

Appendix D5

Habitat Assessment Report (MBA 2008)



Appendices

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DRAFT
Habitat Assessment Report
Spring Trails Project Site (Access Roads)
Unincorporated San Bernardino County, California

Devore and San Bernardino North, California,
USGS 7.5-minute Topographic Quadrangle Map
Township 2 North, Range 5 West, Sections 35, 36 and Muscupiabe Land Grant

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Report Prepared By: Dale Hameister and
Debra De La Torre, Project Biologists



October 27, 2008

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SECTION 1: INTRODUCTION

At the request of PDC/Spring Trails L.L.C., Michael Brandman Associates (MBA) conducted a habitat assessment on two proposed access road alignments associated with the Spring Trails project site (herein referred to as project site or site), located in an unincorporated portion San Bernardino County within the Sphere of Influence of the City of San Bernardino. This report presents the results of a literature review and provides a detailed description of current existing conditions and a general habitat assessment for sensitive plant and wildlife species. General recommendations that are necessary to move this project forward are provided.

The information contained herein also includes an evaluation of potential impacts to biological resource associated with the development of the two access roads along the proposed alignments, based upon relevant environmental policies and regulations, including the federal Clean Water Act (CWA), the federal Endangered Species Act (ESA), the California Endangered Species Act (CESA), and the California Environmental Quality Act (CEQA).

1.1 - Project Site Location

The Spring Trails project site is generally located northeast of Interstate 215, south of State Route 138, and southeast of the I-15/I-215 Interchange in southwestern San Bernardino County (Exhibit 1). The site is located within Sections 35 and 36, Township 2 North, Range 5 West and portions of the Muscupiabe Land Grant on the Devore and San Bernardino North, California, United States Geological Survey (USGS) 7.5-minute topographic quadrangle map (Exhibit 2). The primary access road begins as an extension of Little League Drive from the south and from Perrin Drive from the east. The secondary access road originates at the frontage road of the I-215 freeway (Frontage Road) and travels northeasterly to the proposed Spring Trails project site with a connection at West Meyer Road (Exhibit 3).

Regional access to the project site is via the I-215 freeway exiting at the Palm Avenue interchange. Local access is currently provided by Little League Drive, north to Meyers Road, which is taken westerly to Martin Ranch Road, then northerly into the Spring Trails site (Exhibit 3).

1.2 - Project Description

The proposed alignment of the primary access road is the extension of Little League Drive northerly, intersecting with the new Verdemont Drive (previously Perrin Drive). Both sections of road are included in approved tract 17329 immediately southeast of the Spring Trails site and include approximately 5,224 linear feet of newly constructed access roads through hilly terrain. At the intersection of the extension of Little League and Verdemont Drive, project traffic would turn left onto Verdemont Drive, then right onto a currently unnamed street, the extension of which would be the main access into the Spring Trails site.

The proposed secondary access road is approximately 12,400 linear feet in length and would begin at Frontage Road, southwesterly of the Spring Trails site, traveling northerly and crossing the Cable Creek Wash and West Meyers Road. At the secondary access road/Frontage Road intersection, project traffic would then travel east for one mile to access the I-215 freeway at Palm Avenue. Frontage Road does not reach to the Devore Road interchange.



Source: Census 2000 Data, The CaSIL, MBA GIS 2007.



Michael Brandman Associates

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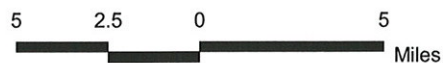
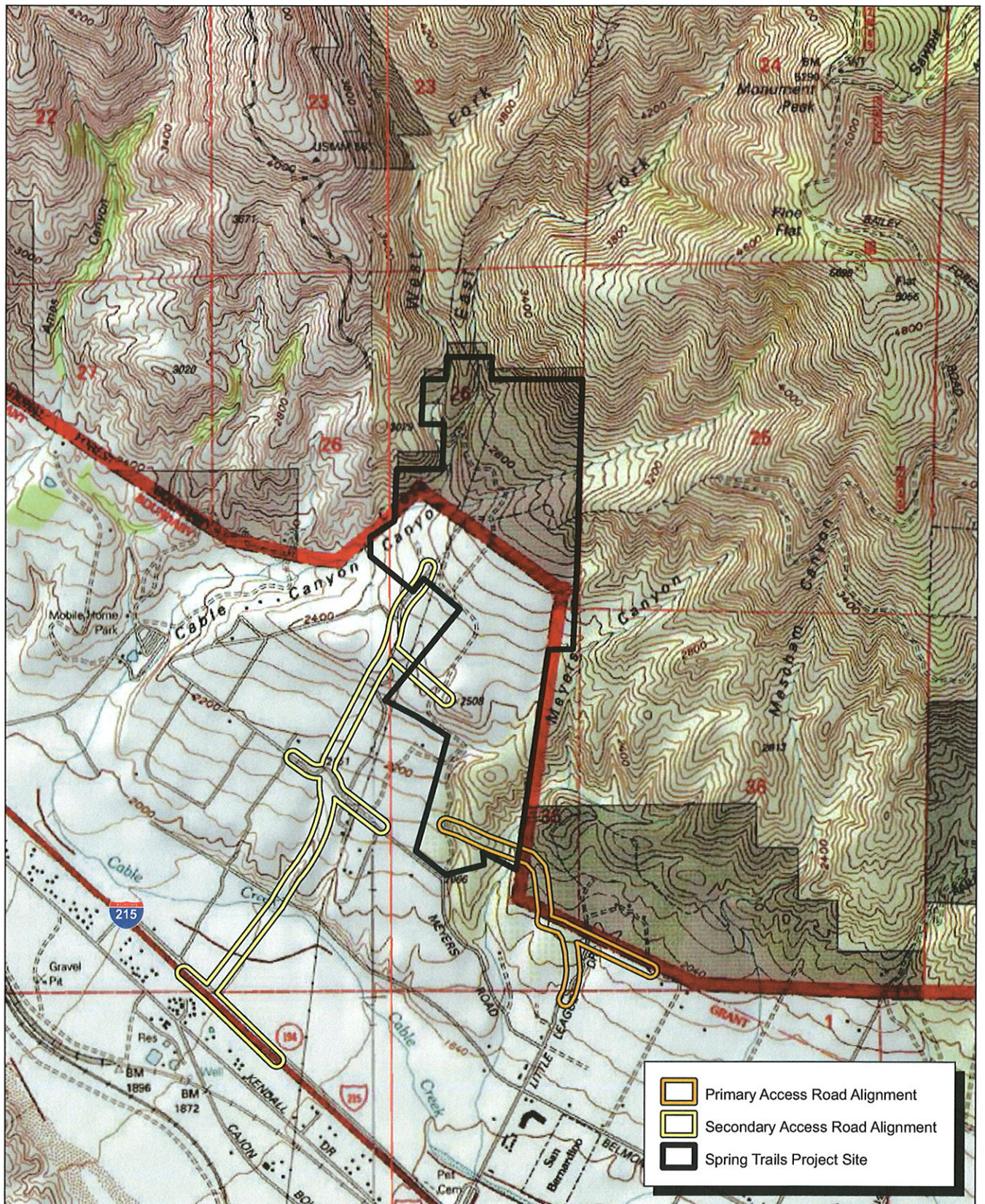


Exhibit 1 Regional Location Map

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HABITAT ASSESSMENT



Source: TOPOI USGS Devore (1996) and San Bernardino North (1996) 7.5' DRG's.



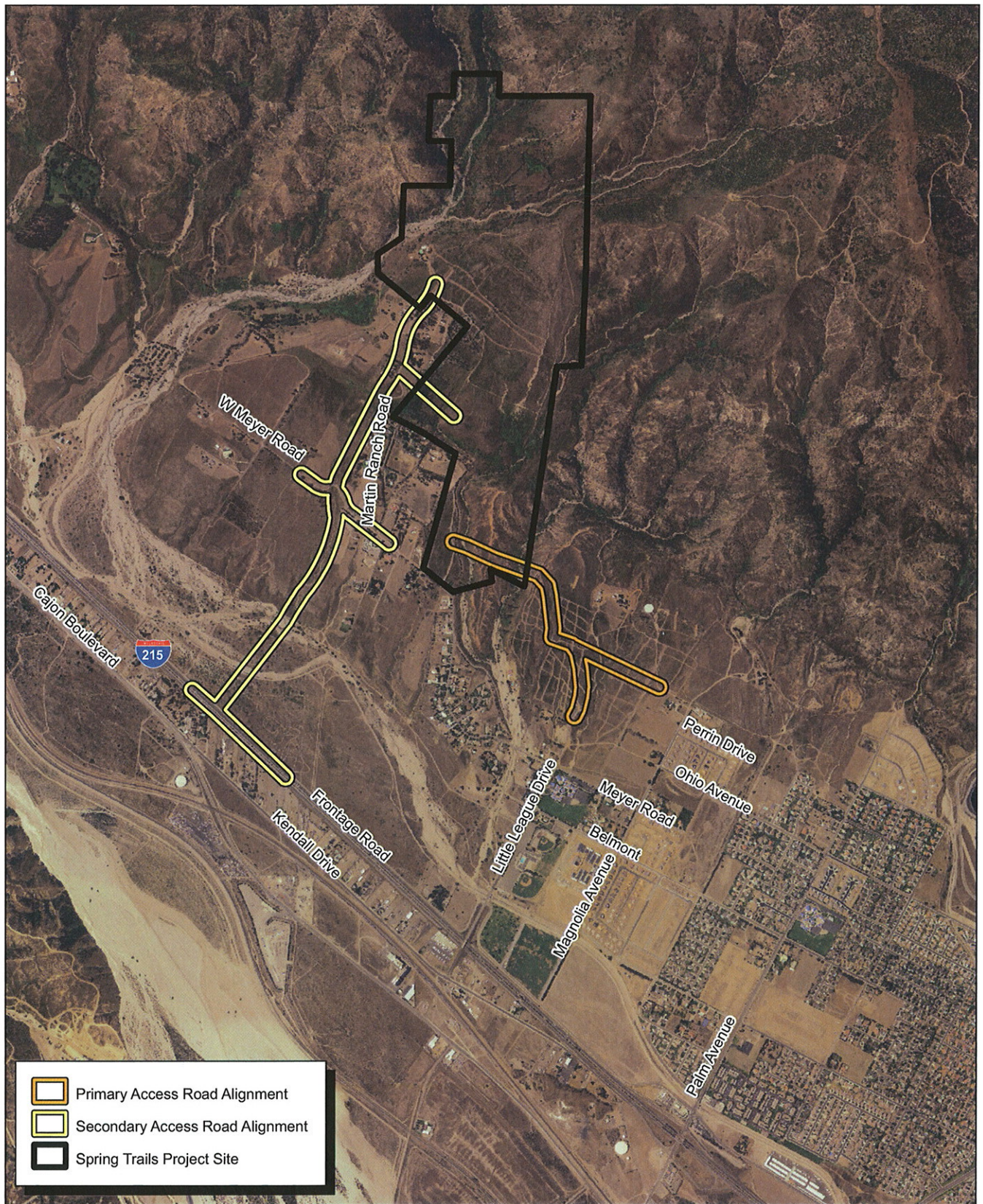
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Exhibit 2 Local Vicinity Map Topographic Base

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HABITAT ASSESSMENT



Source: NAIP for San Bernardino County (2005), MBA GIS (2008).



