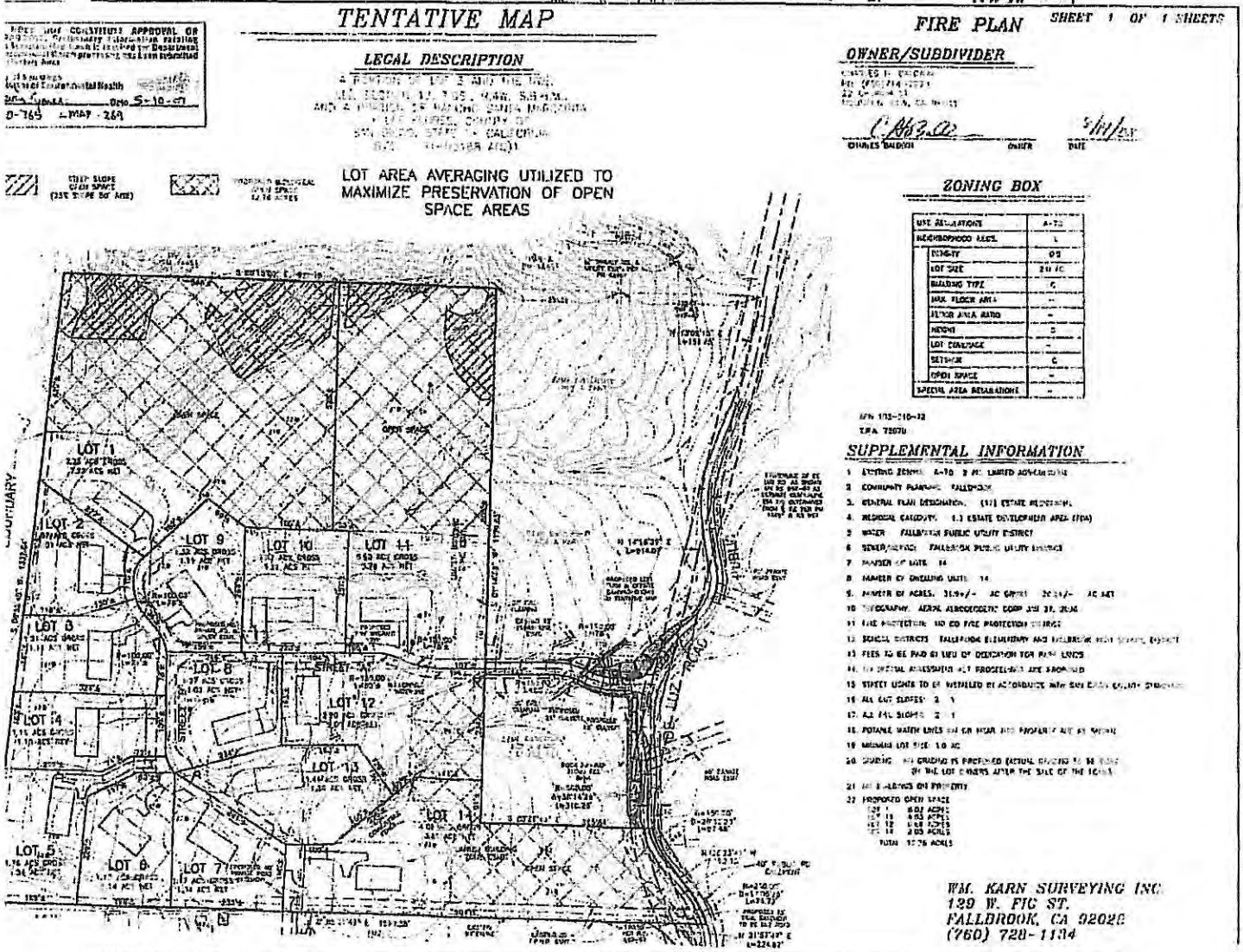
Trapping surveys for the SKR were conducted according to U. S. Fish and Wildlife Service (USFWS) protocols. The current protocol calls for five nights of trapping, conducted when the species is active aboveground at night and preferably during a new moon phase. One trapping session was conducted from October 31 to November 5 of 2009.

Based on the trapping results, the SKR does not occur on the site, and there will be no direct impacts to this species as a result of project implementation.

