Appendix D12
Biological Resources Assessment (compiled) (PBS&J 2011)

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Spring Trails Specific Plan
Biological Resources Assessment

Compiled From Assessments and Surveys Conducted from 1998 to 2009

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Appendices

List of Exhibits

Chapter 1 Executive Summary

This report serves as a summary of all biological resources surveys conducted on the Spring Trails Specific Plan project site between 1998 and 2009. The site is located in the Devore area of San Bernardino County, California. The Specific Plan area occupies a 352.8-acre parcel that was formerly known as Martin Ranch. The associated access roads occupy an additional 23.7 acres offsite, totaling a total project site of approximately 376.5 acres. Of these 376.5 acres, approximately 224 acres would be developed, and the remaining 152.5 acres would remain as natural open space. The proposed project is the development of a 307-unit residential community with associated access roads, fuel modification zones, and hiking/equestrian trails.

The report summarizes existing conditions and assesses the impacts likely to result from project implementation. Where feasible, mitigation is proposed to reduce the significance of identified impacts. Principal findings of the report are as follows:

Impacts Determined to be Less Than Significant

- Impacts to raptor foraging habitat
- Impacts to wildlife nursery sites

Impacts Determined to be Less Than Significant With Mitigation

- Impacts to special status bird species
- Impacts to special status reptile and amphibian species
- Impacts to special status plant species (Plummer's mariposa lily, California black walnut)
- Impacts to critical habitat for San Bernardino kangaroo rat
- Impacts to special status mammal species
- Impacts related to nesting birds
- Impacts to Riversidean sage scrub (approximately 168.4 acres)
- Impacts to riparian plant communities (approximately 26.4 acres)
- Impacts related to noxious weeds and invasive plant species
- Impacts related to human-wildlife conflicts and domestic animal impacts
- Impacts related to tree resources
- Impacts to jurisdictional waters
- Impacts to wildlife corridors

Chapter 2 Introduction

The City of San Bernardino is considering approval of a residential development known as Spring Trails (formerly Martin Ranch) in the San Bernardino Mountain foothills, east of Devore. This report presents information related to the biological resources on the site, and also assesses the potential impacts associated with the development of the proposed Spring Trails project.