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Exhibit 3 Local Vicinity Map Aerial Base

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HABITAT ASSESSMENT

SECTION 2: METHODS

Analysis of the biological resources associated with the development of the two access roads began with a thorough review of relevant literature followed by a reconnaissance-level survey. The primary objective of the survey was to document existing site conditions and determine the potential presence of any sensitive biological resources.

For the purpose of this report, sensitive species refers to all species formally listed as threatened and/or endangered under the ESA and CESA, California Species of Special Concern (CSS), designated as Fully Protected by California Department of Fish and Game (CDFG); given a status of 1A, 1B, or 2 by the California Native Plant Society (CNPS); or designated as sensitive by City, County, or other regional planning documents.

2.1 - Literature Review

The literature review provides a baseline from which to evaluate the biological resources potentially occurring along the access road alignments, as well as the surrounding area.

2.1.1 - Sensitive Species

MBA compiled a list of threatened, endangered, and otherwise sensitive species previously recorded to occur on or in the vicinity of the access road alignments. The list was based on a search of the CDFG's California Natural Diversity Database (CNDDDB), a sensitive species and plant community account database and the CNPS's Electronic Inventory of Rare and Endangered Vascular Plants of California database for the USGS 7.5-minute topographic quadrangle maps containing the proposed alignments and immediate vicinity.

The CNDDDB GIS database along with ArcGIS software was used to determine the distance between known recorded occurrences of sensitive species and the project site. Federal register listings, protocols, and species data provided by the U.S. Fish and Wildlife Service (USFWS) and CDFG were reviewed in conjunction with anticipated federal and State listed species, or proposed for listing, potentially occurring in the vicinity. These and other documents are listed in Section 6, References.

2.1.2 - Topographic Maps and Aerial Photographs

MBA reviewed current USGS 7.5-minute topographic quadrangle map(s) and aerial photographs as a preliminary analysis of the existing conditions within the access road alignments and immediate vicinity. Information obtained from the review of the topographic maps included elevation range, general watershed information, and potential drainage feature locations. Aerial photographs provide an aerial perspective of the most current site conditions with regard to onsite and offsite land use, plant community location, and potential location of wildlife movement corridors.

2.1.3 - Soil Surveys

Many sensitive plant species have a limited distribution based exclusively on soil type. The United States Department of Agriculture (USDA) has published soil surveys that describe the soil series that occur within a particular area. A soil series is a group of soils with similar profiles. These profiles include major horizons with similar thickness, arrangement, and other important characteristics. These series are further subdivided into soil mapping units, which provide specific information regarding soil characteristics. Pertinent USDA soil survey maps were reviewed to determine the existing soil mapping units within the access road alignments and to establish if soil conditions are suitable for any sensitive plant species.

2.2 - Reconnaissance-Level Survey

MBA biologists Dale Hameister and Debra De La Torre conducted the reconnaissance-level field survey on September 19 and October 2, 2008. Special attention was paid to sensitive habitats or those areas potentially supporting sensitive floral and faunal species.

The reconnaissance-level survey was conducted on foot during daylight hours. Generally, the object of the survey was not to extensively search for every species that could within the access road alignments, but to ascertain general site conditions and identify potentially suitable habitat areas for various sensitive plant and wildlife species. Appendix C provides photographic documentation of various plant communities observed during the site visit.

2.2.1 - Plant Community Mapping

Plant communities were mapped using 7.5-minute USGS topographic base maps and recent aerial photography. Sensitive or unusual biological resources identified during the literature review were ground-truthed during the reconnaissance-level survey for mapping accuracy. The plant communities within the access road alignments were classified according to Holland's Preliminary Descriptions of the Terrestrial Natural Communities of California (1986 and 1996 update) and cross-referenced with CDFG's List of Terrestrial Natural Communities (2003). Modifications were made by MBA's biologist where appropriate.

2.2.2 - Plant Species

Common plant species observed during the reconnaissance-level survey were identified by visual characteristics and morphology in the field and recorded in a field notebook. Uncommon and less familiar plants were identified offsite using taxonomical guides. A list of all species observed within the proposed access road alignments was compiled from the survey data, shown in Appendix A. Taxonomic nomenclature used in this study follows Hickman (1993). Common plant names, when not available from Hickman, were taken from other regionally specific references. In this report, scientific names are provided immediately following common names of plant species for the first reference only.

2.2.3 - Wildlife Species

Wildlife species detected during the reconnaissance-level survey by sight, calls, tracks, scat, or other signs were recorded in a field notebook. Notations were made regarding suitable habitat for those sensitive species determined to potentially occur within the access road alignments. Appropriate field guides were used to assist with species identification during surveys. Common names of wildlife species are standard; however, scientific names are provided immediately following common names for the first reference only. Appendix A lists all wildlife species observed or detected during the survey.

2.2.4 - Jurisdictional Waters and Wetlands

Prior to conducting the site visit, MBA's biologist reviewed USGS topographic maps and aerial photography to identify any potential natural drainage features and water bodies. In general, all surface drainage features indicated as blue-line streams on USGS maps and linear patches of vegetation expected to exhibit evidence of flows are considered potentially subject to State and federal regulatory authority as "waters of the US and/or State." The assessment was not intended as a formal delineation of waters of the US or State but rather to identify areas that may require a formal delineation.

2.2.5 - Wildlife Movement Corridors

Wildlife movement corridors link areas of suitable wildlife habitat that are otherwise separated by rugged terrain, changes in vegetation, or human disturbance. The fragmentation of open space areas by urbanization creates isolated "islands" of wildlife habitat, separating different populations of a single species. Corridors effectively act as links between these populations.

The access road alignments were evaluated for evidence of a wildlife movement corridor. The scope of the biological resources impact assessment did not include a formal wildlife movement corridor study such as the use of track plates, camera stations, scent stations, or snares. However, the focus of this study was to determine if the alteration of current land use along the access road alignments will have significant impacts on the regional movement of wildlife. These conclusions are based on the information compiled from the literature review, including, aerial photographs, USGS topographic maps, and resource maps for the vicinity, the reconnaissance-level survey, and knowledge of desired topography and resource requirements for wildlife potentially utilizing the access road alignments and vicinity.

2.3 - Problems and Limitations

The reconnaissance-level survey was conducted during the late summer season. Very few plant species were in flower at the time of the survey. However, most perennial herbs and annuals were still present and although they may have been dying back, were still identifiable.

Many amphibians, reptiles, and mammals are secretive by nature and some are nocturnally active, making diurnal observations problematic. Observations of diagnostic sign may provide evidence of

occurrence of these species. Otherwise, conclusions regarding potential occurrence are based on consideration of habitat suitability factors.

SECTION 3: RESULTS

The field surveys were conducted on September 19th and October 2nd. Surveys were generally conducted between 0900 and 1630 hours. Weather conditions during the field surveys included temperatures ranging from 85 to 98 degrees Fahrenheit, with clear skies and winds between 0 and 11 miles per hour. The last measurable rain event prior to conducting the surveys was recorded on January 5, 2008.

3.1 - Existing Conditions

Historic Land Use. The project area has been used for agricultural purposes in the past but no recent use of either proposed alignment was evident. On November 24, 1980, the Panorama fire burned the area, leaving only the mature eucalyptus trees and the vegetation within portions of the canyons. In October 2003, the Old Fire swept across the front of the San Bernardino Mountains burning the area including several homes.

Topography. The two road alignments exhibit different topographic features. The primary access road alignment is located in hilly terrain, ranging in elevation from 2,040 to 2,400 feet above mean sea level (msl). The secondary access road is located at approximately 2,800 feet above msl at the entrance to the Spring Trails site and descends towards its terminus at Frontage Road to approximately 1,700 feet above msl.

Soils. The United States Department of Agriculture (USDA) has published soil surveys that describe the soil series that occur within a particular area. A soil series is a group of soils with similar profiles. These profiles include major horizons with similar thickness, arrangement, and other important characteristics. These series are further subdivided into soil mapping units, which provide specific information regarding soil characteristics.

Based on the San Bernardino County Southwestern Part, soils survey (USDA 1979), the access road alignments contain ten distinct soil mapping units: Ramona family, Osito-Rock outcrop, Cieneba fine sandy loam, Hanford coarse sandy loam, Ramona sandy loam, Saugus sandy loam, Soboba gravely loamy sand, Soboba stony loamy sand, and Tujunga gravely loamy sand (Exhibit 4).

3.2 - Vegetation

The project area appears to have recovered from the October 2003 Old Fire and currently supports a diversity of habitat types as a result of natural revegetation. A brief description of the plant communities, the plant species common to these communities and current condition of the habitat is provided below. Plant community descriptions are based on field observations and generally follow the naming convention used by Holland 1986 (Exhibit 5). Table 1 summarizes the plant communities

found onsite, the extent of their occurrence and whether the plant community is restricted to one of the access road alignments, or both.