One sensitive species was captured during the course of the trapping survey, the Northwestern San Diego pocket mouse. Impacts to this species from project implementation are not significant since most of the occupied habitat is being preserved and the amount of take on a regional basis is negligible.

Figure 1 Project Site Vicinity and Location





2.0 METHODS

A literature review and records check was conducted for sensitive resources within the vicinity of the proposed project. In addition to the literature review, a general field survey of the project area was conducted. The field survey provided information on the existing conditions on the site and the potential for sensitive resources to be present. Focused trapping surveys for the SKR were conducted on areas containing potential habitat, suitable soils, and small mammal sign.

2.1 LITERATURE REVIEW

A literature review was conducted prior to the trapping effort. This included a review of standard field guides and texts on sensitive and non-sensitive biological resources, as well as the following sources:

- List of sensitive biological resources provided by the California Natural Diversity Data Base (CNDDB);
- Biological resources reports for the project site and adjacent properties; and
- General texts and other documents identifying potential resources on the site.

All technical information reviewed is included in the References section of this document.

2.2 GENERAL BIOLOGICAL SURVEYS

A reconnaissance level phase one pedestrian survey was conducted on the property in October in order to assess the need for a focused SKR survey within the project boundaries. At the time of the survey, potential habitat for the SKR and k-rat scat and burrows were found onsite and a focused trapping survey was recommended and later implemented.

Notes were taken during the surveys of all plant and wildlife species observed. Observations of wildlife species included scat, trails, tracks, burrows, nests, calls, and visual observation. In addition, site characteristics such as soils, topography, the condition of the plant communities, and evidence of human use of the site were noted. A list of plant and wildlife species observed is included in Appendix A.

2.3 FOCUSED SURVEYS

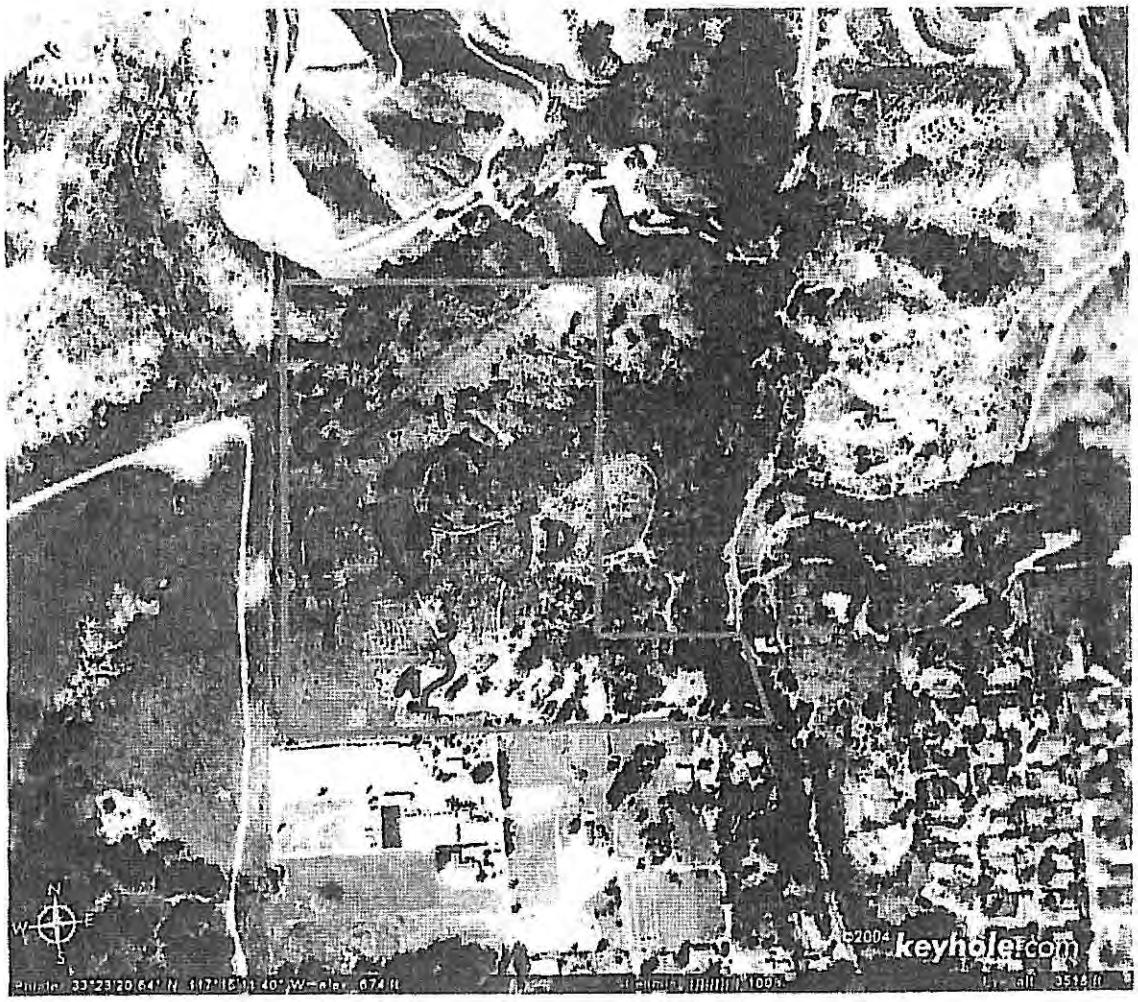
Focused surveys for the SKR were conducted by Philippe Vergne (TE-068072-2) according to U. S. Fish and Wildlife Service (USFWS) protocols. The current protocol calls for 5 nights of trapping, conducted when the animal is active aboveground at night and preferably during a new moon phase. One trapping session was held from October 31 to November 5 of 2009.