2.1 Purpose of This Report

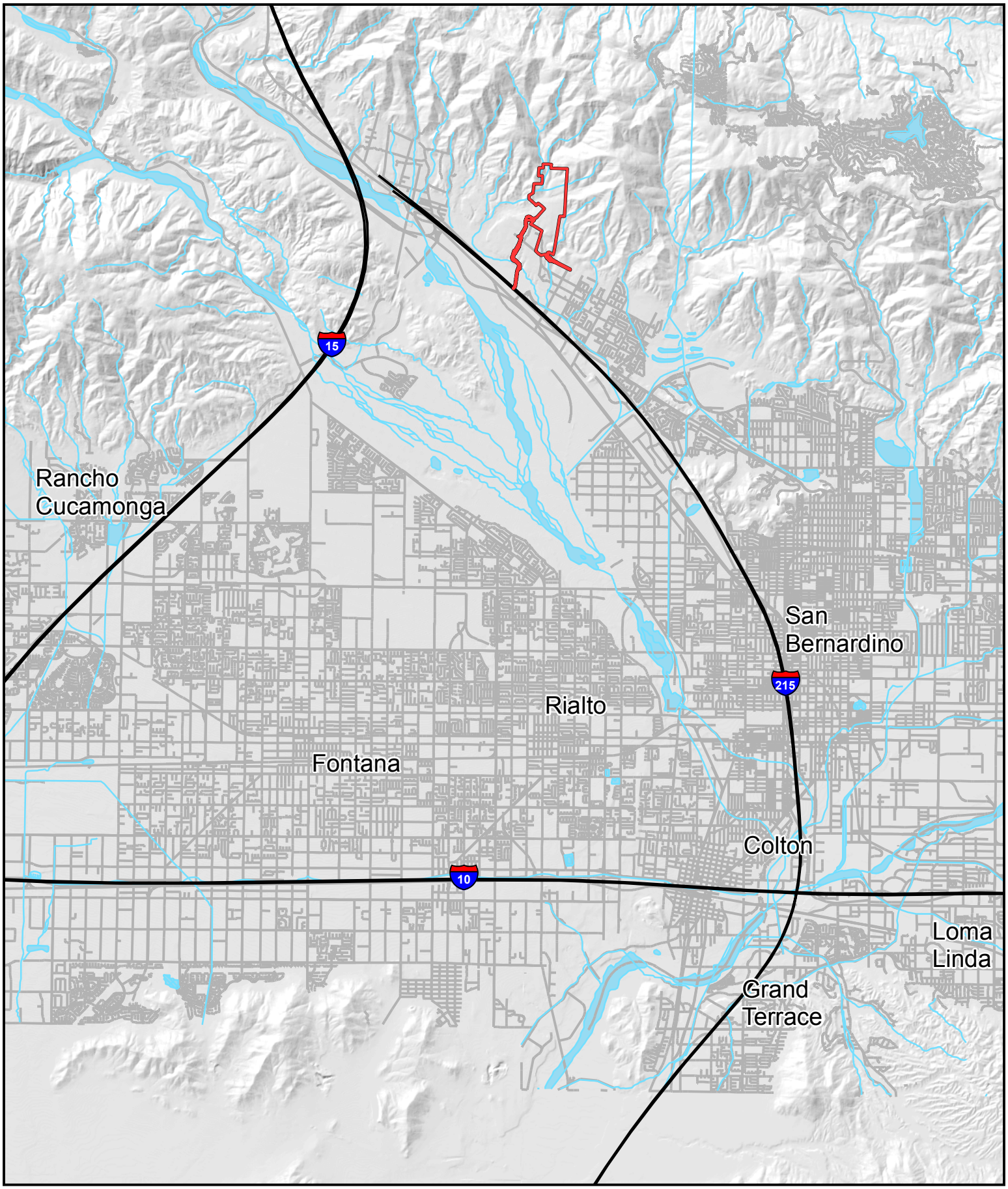
The Spring Trails project site has been the subject of sustained biological resources investigations for more than 12 years. No less than five general habitat assessments or habitat assessment updates have been conducted for the site, along with numerous focused surveys for sensitive species. This large quantity of data is currently contained in more than a dozen separate reports that have been conducted for the entire site, or portions of the site, at different times. While the amount of information that has been compiled is extensive, the available assemblage of documents is challenging to interpret because they have never been properly integrated and presented in a coherent summary document. The purpose of this report is to combine all of the available data into a master document that is comprehensible to the public and to decision-makers, and is suitable to be used as the basis for the analysis in the project Environmental Impact Report (EIR). This report also includes the results of several studies that have been conducted in the last two years, including a number of updated focused surveys and a jurisdictional delineation for the project site.

2.2 Project Site Location

The site is situated northeast of Interstate 215 (I-215), south of State Route 138 (SR-138) and southeast of the I-15/I-215 interchange in southwestern San Bernardino County (Exhibit 1). The northern half of the project site is bordered on the west, north, and east by the San Bernardino National Forest (SBNF). The site is located in Sections 26 and 35, Township 2 North, Range 5 West on portions of the Devore and San Bernardino North U.S. Geological Survey (USGS) 7.5-minute topographic quadrangle maps (Exhibit 2). The primary access road would enter the site at the southeast corner via a street extending from the terminus of Little League Drive. The secondary access would originate at the frontage road adjacent to the I-215 freeway, and travel northeasterly to the project site. Exhibit 3 presents an aerial view of the project site and the associated access roads.

2.3 Project Description

The proposed project is a 352.8-acre project site containing a residential development within a portion of that area and approximately 23.7 acres of off-site access roads. The primary components are described below.