Table 1: Plant Communities

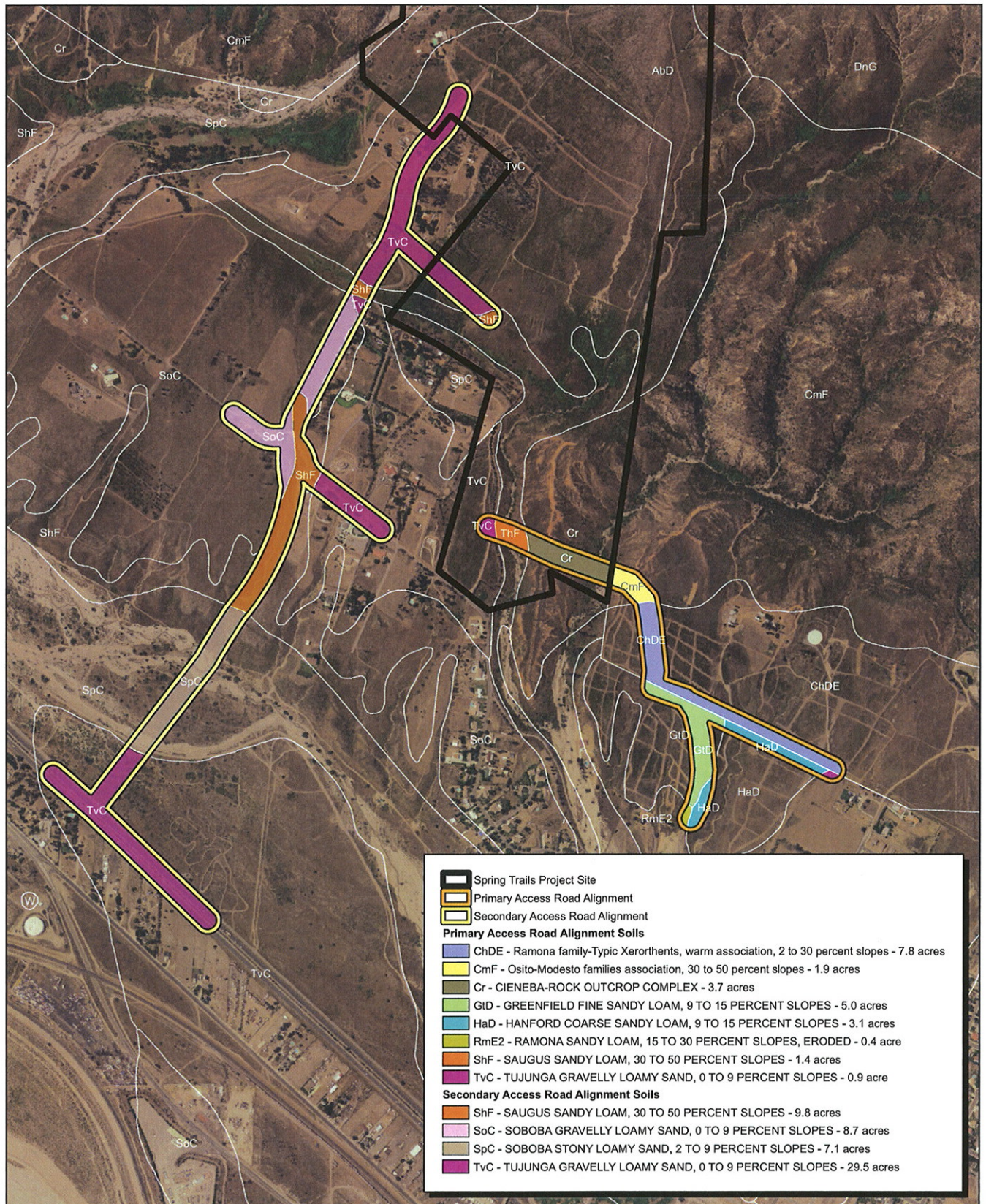
Plant Community	Acreage	
	Primary Access Road	Secondary Access Road
Non-native Annual Grassland	0	26.5
Eucalyptus Woodland	0	2.1
Developed	0	17.7
Riversidean Sage Scrub	19.4	1.3
Riversidean Alluvial Fan Sage Scrub	0	7.5
Paved	0.5	0
Ruderal	3.4	0
Sycamore Alluvial Woodland	0.9	0
Total	24.2	55.1

3.2.1 - Non-native Annual Grassland

This community comprises 26.5-acres (see Exhibit 3). Dominant species include wild oat (*Avena fatua*), slender wild oat (*Avena barbata*), ripgut grass (*Bromus diandrus*), foxtail chess (*Bromus madritensis* ssp. *rubens*), barley (*Hordeum vulgare*), fescue (*Vulpia myuros*), black mustard (*Brassica nigra*), red-stemmed filaree (*Erodium cicutarium*), and cheeseweed (*Malva parviflora*). Non-native grassland (NNG) is typically one of the first plant communities to re-establish a disturbed area following a fire. The majority of NNG is within the northern portion of the secondary access road alignment.

3.2.2 - Eucalyptus Woodland

Eucalyptus woodlands area dominated by non-native Eucalyptus species occurring onsite include red gum (*Eucalyptus camaldulensis*), blue gum (*Eucalyptus globulus*), silver-dollar gum (*Eucalyptus polyanthemus*), and flooded gum (*Eucalyptus rudis*). These trees are scattered throughout the project site and occasionally occur within the native Riversidean alluvial fan sage scrub (RAFSS), Riversidean sage scrub (RSS), and NNG communities. In total, there are 2.1 acres of eucalyptus trees that would be affected by the proposed access roads; all associated with the secondary access road alignment. There are also isolated Eucalyptus trees scattered throughout portions of the two alignments, but are not considered sufficient to be considered a separate plant community.



Source: NAIP for San Bernardino County (2005), MBA GIS (2008).



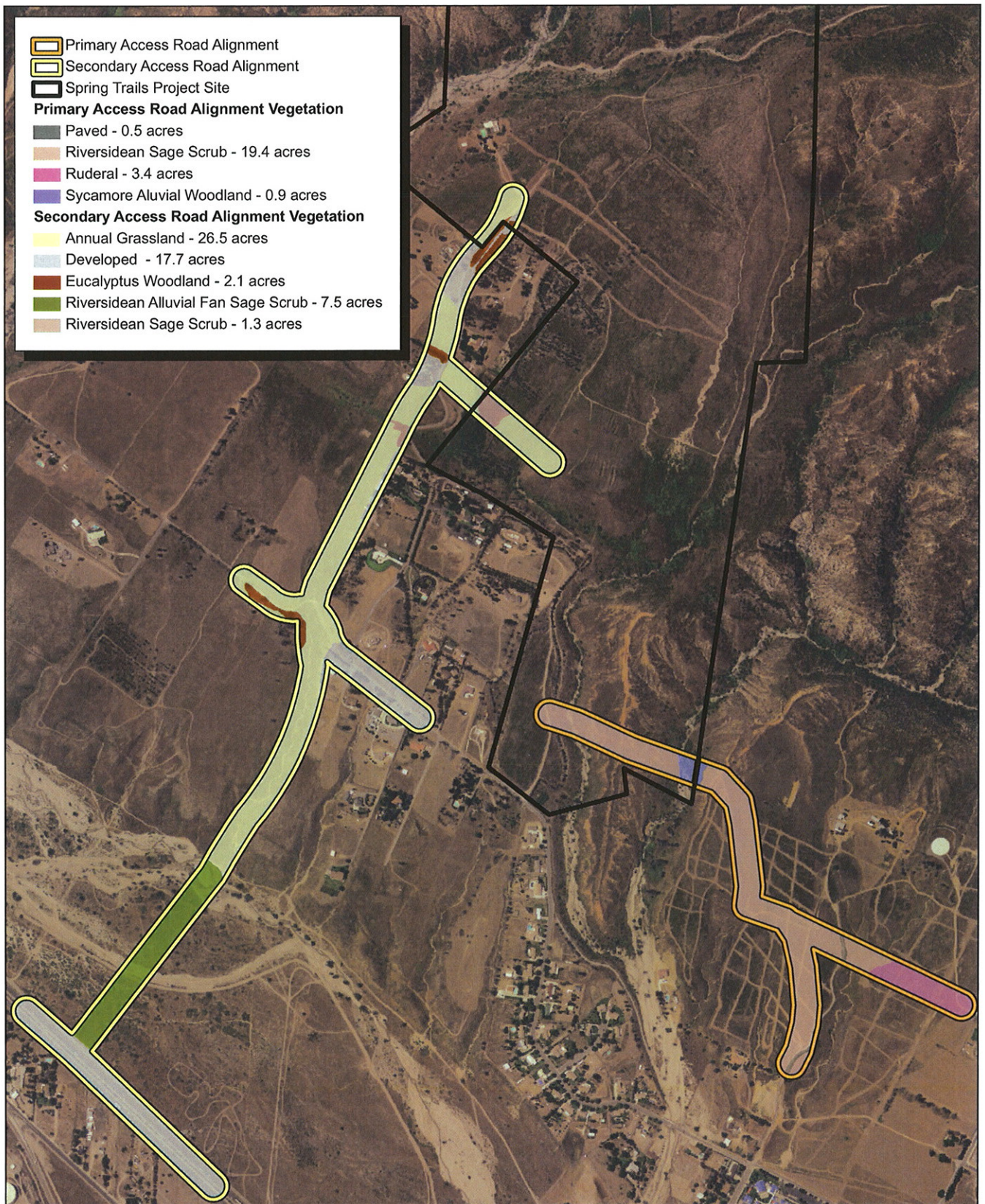
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Exhibit 4 USDA Soils Map

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Source: NAIP for San Bernardino County (2005), MBA GIS (2008).



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Exhibit 5 Plant Communities Map

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3.2.3 - Developed

Approximately 17.7 acres of the proposed secondary access road is developed. Previous development includes rural residential development and existing paved roads. Developed areas are located in the northern portions of the secondary access road.