Trapping lines of 30 traps, set 12 meters apart, were set at each trapping area (A through G) (Figure 2). Traps were placed in suitable habitat areas on the project site, concentrating on locating traps in areas containing small mammal sign, suitable soils and vegetation for SKR and sign of small mammal occupancy.

Each trap was baited with a mixture of birdseed placed at the back of the traps. The traps were left in place and opened at dusk each night and inspected once during the night and at dawn each morning. All animals were identified and released at the point of capture.

Photographs were taken on the habitat conditions (Appendix B). A description of the associated conditions is also included. Weather conditions at the time of the trapping were also noted.

Figure 2 Trapping Locations



3.0 EXISTING CONDITIONS

3.1 WEATHER CONDITIONS

Weather conditions during the trapping surveys included morning temperatures in the low seventies degrees Fahrenheit, with clear skies and winds of less than three miles per hour. No ground fog or rain occurred during the survey period. The moon was in the first quarter during the protocol survey. Weather conditions are summarized in Table 1 below.

TABLE 1

WEATHER CONDITIONS

Day	Cloud Cover	Night Temperature (F)	Wind (mph)
1	Clear		0
2	Clear	71	0
3	Clear	69	0
4	Clear	72	0
5	Clear	72	0
6	Clear	73	0

3.2 TOPOGRAPHY AND SOILS

The project site consists of gently sloping terrain on the upper portion of the property, dropping, at times steeply, in the eastern and northeastern portion of the property.

The soils onsite, based on soil conservation service maps (Bowman 1973), consist mainly of Fallbrook-Vista rocky sandy loams, with 9-15% slopes (FvD), and Vista coarse rocky sandy loam, with 15-30% slopes (VsE).

Surrounding land use varies. The Camp Pendleton Marine Base is contiguous with the site on the West. The site is bordered on the North, South, and East by single-family residences and groves.

Disturbances on the site include fire, disking, dirt roads, and a burned farm building and associated structures.

3.3 PLANT COMMUNITIES

Seven vegetation communities were identified on site by Dr. William T. Everett of Everett and Associates. These are Diegan Coastal Sage Scrub, Disturbed Habitat, Orchards and Vineyards, Urban / Developed, Southern Coast Live Oak Riparian Forest, Granitic Chamise Chaparral, and Coast Live Oak Woodland.

Of these three areas had potential for SKR occupancy. They are the ruderal/disturbed annual grasslands, dirt roads, and sparse sage scrub adjacent to those disturbed areas.

The limited ruderal/disturbed annual grassland plant community (portions currently disked) is composed of annual grasses, weeds, and sparse emergent scrub. Plant species within this community include bromes such as red brome (*Bromus madritensis*) and ripgut brome (*Bromus diandrus*), Mediterranean grass (*Schismus barbatus*), and herbaceous annuals such as red-stemmed filaree (*Erodium cicutarium*), fiddleneck (*Amsinckia menziesii*), doveweed (*Eremocarpus setigerus*), and short-podded mustard (*Hirschfeldia incana*).