3.2.4 - Riversidean Sage Scrub (RSS)

RSS is the most xeric (dry, desert-like) expression of coastal sage scrub in southern California and has adapted to periodic occurrence of fire and other forms of disturbance. The majority of RSS onsite has a history of disturbance. Much of the area currently supporting RSS was dryland farmed or grazed in the past. Previous fire events have greatly influenced the RSS within the access road alignments. Today the RSS has substantially recovered and is currently in an intermediate phase of succession within the access road alignments. This community is dominated by California buckwheat (*Eriogonum fasciculatum*), deer weed (*Lotus scoparius*), white sage (*Salvia apiana*), yerba santa (*Eriodictyon trichocalyx*) and black sage (*Salvia mellifera*). There is currently 20.7 acres of RSS within both access road alignments. RSS is the predominate community on the primary access road alignment.

3.2.5 - Riversidean Alluvial Fan Sage Scrub (RAFSS)

The CDFG lists RAFSS as rare and it is considered a sensitive plant community because it is often believed to be suitable habitat for a number of sensitive plant and wildlife species. RAFSS is an open plant community adapted to the harsh conditions of flooding. It grows on sandy, rocky alluvium deposited by streams that experience infrequent episodes of flooding. RAFSS is composed of an assortment of drought-deciduous sub-shrubs and large, evergreen, woody shrubs that are adapted to the periodic and intense episodes of flooding and erosion that occurs along alluvial fans. Scalebroom (*Lepidospartum squamatum*) is a typical component to RAFSS and is located throughout this plant community. Additional species common to RAFSS and located onsite include spiny redberry (*Rhamnus crocea*), chaparral yucca (*Yucca whipplei*), California croton (*Croton californicus*), birch-leaf mountain mahogany (*Cercocarpus betuloides*), yerba santa and deerweed (*Lotus scoparius*). Cable Creek has a number of riparian species growing along its margins, including California sycamore (*Platanus racemosa*), Fremont cottonwood (*Populus fremontii* ssp. *fremontii*), blue elderberry (*Sambucus mexicana*), southern California black walnut (*Juglans californica* var. *californica*), and California wild grape (*Vitis californica*). There are currently 7.5 acres of RAFSS habitat within the secondary access road alignment. No RAFSS was observed within the primary access road alignment.

3.2.6 - Paved

Approximately 0.5 acres of the proposed access road alignments are paved. The paved areas are commonly associated with previously paved access roads and are completely void of any vegetation.

3.2.7 - Ruderal

Ruderal plant communities are typically associated with recently disturbed areas and are dominated by plant species that are quick to colonize disturbed lands. The disturbance may be natural (e.g., wildfires), or due to human influence - construction-related (e.g., road construction, building construction or mining), or agricultural (e.g., abandoned farming fields or abandoned irrigation ditches). Approximately 3.4 acres of the proposed access road alignment contain this plant community. The ruderal areas are associated with the eastern portion of the primary access road.

3.2.8 - Sycamore Alluvial Woodland

Sycamore alluvial woodland, dominated by western sycamore, scrub oak and Mexican elderberry was observed along the primary access road alignment. The 0.9 acre of woodland is associated with the braided channel systems in Meyers Canyon (Exhibit 5). This riparian woodland occurs within the canyon bottoms and was relatively unaffected by previous wildfires as those plant communities found on the upper alluvial benches and hilltops. Vegetation within this woodland is diverse, healthy, and shows no remaining adverse impacts from the 2003 Old Fire. Common plant species include western sycamore (*Platanus racemosa*), mulefat (*Baccharis salicifolia*), and creek monkey flower (*Mimulus guttatus*). This community is associated with the western portion of the primary access road alignment.

3.3 - Wildlife

3.3.1 - Amphibians

Meyers Creek traverses the central portion of the primary access road alignment. This perennial stream provides adequate habitat for common amphibian species. In addition, the area can support a variety of amphibians in the moister woodland areas and canyon bottoms. California tree frog (*Hyla cadaverina*) was observed in a 2007 survey of an area southerly of the proposed primary access road alignment.

3.3.2 - Reptiles

The access road alignments possess the potential to support a wide variety of common reptile species. Reptile species observed during surveys included the sagebrush lizard (*Sceloporus graciosus*) and side-blotched lizard (*Uta elegans*).

3.3.3 - Mammals

A number of mammal species were either directly observed, or their presence was deduced by diagnostic signs (track, scat, burrows, etc.) along both access road alignments. Among these were the desert cottontail (*Sylvilagus audubonii*), California ground squirrel (*Spermophilus beecheyi*), bobcat (*Lynx rufus*), coyote (*Canis latrans*), and mule deer (*Odocoileus hemionus*).

3.3.4 - Special Interest Species

Legal protection for sensitive species varies widely, from the comprehensive protection extended to listed threatened/endangered species to no legal status at present. CDFG, USFWS, local agencies, and

special interest groups, such as the CNPS, publish watch lists of declining species. Species on watch lists can be included as part of the sensitive species assessment. Species that are candidates proposed for listing or are candidates for State and/or federal listing are also included in the sensitive species list.

Inclusion of the potential species described in the sensitive species analysis of the study area is based on the following criteria:

1. Direct observation of the species or its sign in the study area or immediate vicinity during surveys conducted for this study or reported in previous biological studies;
2. Sighting by other qualified observers;
3. Record reported by the CNDDDB published by CDFG;
4. Presence or location of specific species lists provided by private groups (e.g., CNPS); or
5. Study area lies within known distribution of a given species and contains appropriate habitat.

The literature review revealed a total of 13 sensitive plant species and 48 sensitive wildlife species with the potential to occur within the area of the proposed access road alignments. Tables 2 and 3 list these species with a data summary for each, and a determination as to the likelihood of the species occurring on-site.

Threatened/Endangered Species. Of the five federally or State listed threatened/endangered plant species and nine threatened/endangered wildlife species that were identified as occurring within the vicinity of the access road alignments, three plants and six wildlife species were determined to have a moderate or higher potential to occur on the project site.

Nevin's Barberry. The RSS habitat on both proposed access road alignments contain suitable habitat for the Nevin's barberry (*Berberis nevinii*), however this plant species was not observed during the recent site visits. This species is a shrub and would be easily identifiable during a general site visit. This species is considered absent from the study area.

Slender-horned Spineflower. The RAFSS habitat provides suitable habitat for the slender-horned spineflower (*Dodecahema leptoceras*). The study area was visited after this species known flowering period. It is likely that this species would not be identifiable during the project surveys.

Santa Ana River Woollystar. The RAFSS habitat associated with Cable Creek provides suitable habitat for the Santa Ana River woolly star (*Eriastrum densifolium* ssp. *sanctorum*). The study area was visited after this species known flowering period, but the species is an annual herb. It is highly likely that this species would be identifiable during the project surveys and is considered absent from the access road alignments.

San Bernardino Merriam's Kangaroo Rat. The RAFSS habitat on site provides suitable sandy soils for the federally listed San Bernardino kangaroo rat (*Dipodomys merriami parvus*) (SBKR). The secondary access road alignment is also located within the final

designated critical habitat for this species. The closest recorded occurrence is within approximately 2 miles of the study area. This species has a moderate potential for occurrence.

Coastal California Gnatcatcher. The RSS plant community onsite provides suitable foraging and nesting habitat for coastal California gnatcatcher (*Poliophtila californica*) (CAGN). RSS is the predominate community on the primary access road alignment. Although surveys were conducted in the immediate vicinity of the alignment with negative findings in 2007 the suitable habitat areas within the proposed access road alignment was not covered during survey efforts. The closest recorded occurrence is within 1 mile of the study area. There is a moderate potential for this species to occur.

Southwestern Willow Flycatcher. The Sycamore Alluvial woodland plant communities in Cable Creek and Meyers Creek provide suitable habitat for the southwestern willow flycatcher (*Empidonax traillii extimus*) (SWF). This community is associated with the western portion of the primary access road alignment. Although surveys were conducted in the study area with negative findings in 2007, the suitable habitat areas within the proposed access road alignment was not covered during those survey efforts. There are no recorded occurrences of this species within 7 miles of the study area. There is a moderate potential for this species to occur.

Least Bell's Vireo. The riparian woodland plant communities in Cable Creek and Meyers Creek provide suitable habitat for the least Bell's vireo (*Vireo bellii pusillus*) (LBV). Although surveys were conducted in the immediate vicinity of the study area with negative findings in 2007, the suitable habitat areas within the proposed access road alignments were not covered during those survey efforts. The closest recorded occurrence is 6.5 miles from the study area. There is a moderate potential for this species to occur.

Mountain Yellow-legged Frog. Southern California mountain yellow-legged frogs (*Rana aurora draytonii*) are diurnal, highly aquatic frogs, occupying rocky and shaded streams with cool waters originating from springs and snowmelt. They do not occur in the smallest creeks. The small sycamore alluvial woodland area within the primary access road alignment impact area is too small to support a population of mountain yellow-legged frog. The closest recorded occurrence is 6.9 miles to the north. It is unlikely to occur along either access road alignment.

Arroyo Toad. The perennial stream in Cable Creek provides suitable habitat for arroyo toad (*Bufo californicus*); however, focused surveys in 2007 in the vicinity were negative. The primary access road alignment has Sycamore Alluvial Woodland. Although surveys were conducted in the immediate vicinity in 2007 with negative findings, the suitable habitat areas within the proposed access roads was not covered during those survey efforts. The closest recorded occurrence is within 5.9 miles of the study area. There is a moderate potential for this species to occur.

Non-listed Sensitive Species. Of the 8 plant and 39 wildlife sensitive species identified in Tables 2 and 3 plant species, 24 sensitive wildlife species have a moderate to high probability of occurring within either or both access road alignments. A complete list of these species can be found in Table 3.

3.4 - Critical Habitat

The proposed access road alignments falls within SBKR critical habitat recently designated by the USFWS. Loss or adverse modification of Critical Habitat must be evaluated by federal agencies prior to authorizing or conducting a major federal action.

Table 2: Potential Sensitive Plant Species

Plant Species	Status Fed/State/CNPS	Observed Onsite	Likelihood of Occurrence
Nevin's barberry (<i>Berberis nevini</i>)	FE/SE/IB.1	No	Very low as species is easily observed
Slender-horned-spineflower (<i>Dodecahema leptoceras</i>)	FE/SE/IB.1	No	Low-moderate suitable habitat in Cable Creek
Santa Ana River woolly star (<i>Eriastrum densifolium</i> ssp. <i>sanctorum</i>)	FE/SE/IB.1	No	Low-moderate suitable habitat in Cable Creek
Marsh sandwort (<i>Arenaria paludicola</i>)	FE/SE/IB.1	No	None, no suitable habitat
Thread-leaved brodiaea (<i>Brodiaea filifolia</i>)	FT/SE/IB.1	No	None, no suitable habitat
Orcutt's brodiaea (<i>Brodiaea orcutti</i>)	None/None/IB.1	No	None, well outside of its geographic range; no suitable habitat
Plummer's mariposa lily (<i>Calochortus plummerae</i>)	None/None/IB.2	No	Expected to occur onsite; suitable habitat throughout site
Parry's spineflower (<i>Chorizanthe parryi</i> var. <i>parryi</i>)	None/None/IB.1	No	Expected to occur onsite; suitable habitat throughout site
Many-stemmed dudleya (<i>Dudleya multicaulis</i>)	None/None/IB.2	No	None, well outside of its geographic range; no suitable habitat
San Bernardino Mountain owl's-clover (<i>Castilleja lasiorhyncha</i>)	None/None/IB.2	No	None, well below elevation range
Hot springs fimbriatylis (<i>Fimbristylis thermalis</i>)	None/None/2.2	No	None, no suitable habitat
Smooth tarplant (<i>Centromadia pungens</i> ssp. <i>laevis</i>)	None/None/IB.1	No	Unlikely, marginal habitat and at the margin of its geographic range
Parish's gooseberry (<i>Ribes divaricatum</i> var. <i>parishii</i>)	None/None/1A	No	Very low likelihood, plant is probably extinct

Table 2: Potential Sensitive Plant Species (Cont.)

Plant Species	Status Fed/State/CNPS	Observed Onsite	Likelihood of Occurrence
Source: "Biological Resources Assessment and Report for Martin Ranch", PCR February 1999, subsequent biological resources assessment and report, White and Leatherman Bioservices, 2002, MBA General Biological Resources Report 2007.			
*Includes secondary access route.			
<u>Federal (USFWS) California Native Plant Society (CNPS) List</u>			
FE Federally listed, endangered	List 1A: Plants presumed extinct in California.		
FT Federally listed, threatened	List 1B: Plants rare, threatened or endangered in California and elsewhere.		
FPE Federally proposed endangered	List 2: Plants rare, threatened or endangered in California, but more common elsewhere.		
FPT Federally proposed threatened	List 3: Plants about which we need more information - a review list.		
FC Candidate species. Sufficient data are on file to support the federal listing.	List 4: Plants of limited distribution - a watch list.		
FSC Federal species of concern (former C2 and C3 species)			
<u>State (CDEG)</u>			
SE State listed, endangered			
ST State listed, threatened			
SCE State candidate endangered			
SCT State candidate threatened			
SFP State fully protected			
SP State protected			
CSC California species of special concern			

Table 3: Potential Sensitive Wildlife Species

Endangered or Threatened	Species	Status Fed/State	Observed Onsite	Likelihood of Occurrence
Arroyo toad (<i>Bufo californicus</i>)		FE/CSC	No	Marginally suitable habitat in Cable Creek, nearest recorded occurrence 5.9 miles. Moderate potential to occur.
California red-legged frog (<i>Rana aurora draytonii</i>)		FE/CSC	No	No suitable habitat. Not likely to occur.
Mountain yellow-legged frog (<i>Rana muscosa</i>)		FEC/CSC	No	Marginally suitable habitat in Cable Creek, nearest recorded occurrence 6.9 miles. Not likely to occur.
Southern rubber boa (<i>Charina bottae umbratica</i>)		None/ST	No	No suitable habitat. Site is below the elevation range of this species. Not likely to occur.
Southwestern willow flycatcher (<i>Empidonax traillii extimus</i>)		FE/SE	No	Moderate suitable habitat; recorded occurrence 7.0 miles. No observations during surveys on adjacent property. Low potential for occurrence.
Coastal California gnatcatcher (<i>Poliopitila californica</i>)		FT/CSC	No	Negative focused surveys on Spring Trails (2007), suitable habitat onsite; nearest recorded occurrence 1.0 miles. Moderate potential to occur.
San Bernardino kangaroo rat (<i>Dipodomys merriami parvus</i>)		FE/CSC	No	Negative focused surveys on Spring Trails (2007), suitable habitat onsite; nearest recorded occurrence 2.0 miles. Moderate potential to occur.
Least Bell's vireo (<i>Vireo bellii pusillus</i>)		FE/SE	No	Negative focused surveys on Spring Trails (2007), suitable habitat onsite; Moderate potential to occur.
Santa Ana Sucker (<i>Catostomus santaanae</i>)		FT/CSC	No	No suitable habitat. Not likely to occur.
Sensitive Species				

Table 3: Potential Sensitive Wildlife Species (Cont.)

Species	Status Fed/State	Observed Onsite	Likelihood of Occurrence
American Badger (<i>Taxidea taxus berlandieri</i>)	CSC	No	Marginal suitable habitat. Not likely to occur
Western spadefoot toad (<i>Scaphiopus hammondi</i>)	FSC/CSC	No	No suitable habitat. Not likely to occur.
Southwestern pond turtle (<i>Clemmys marmorata pallida</i>)	FSC/CSC	No	No suitable habitat. Not likely to occur.
Orange-throated whiptail (<i>Cnemidophorus hyperythrus beldingi</i>)	FSC/CSC	No	Edge of known range, limited suitable habitat, low potential to occur.
San Diego horned lizard (<i>Phrynosoma coronatum blainvillei</i>)	FSC/CSC	Yes	Suitable habitat onsite. Closest recorded occurrence is on the Spring Trails project site. High potential to occur.
San Diego banded gecko (<i>Coleonyx variegatus abbotti</i>)	None/CSC	No	Marginal habitat onsite. Moderate potential to occur.
California silvery legless lizard (<i>Anniella pulchra</i>)	FS/CSC	No	Suitable habitat, high potential to occur onsite. .
Rosy boa (<i>Charina trivirgata</i>)	FS/CSC	No	Suitable habitat onsite. High potential to occur.
Coast patch-nosed snake (<i>Salvadora hexalepis virgultea</i>)	None/CSC	No	Suitable habitat onsite. High potential to occur.
Northern harrier (<i>Circus cyaneus</i>)	None/CSC	No	Suitable foraging habitat onsite High potential to occur (foraging only)
Golden eagle (<i>Aquila chrysaetos</i>)	None/CSC/S FP	No	Suitable foraging habitat onsite High potential to occur (foraging only)
Ferruginous hawk (<i>Buteo regalis</i>)	None/CSC	No	Suitable foraging habitat onsite High potential to occur (foraging only)
Swainson's hawk (<i>Buteo swainsonii</i>)	None/S2 THR	No	Suitable foraging habitat onsite High potential to occur (foraging only)

Table 3: Potential Sensitive Wildlife Species (Cont.)

Species	Status Fed/State	Observed Onsite	Likelihood of Occurrence
Merlin (<i>Falco columbarius</i>)	None/CSC	No	Suitable foraging habitat onsite High potential to occur (Winter only)
Sharp-shinned hawk (<i>Accipiter striatus</i>)	None/CSC	Yes	Suitable habitat onsite. Closest recorded occurrence is on the Spring Trails project site. High potential to occur.
Cooper's hawk (<i>Accipiter cooperii</i>)	None/CSC	No	Suitable foraging habitat onsite High potential to occur (foraging only)
Prairie falcon (<i>Falco mexicanus</i>)	FSC/CSC	No	Marginal foraging habitat onsite Moderate potential to occur (foraging only)
White-tailed kite (<i>Elanus leucurus</i>)	None/SFP	No	Suitable foraging habitat onsite High potential to occur (foraging only)
Burrowing owl (<i>Athene cunicularia</i>)	FSC/CSC	No	Low quality habitat onsite. Low potential to occur.
California horned lark (<i>Eremophila alpestris actia</i>)	None/CSC	No	Marginal quality habitat onsite, moderate potential to occur.
Loggerhead shrike (<i>Lanius ludovicianus</i>)	FSC/CSC	No	Suitable habitat onsite. Closest recorded occurrence is on the Spring Trails project site. High potential to occur.
Southern California rufous-crowned sparrow (<i>Aimophila ruficeps canescens</i>)	None/CSC	Yes	Suitable habitat onsite. Closest recorded occurrence is on the Spring Trails project site. High potential to occur.
Bell's sage sparrow (<i>Amphispiza belli</i>)	FSC/CSC	Yes	Suitable habitat onsite. Closest recorded occurrence is on the Spring Trails project site. High potential to occur.
Yellow warbler (<i>Dendroica petechia brewsteri</i>)	None/CSC	No	Negative surveys on Spring Trails (2007), suitable habitat onsite; Moderate potential to occur.
Yellow-breasted chat (<i>Icteria virens</i>)	None/CSC	No	Negative surveys on Spring Trails (2007), suitable habitat onsite; Moderate potential to occur.

Table 3: Potential Sensitive Wildlife Species (Cont.)