The sage scrub areas were dominated by California buckwheat (*Eriogonum fasciculatum*) and California sagebrush (*Artemisia californica*). The understory is dominated by brome grasses.

A complete list of plant species observedwithin the trapping areas is found in Appendix A.

3.4 WILDLIFE

Wildlife activity was moderate to high, with most of the wildlife represented by bird species and small fossorial mammals captured during the trapping effort.

No amphibians were found although suitable habitat occurs onsite. Reptiles were observed mainly in the open habitats near the dirt roads, and near the open scrub.

Mammal species observed (other than those trapped) included Botta's pocket gopher (*Thomomys bottae*), California ground squirrel (*Spermophilus beecheyi*), Audubon's cottontail (*Sylvilagus aubudonii*), and coyote (*Canis latrans*). A complete list of wildlife species observed is found in Appendix A.

3.4.1 Sensitive Biological Resources

The following is a discussion of the sensitive small mammal species identified as potentially occurring on the project site.

Stephens' Kangaroo Rat

The Stephens' kangaroo rat prefers open areas with sparse perennial cover. They occur in areas containing loose soil where the soil depth is at least 0.5 meter (Price and Endo, 1989). SKR will also inhabit disturbed areas such as fallow fields by using the burrows of other rodents, including pocket gophers and the California ground squirrel (O'Farrell, 1989).

Like all kangaroo rats, SKR is primarily a seedeater, feeding on the seeds of both annual and shrub species. It also feeds on green vegetation and insects when these are available. Being a primarily dry biome species, kangaroo rats obtain nearly all of their water from the food they eat, and can subsist indefinitely on water extracted from dry seeds. They forage in open ground and underneath shrubs. Burrows are dug in loose soil.

SKR are documented as occurring in the project vicinity at the Fallbrook airpark, the Naval weapon's storage Center and the Camp Pendleton Marine Base.

Northwestern San Diego Pocket Mouse

The northwestern San Diego pocket mouse prefers habitat similar to that preferred by the SBKR. The northwestern San Diego pocket mouse occurs in open, sandy areas in the valleys and foothills of southwestern California. The range of this species extends from Orange County to San Diego County, and includes Riverside and San Bernardino counties. This species is a California Species of Special Concern (CSC); its historical range has been reduced by urban development and agriculture.

San Diego Desert Woodrat

The desert woodrat (*Neotoma lepida*) is a relatively wide-ranging species extending along the coast of California from south of San Francisco through to the border with Baja California. This species also occurs in the Central Valley and the deserts of southern California and extends along the desert side of the Sierra Nevada into southeastern Oregon.

The coastal race of the desert woodrat, the San Diego desert woodrat, prefers scrub habitats such as coastal sage scrub, chaparral and alluvial fan sage scrub. It is more common in areas with rock piles and coarse sandy to rocky soils throughout coastal southern California. The range of this species extends from just south of Sacramento and the San Francisco area to the border with Baja California. The coastal subspecies of the widespread *Neotoma lepida* is listed as a CSC; its historical range has been impacted by the conversion of scrub habitats into residential, commercial and industrial use.

3.5 TRAP SITE DESCRIPTIONS

Traps were set in areas containing suitable sandy soils, open vegetation cover, and small mammal sign. Areas trapped included the ruderal/disturbed annual grasslands located adjacent to the Camp Pendleton Marine Base fence, dirt roads, open knolls, and areas of sage scrub with less than 30 percent slope. Appendix B contains site photographs.

4.0 FOCUSED TRAPPING SURVEY RESULTS

A total of Four small mammal species were trapped during the survey period. Table 2 provides summary information on the species trapped per site.

TABLE 2

FOCUSED TRAPPING RESULTS FOR THE BALDWIN FALLBROOK PROJECT

Trap Line	Trap Nights	DKR	PEMA	REME	CHFA
A	150	1	13		
B	150		7		
C	150	2	9		2
D	150		4		4
E	150	3	11	2	3
F	150	1	8		1
G	150		5		
TOTAL	**1050**	**7**	**57**	**2**	**10**

DKR-Dulzura Kangaroo Rat (*Dipodomys simulans*)
PEMA-Deer Mouse (*Permnyscus maniculatis*)
REME-Harvest Mouse (*Reithrodontomys megalotis*)
CHFA-Northwestern San Diego Pocket Mouse (*Chaetodipus fallax fallax*)

5.0 CONCLUSION

Based on the trapping results, the SKR does not occur on the site, and there will be no direct impacts to these species as a result of project construction.