Species	Status Fed/State	Observed Onsite	Likelihood of Occurrence
Tricolored blackbird (<i>Agelaius tricolor</i>)	FSC/CSC	No	No suitable habitat and no local occurrence. Not likely to occur.
Grasshopper sparrow (<i>Ammodramus savannarum</i>)	None/CSC	No	Marginal habitat onsite. Low potential to occur.
Black-chinned sparrow (<i>Spizella passerina</i>)	FSC/CSC	No	Suitable habitat onsite, high potential to occur.
Northwestern San Diego pocket mouse (<i>Chaetodipus fallax</i>)	None/CSC	Yes	Suitable habitat onsite. Closest recorded occurrence is on the Spring Trails project site. High potential to occur.
Pallid San Diego pocket mouse (<i>Perognathus</i>)	None/CSC	No	Moderate likelihood; recorded within 2 miles of the project site
Los Angeles pocket mouse (<i>Perognathus longimembris brevinasus</i>)	FSC/CSC	Yes	Suitable habitat onsite. Closest recorded occurrence is on the Spring Trails project site. High potential to occur.
White-eared pocket mouse (<i>Perognathus alticola</i>)	FSC/CSC	No	Well below elevation range. No suitable habitat. Not likely to occur.
Southern grasshopper mouse (<i>Onychomys torridus ramona</i>)	None/CSC	No	No suitable habitat. Not likely to occur.
San Diego desert woodrat (<i>Neotoma lepida intermedia</i>)	None/CSC	Yes	Suitable habitat onsite. Closest recorded occurrence is on the Spring Trails project site. High potential to occur.
Pocketed free-tailed bat (<i>Nyctinomops femorosaccus</i>)	None/CSC	No	Outside of known range. Not likely to occur.
Western mastiff bat (<i>Eumops perotis</i>)	FSC/CSC	No	Marginal quality habitat onsite. Low potential to occur.
San Diego black-tailed jackrabbit (<i>Lepus californicus bennettii</i>)	None/CSC	No	Suitable habitat onsite, high potential to occur.

Table 3: Potential Sensitive Wildlife Species (Cont.)

Species	Status Fed/State	Observed Onsite	Likelihood of Occurrence
Source: "Biological Resources Assessment and Report for Martin Ranch", PCR February 1999, subsequent biological resources assessment and report, White and Leatherman Bioservices, 2002. MBA General Biological Resources Report 2007.	Federal (USFWS)		State (CDFG)
	FE	Federally listed, endangered	SE State listed, endangered
	FT	Federally listed, threatened	ST State listed, threatened
	FPE	Federally proposed endangered	SCE State candidate endangered
	FPT	Federally proposed threatened	SCT State candidate threatened
	FC	Candidate species. Sufficient data are on file to support the federal listing.	SFP State fully protected
	FSC	Federal species of concern (former C2 and C3 species)	SP State protected
	FS	Federally sensitive	CSC California species of special concern

*Includes secondary access route.

SECTION 4: IMPACTS

4.1 - Special Interest Plant Communities

The two riparian plant communities found in the study area are considered sensitive plant communities by CDFG, USFWS and CNPS. Approximately 7.5 acres of RAFSS are located within the secondary access road alignment, and approximately 1 acre of sycamore alluvial woodland is located within the primary access road alignment. In addition, RSS (19.4 acres within the primary access road alignment and 1.3 acres within the secondary access road alignment), is considered a sensitive plant community by CDFG.

Project related impacts include the removal of approximately 7.5 acres of RAFSS associated exclusively with the secondary access road alignment. This would be considered a significant adverse impact because it is a substantial effect on a sensitive habitat; the community is declining throughout the region. Under most circumstances, the riparian plant communities represent valuable wildlife habitat, and is a CDFG highest inventory priority community. Worldwide there is less than 15,000 acres of RAFSS remaining and this plant community is necessary for the long-term survival of the SBKR. Thus, loss of any RAFSS habitat may be considered a significant impact.

Project implementation would also result in the removal of approximately 1 acre of sycamore alluvial woodland community associated with the primary access road alignment; however, this is not considered a significant impact. The community is associated with an existing drainage feature. Impacts on drainage features are covered under Section 4.3.3.

The RSS (19.4 acres within the primary access road alignment and 1.3 acres within the secondary access road alignment), which is distributed throughout the local area, has a history of disturbance including dryland farming or grazing. Today, evidence of past disturbances includes the predominance of human-mediated (clearing) and fire disturbance (either natural or man made). Due to the disturbed nature of this habitat in the area, impacts to this community are less than significant unless a listed species occupies the marginal quality habitat.

Recommendations: See recommendations associated with impacts to jurisdictional drainage features and riparian habitats.

4.2 - Sensitive Plant Species

Suitable habitat occurs in the study area for the Nevin's barberry, slender-horned spineflower and Santa Ana River Woollystar. There is a potential for project related impacts to significantly affect sensitive plant resources.

Recommendations: Conduct a focused plant survey within suitable habitat areas associated with the proposed access roads.

4.3 - Sensitive Wildlife Species

4.3.1 - Listed Species

The Habitat Assessment determined that suitable habitat exists for SBKR within the secondary access road alignment in the RAFSS habitat. Kangaroo rat burrows were observed in these areas and it is likely that they are SBKR.

Focused surveys for CAGN, SWF, LBV, mountain yellow-legged frog and arroyo toad in 2007 in the vicinity, did not identify any of these federally and/or State listed wildlife species. There is a moderate potential for impacts to CAGN, SWF, LBV, and arroyo toad within the access road alignments. There is no suitable habitat for the mountain-yellow legged frog onsite.

Several raptors, all of which are sensitive, were either observed or have a moderate to high likelihood of occurring within the access road alignments. These are the white-tailed kite, northern harrier, golden eagle, sharp-shinned hawk and Cooper's hawk.

Sensitive raptors, which would be most affected by the development of the proposed roads, are those that use the grassland, sage scrub and ridge tops for foraging. For individuals of these species that use the study area, the proposed development would result in the loss of approximately 54 acres of foraging habitat.

Sensitive birds that use RSS, chaparral, and grasslands have the potential to be impacted by the by the development of the proposed roads through a loss of habitat. These species include the southern California rufous-crowned sparrow, loggerhead shrike, and Bell's sage sparrow. These raptor and passerine species are not listed as threatened or endangered and any loss of individuals would not threaten the regional population or reduce the population to a level less than self sustaining. Removal of their habitat is an adverse but less than significant impact.

Impacts to the remaining wildlife species of concern are not considered significant on a regional basis. Loss of a few individual species of concern, if present, would not significantly affect the long-term conservation of these species.

Recommendations: Focused surveys for CAGN, SWF, LBV, and arroyo toad will be required within suitable habitat areas of the proposed alignments. However, fully protected species (including white-tailed kite and golden eagle) do not have any take authorization, and therefore must be avoided during all construction activities related to development of the proposed access roads.

4.3.2 - Nesting Birds

The Migratory Bird Treaty Act (MBTA) protects all common wild birds found in the US except the house sparrow, starling, feral pigeon, and resident game birds such as pheasant, grouse, quail, and wild turkey. Resident game birds are managed separately by each state. The MBTA makes it unlawful for anyone to kill, capture, collect, possess, buy, sell, trade, ship, import, or export any migratory bird including feathers, parts, nests, or eggs.

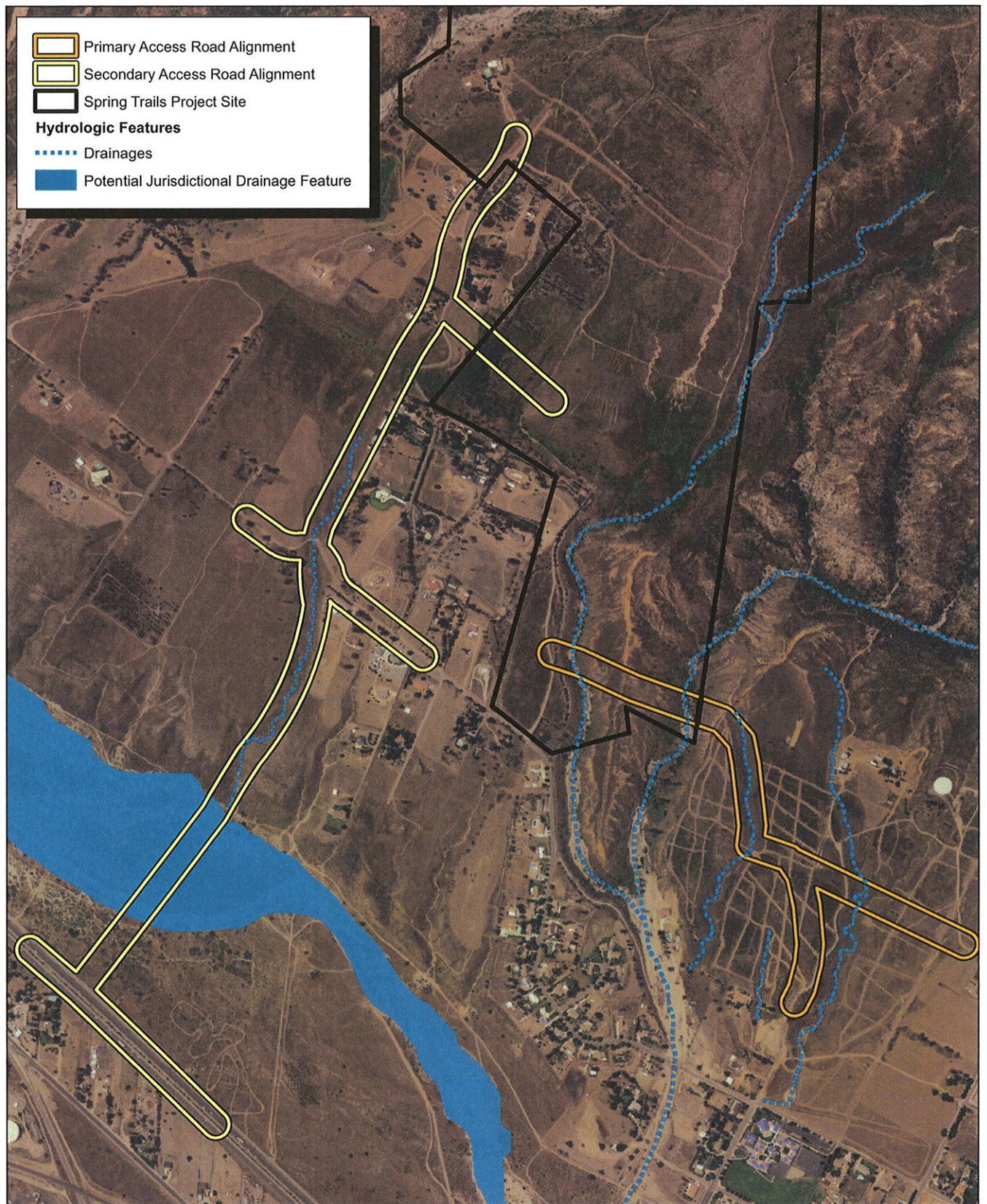
CDFG administers the California Fish and Game Code (CFG Code). There are particular sections of the CFG Code that are applicable to natural resource management. For example, Section 3503 states it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird that is protected under the MBTA. Section 3503.5 further protects all birds in the orders Falconiformes and Strigiformes, birds of prey such as hawks and owls, and their eggs and nests from any form of take. Section 3511 lists fully protected bird species where CDFG is unable to authorize the issuance of permits or licenses to take these species.

Recommendations: To avoid impacts to nesting birds, it is recommended that any removal of vegetation be done outside of the nesting season, which is typically between mid-January and August 31. If construction activities take place during the nesting season, it is recommended that a survey be conducted to determine the presence or absence of nesting raptors within the area of the proposed access road alignments. If the survey concludes that there is an active nest(s), prevention measures (i.e., buffer zone around nesting area(s)) will be needed to avoid “take” of the nesting species and its nest.

4.3.3 - Jurisdictional Waters and Riparian Habitats

The proposed access road alignments will impact areas that are potentially jurisdictional. Development of the access roads has the potential to impact both Cable Creek and Meyers Creek through construction of bridges or roads that would cross these riparian corridors. Several small washes could also be impacted by the construction of both roads (Exhibit 6). A formal delineation has not been performed for the new access road alignments.

Recommendations: A new jurisdictional delineation of waters and riparian habitats will be required to determine the jurisdictional limits of the existing drainage features within each access road alignment. In addition, once a completed site plan has been approved, an impact assessment can be conducted to determine the extent of project related impacts.



4.3.4 - Wildlife Movement within the Study Area

The study area is located at the base of the San Bernardino Mountains with uninhibited movement throughout the study area and to the north, east, and west. The location of the proposed access road alignments near the San Bernardino National Forest and other undeveloped land, allows easy access for many large mammal species. There are no physical barriers surrounding the study area other than sparse residential development. The expanse of undisturbed land surrounding much of both proposed access road alignments is conducive to wildlife traveling throughout the study area. During previous surveys in the study area, large numbers of mule deer (up to 10) were often observed foraging in the general vicinity.

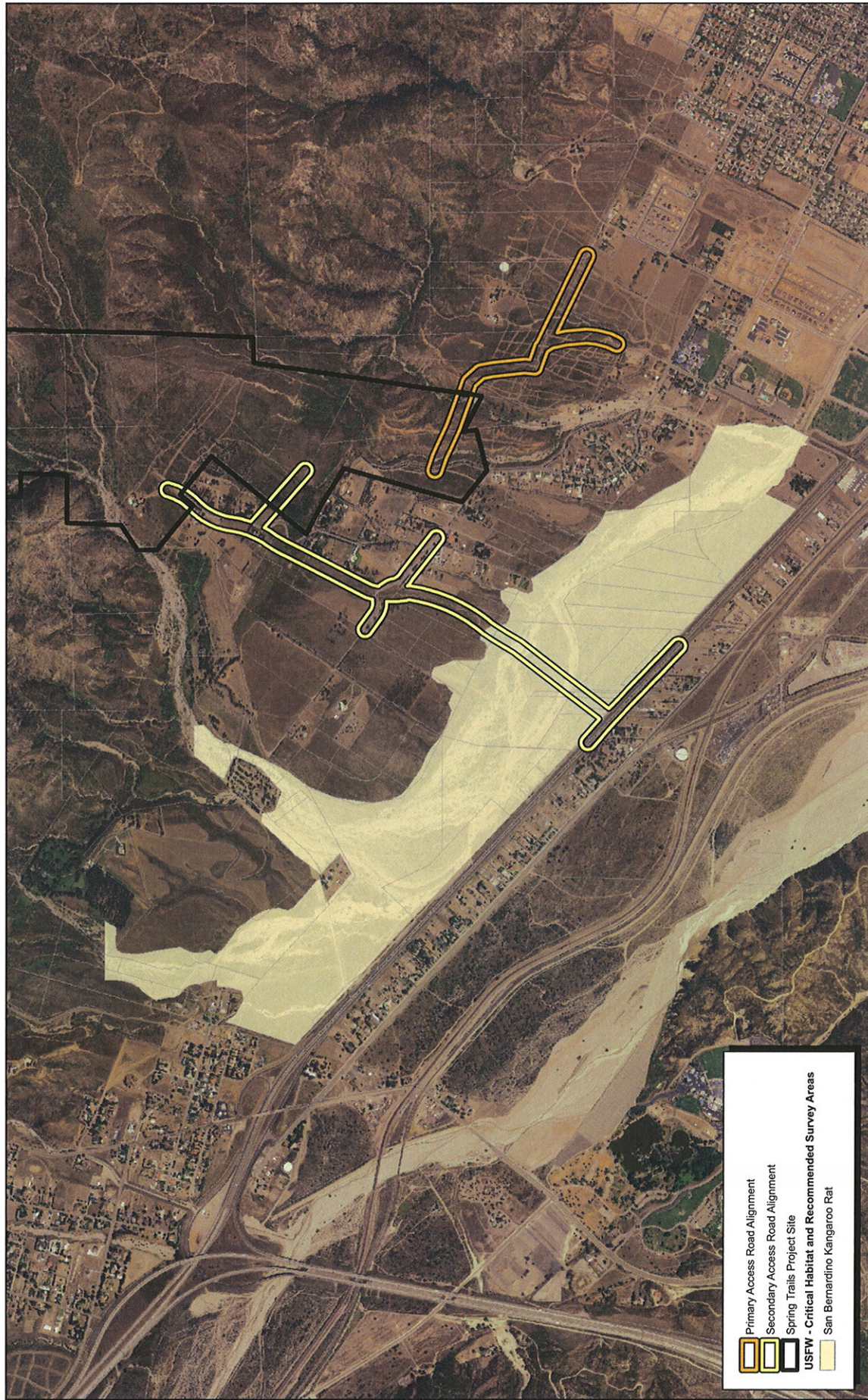
The canyons and drainages found along the foothills of the San Bernardino Mountains can also be used for localized movement within a species' active use area. The drainage features that would be impacted by the roads could potentially provide wildlife movement corridors to the south, but the existing Frontage Road and Interstate 215 create an almost impenetrable barrier.

Recommendations: Prior to completing the construction plans, measures should be developed to avoid blocking any major wildlife use areas such as steep canyons and drainage features. This can be done by adequately sizing any bridge structures over existing drainage features. Overall impacts associated within wildlife movement cannot be completely determined until a final road alignment has been designed for each access road. Drainage features of concern include Meyers Creek associated with the primary access road and Cable Creek associated with the secondary access road.

4.3.5 - Critical Habitat

The southern portion of the secondary road access lies within the area designated as critical habitat for SBKR (Exhibit 7).

Recommendations: A formal consultation between U.S. Army Corps of Engineers (USACE) and USFWS is required under Section 7 of the Endangered Species Act. Any impact to a USACE jurisdictional drainage feature provides the federal nexus required for Section 7 consultation.



Source: NAIIP for Riverside County (2005), USFWS critical habitat data (October, 2008).

Exhibit 7 Critical Habitat / San Bernardino Kangaroo Rat Recommended Focused Survey Areas

PDC / SPRINGS TRAILS L.L.C. • SPRING TRAILS ROAD PROJECT ALTERNATIVES
HABITAT ASSESSMENT



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SECTION 5: MITIGATION MEASURES

Mitigation Measure BIO-1

Impacts to Cable and Meyers Creek will require wetland permits from the USACE (Section 404), Regional Water Quality Control Board, (RWQCB) (Section 401) and CDFG (Section 1602). Mitigation for impacts to these two creeks include the restoration and/or enhancement of the creeks onsite, creation of RAFSS and sycamore alluvial woodland on or off the project site (access roads), or payment into an approved mitigation bank at a ratio determined through the permitting process. All three regulatory permitting agencies (USACE, CDFG and the (RWQCB) must review and approve the proposed permit conditions, as developed in a Habitat Mitigation Monitoring Plan (HMMP).

Mitigation Measure BIO-2

To avoid impacts to nesting birds, vegetation shall be removed outside of the nesting season, which is typically between mid-January and August 31. If construction activities take place during the nesting season, a survey shall be conducted to determine the presence or absence of nesting raptors within the respective access road alignment. If the survey concludes that, there is an active nest(s) within the road alignment, prevention measures (i.e., buffer zone around nesting area(s)) will be needed to avoid “take” of the nesting species and its nest.

Mitigation Measure BIO 3

The project will be designed to recognize and preserve wildlife movement, particularly corridors associated with Cable Canyon and Meyers Creek. The integrity and functionality of each wildlife movement corridor shall be preserved.