One sensitive species was captured during the course of the trapping survey, the Northwestern San Diego pocket mouse- NWSDPM. Although not formally listed as threatened or endangered, impacts to these species may be considered significant under the California Environmental Quality Act (CEQA).

The California Environmental Quality Act addresses the determination of significant impacts. For determination of the level of significance to sensitive but non-listed resources, CEQA requires the impact be such that:

- The habitat of the protected resource will be substantially degraded or reduced;
- Cause a wildlife population to drop below self-sustaining levels; or
- The plant or wildlife community will be eliminated.
- Impacts to this species from project implementation are not significant since most of the occupied habitat is being preserved and the amount of take on a regional basis is negligible.

Based on trapping results and project habitat preservation/mitigation goals impacts to the NWSPM from project implementation are not significant.

It should be noted that trapping results are valid for one year, after which time additional trapping efforts may be required.

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APPENDIX A

FLORAL AND FAUNAL SPECIES COMPENDIA

APPENDIX A

FLORA OBSERVED ON THE VILLAGES AT LAKEVIEW PROJECT SITE

ANGIOSPERMAE	DICOT FLOWERING PLANTS
Asteraceae	**Sunflower family**
Ambrosia psilostachya	Western ragweed
Artemisia californica	California sagebrush
Boraginaceae	**Borage family**
Amsinckia intermedia	Fiddleneck
Cryptantha intermedia	Popcorn flower
Brassicaceae	**Mustard family**
**Hirschfeldia incana*	Short-podded mustard
Caprifoliaceae	**Honeysuckle family**
Sambucus mexicana	Blue elderberry
Euphorbiaceae	**Spurge family**
Eremocarpus setigerus	Doveweed
Euphorbia nutans	Spurge
Ricinus communis	Castor bean
Fabaceae	**Pea family**
Lotus scoparius	Deer weed
Geraniaceae	**Geranium family**
**Erodium cicutarium*	Red-stemmed filaree
Polygonaceae	**Buckwheat family**
Eriogonum fasciculatum	California buckwheat
Eriogonum gracile	Graceful buckwheat

MONOCOTYLEDONAE	MONOCOT FLOWERING PLANTS
Poaceae	**Grass family**
**Avena barbata*	Slender wild oats
**Avena sativa*	Cultivated oats
**Bromus diandrus*	Ripgut brome
**Bromus madritensis*	Red brome
**Schismus barbatus*	Mediterranean grass

*Denotes non-native species
Taxonomy and nomenclature follow Hickman 1993 and Munz 1974.

APPENDIX A

FAUNA OBSERVED ON THE PROJECT SITE

REPTILIA	REPTILES
Iguanidae	**Iguanas and their allies**
Uta stansburiana	Side-blotched lizard
Teiidae	**Whiptails and their allies**
Cnemidophorus tigris multiscutatus	Coastal whiptail
Colubridae	**Colubrids**
Masticophis flagellum	Coachwhip

AVES	BIRDS
Cathartidae	**Vultures**
Cathartes aura	Turkey vulture
Accipitridae	**Kites, hawks and eagles**
Buteo lineatus	Red-shouldered hawk
Buteo jamaicensis	Red-tailed hawk
Falconidae	**Caracaras and falcons**
Falco sparverius	American kestrel
Phasianidae	**Quails and pheasants**
Callipepla californica	California quail
Columbidae	**Pigeons and doves**
Zenaida macroura	Mourning dove
Cuculidae	**Typical cuckoos**
Geococcyx californianus	Greater roadrunner
Corvidae	**Crows and ravens**
Corvus brachyrhynchos	American crow
Sturnidae	**Starlings**
Sturnus vulgaris	European starling
Fringillidae	**Finches**
Carpodacus neomexicanus	House finch

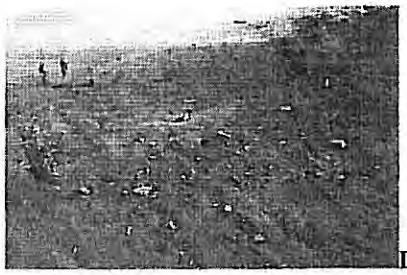
MAMMALIA	MAMMALS
Leporidae	**Rabbits and hares**
Sylvilagus audubonii	Audubon's cottontail
Sciuridae	**Squirrels, chipmunks and marmots**
Spermophilus beecheyi	California ground squirrel
Geomyidae	**Pocket gophers**
Thomomys bottae	Botta's pocket gopher
Heteromyidae	**Pocket mice and kangaroo rats**
Chaetodippus fallax fallax	Northwestern San Diego pocket mouse
Dipodomys simulans	Dulzura kangaroo rat
Cricetidae	**Cricetine mice and rats**
Reithrodontomys megalotis	Western harvest mouse
Peromyscus maniculatus	Deer mouse
Canidae	**Foxes, wolves and relatives**
Canis latrans	Coyote
Procyonidae	**Raccoons and relatives**
Procyon lotor	Raccoon

Nomenclature follows Hall 1981, Laudenslayer et al. 1991, and Stebbins 1985.

APPENDIX B

Site Photographs

Looking west from access road


Dulzura K-rat burrows on site

disked grassland adjacent to CPMCB

Disturbed annual grassland on site

APPENDIX G

PREPARER QUALIFICATIONS

William T. Everett is a research, consulting, and conservation biologist with more than 30 years experience in the San Diego environment and around the world. He has logged more than 12,000 hours of field work, all detailed with field notes. In the 1970's Bill apprenticed in the study of chaparral ecology under Frank Gander, the retired but renown premier California botanist of the 1930s and 40s. Although his specialty is ornithology, Bill has a long-standing interest in all endangered species management and conservation issues. As President then Conservation Chairman of the San Diego Chapter of the Audubon Society in the late 1970s, he gained a keen understanding of the conservation challenges facing a growing Southern California. He subsequently became one of the first Biological Consultants certified by the County of San Diego in the 1980s. Bill is a Fellow of the National Association of Environmental Professionals (NAEP) and subscribes to the NAEP Code of Ethics and Standards of Practice for Environmental Professionals.

Bill Everett has published numerous scientific articles and conducted research in Southern California, Alaska, Baja California, South America, and throughout the tropical Pacific Ocean. In 1977, in recognition of his accomplishments, he was appointed as a Research Associate of the Department of Birds and Mammals of the San Diego Natural History Museum, a position he holds to this day. In 1990 he was elected as a Research Fellow of the Zoological Society of San Diego, and in 1988 was appointed as the Senior Conservation Biologist of the Western Foundation of Vertebrate Zoology. The Royal Geographic Society of London elected Bill as a Fellow in 1996, following his election as a Fellow of the Explorers Club in 1990.

Hired as a biologist for the U.S. Fish and Wildlife Service in 1977, Bill conducted research on endangered Peregrine Falcons in Northern California at a time when their continued existence was questionable. His interest in threatened species led to publication by the Audubon Society in 1979 of his paper entitled "Threatened, Declining and Sensitive Bird Species in San Diego County" (Sketches 36:1-2). This paper contained the first published account of the decline of the California Gnatcatcher.

Beyond the Southern California area, Bill has prepared the seabird impacts sections for the Draft and Final Environmental Impact Statements for Hawaii-based Pelagic Fisheries of the Western Tropical Pacific Ocean (2001), received a National Science Foundation major grant to lead an International Biocomplexity Survey and Expedition to Isla Guadalupe, Baja California, Mexico (2000), led the effort to save North America's most endangered bird species, the San Clemente Loggerhead Shrike (1991-1997), and currently heads up efforts to restore bird populations on Wake Atoll and Christmas Island in the central Pacific.

Bill holds a U.S. Fish and Wildlife Master Bird Banding Permit (#22378) with Endangered Species Authorization, and California Gnatcatcher Survey Authorization Permit #

TE-788036. He received his Masters Degree from the University of San Diego in 1991, and completed a Post-Graduate Program at Harvard University's John F. Kennedy School of Government in 1997.

Bill has served as a member of the Conservation and Research Committee of the Zoological Society of San Diego since the committee was first established. In 1990, he founded the Endangered Species Recovery Council (www.esrc.org), an international organization of scientists and conservationists dedicated to finding solutions to the problem of species extinctions. He continues as President of the organization.

In May 2002 Bill was honored in New York as a first recipient of the Explorers Club "Champions of Wildlife" award.