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Appendix A: Flora Compendium

Flora Compendia

<i>Salvia</i>	<i>mellifera</i>	black sage
Meliaceae		Mahogany Family
<i>Melia</i>	<i>azedarach</i>	China berry
Myrtaceae		Myrtle Family
<i>Eucalyptus</i>	<i>camaldulensis</i>	river red gum
<i>Eucalyptus</i>	<i>globulus</i>	blue gum
<i>Eucalyptus</i>	<i>polyanthemos</i>	red box
Oleaceae		Olive Family
<i>Olea</i>	<i>europaea</i>	olive
Onagraceae		Evening Primrose Family
<i>Epilobium</i>	<i>canum</i>	hummingbird trumpet
Platanaceae		Sycamore Family
<i>Platanus</i>	<i>racemosa</i>	western sycamore
Polemoniaceae		Phlox Family
<i>Navarretia</i>	<i>hamata</i>	hooked navarretia
Polygonaceae		Buckwheat Family
<i>Eriogonum</i>	<i>davidsonii</i>	Davidson's buckwheat
<i>Eriogonum</i>	<i>fasciculatum</i>	California buckwheat
Rhamnaceae		Buckthorn Family
<i>Rhamnus</i>	<i>crocea</i>	redberry buckthorn
Rosaceae		Rose Family
<i>Adenostoma</i>	<i>fasciculatum</i>	chamise
<i>Rubus</i>	<i>ursinus</i>	California blackberry
Salicaceae		Willow Family
<i>Populus</i>	<i>fremontii</i>	Fremont cottonwood
<i>Salix</i>	<i>exigua</i>	narrowleaf willow
<i>Salix</i>	<i>laevigata</i>	red willow
<i>Salix</i>	<i>lasiolepis</i>	arroyo willow
Simaroubaceae		Quassia Family
<i>Ailanthus</i>	<i>altissima</i>	tree of heaven
Solanaceae		Nightshade Family
<i>Datura</i>	<i>wrightii</i>	jimson weed
Tamaricaceae		Tamarisk Family
<i>Tamarix</i>	<i>ramosissima</i>	Mediterranean tamarisk
Poaceae		Grass Family
<i>Avena</i>	<i>fatua</i>	wild oat
<i>Bromus</i>	<i>diandrus</i>	ripgut brome
<i>Bromus</i>	<i>madritensis</i>	compact brome
<i>Bromus</i>	<i>tectorum</i>	cheat grass

Flora Compendia

Cupressaceae		Cypress Family
<i>Juniperus</i>	<i>californica</i>	California juniper
Anacardiaceae		Sumac or Cashew Family
<i>Rhus</i>	<i>trilobata</i>	skunkbrush
<i>Toxicodendron</i>	<i>diversilobum</i>	poison oak
Asteraceae		Sunflower Family
<i>Ambrosia</i>	<i>acanthicarpa</i>	annual bursage
<i>Artemisia</i>	<i>californica</i>	California sagebrush
<i>Artemisia</i>	<i>douglasiana</i>	mugwort
<i>Artemisia</i>	<i>dracunculus</i>	tarragon
<i>Brickellia</i>	<i>californica</i>	California brickellbush
<i>Centaurea</i>	<i>solstitialis</i>	yellow star thistle
<i>Helianthus</i>	<i>annuus</i>	common sunflower
<i>Heterotheca</i>	<i>grandiflora</i>	telegraphweed
<i>Lepidospartum</i>	<i>squamatum</i>	California broomsage
<i>Stephanomeria</i>	<i>virgata ssp. pleurocarpa</i>	tall stephanomeria
Brassicaceae		Mustard Family
<i>Brassica</i>	<i>nigra</i>	black mustard
<i>Brassica</i>	<i>rapa</i>	field mustard
Cactaceae		Cactus Family
<i>Opuntia</i>	<i>littoralis</i>	coastal prickly pear
Chenopodiaceae		Goosefoot Family
<i>Chenopodium</i>	<i>album</i>	lamb's quarters
Cucurbitaceae		Gourd Family
<i>Cucurbita</i>	<i>palmata</i>	coyote gourd
<i>Marah</i>	<i>macrocarpus</i>	wild cucumber
Euphorbiaceae		Spurge Family
<i>Chamaesyce</i>	<i>prostrata</i>	prostrate sandmat
<i>Croton</i>	<i>californicus</i>	California croton
<i>Croton</i>	<i>setigerus</i>	dove weed
<i>Ricinus</i>	<i>communis</i>	castor bean
Fabaceae		Legume Family
<i>Lotus</i>	<i>scoparius</i>	common deerweed
Fagaceae		Oak Family
<i>Quercus</i>	<i>berberidifolia</i>	scrub oak
Juglandaceae		Walnut Family
<i>Juglans</i>	<i>californica</i>	Southern California walnut
Lamiaceae		Mint Family
<i>Salvia</i>	<i>apiana</i>	white sage

Appendix B: Fauna Compendium

Fauna Compendia

Phrynosomatidae		Lizards
<i>Sceloporus</i>	<i>graciosus vandenburgianus</i>	southern sagebrush lizard
<i>Uta</i>	<i>stansburiana</i>	side-blotched lizard
Odontophoridae		Quail
<i>Callipepla</i>	<i>californica</i>	California quail
Accipitridae		Hawks
<i>Buteo</i>	<i>jamaicensis</i>	red-tailed hawk
Falconidae		Falcons
<i>Falco</i>	<i>sparverius</i>	American kestrel
Cuculidae		Cuckoos/Roadrunners/Anis
<i>Geococcyx</i>	<i>californianus</i>	greater roadrunner
Trochilidae		Hummingbirds
<i>Archilochus</i>	<i>alexandri</i>	black-chinned hummingbird
<i>Calypte</i>	<i>anna</i>	Anna's hummingbird
Picidae		Woodpeckers
<i>Colaptes</i>	<i>auratus</i>	northern flicker
Tyrannidae		Flycatchers
<i>Sayornis</i>	<i>saya</i>	Say's phoebe
<i>Tyrannus</i>	<i>verticalis</i>	western kingbird
Laniidae		Shrikes
<i>Lanius</i>	<i>ludovicianus</i>	loggerhead shrike
Mimidae		Mockingbirds/Thrashers
<i>Toxostoma</i>	<i>redivivum</i>	California thrasher
Emberizidae		Warblers, sparrow, etc.
<i>Pipilo</i>	<i>maculatus</i>	spotted towhee
<i>Pipilo</i>	<i>crissalis</i>	California towhee
<i>Zonotrichia</i>	<i>leucophrys</i>	white-crowned sparrow
Icteridae		New world blackbirds
<i>Sturnella</i>	<i>neglecta</i>	western meadowlark
Fringillidae		Finches
<i>Carpodacus</i>	<i>mexicanus</i>	house finch
<i>Carduelis</i>	<i>tristis</i>	American goldfinch
Sciuridae		Squirrels
<i>Spermophilus</i>	<i>beecheyi</i>	California ground squirrel
Geomyidae		Pocket Gophers
<i>Thomomys</i>	<i>bottae</i>	Botta's pocket gopher
Canidae		Wolves and Foxes
<i>Canis</i>	<i>latrans</i>	coyote

Appendix C: Site Photographs



Photograph 1: Looking north from the central portion of the primary access road alignment. This is a representative photograph of the Riversidean Sage Scrub along the alignment.



Photograph 2: Looking north from the central portion of the primary access road alignment. This is a representative photograph of the Ruderal vegetation along the alignment.

Source: Michael Brandman Associates, 2008.



Michael Brandman Associates

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Appendix C Site Photographs 1 and 2

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HABITAT ASSESSMENT



Photograph 3: View southwest from the central portion of the secondary access road alignment.



Photograph 4: Looking northwest from the southeast portion of the secondary access road alignment. This is a representative photograph of the Eucalyptus Woodland along the alignment.

Source: Michael Brandman Associates, 2008.



Michael Brandman Associates

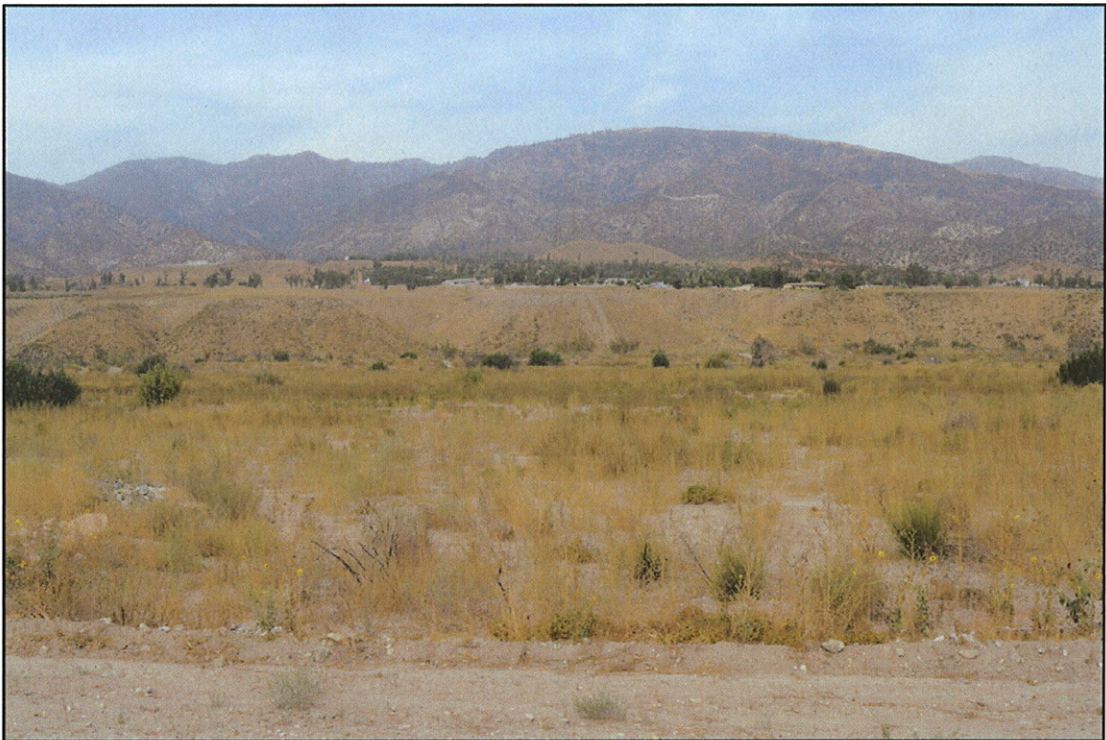
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Appendix C Site Photographs 3 and 4

PDC / SPRINGS TRAILS L.L.C. • SPRING TRAILS ROAD PROJECT ALTERNATIVES
HABITAT ASSESSMENT



Photograph 5: Looking north from the southern portion of the secondary access road alignment. This is a representative photograph of the Non-Native Grassland along the alignment.



Photograph 6: Looking north from the southern portion of the secondary access road alignment. This is a representative photograph of the Riversidean Alluvial Fan Sage Scrub along the alignment.

Source: Michael Brandman Associates, 2008.



Michael Brandman Associates

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Appendix C Site Photographs 5 and 6

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HABITAT ASSESSMENT



Photograph 7: This is a representative photograph of the Riversidean Sage Scrub along the secondary access road alignment.

Source: Michael Brandman Associates, 2008.



Michael Brandman Associates

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Appendix C Site Photograph 7

PDC / SPRINGS TRAILS L.L.C. • SPRING TRAILS ROAD PROJECT ALTERNATIVES
HABITAT ASSESSMENT