N

0 0.5 1 2 Miles

1 in = 2 miles

Project Site

SPRING TRAILS
BIOLOGICAL RESOURCES ASSESSMENT

PBS&J

EXHIBIT 1: REGIONAL LOCATION MAP

Source: PBS&J, ESRI Streetmap | 10/22/2009
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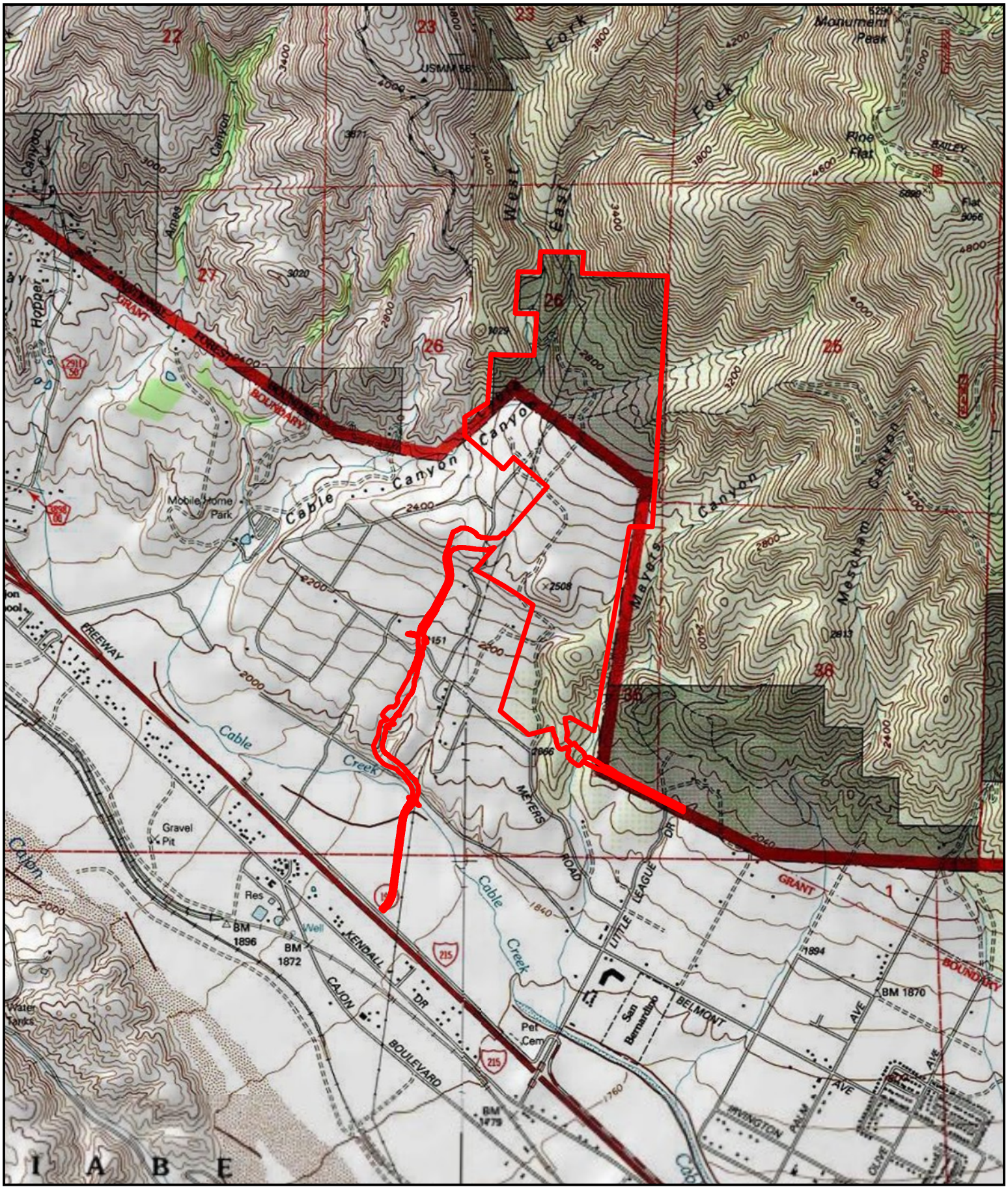
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Feet
1 in = 2,000 feet
Project Site
SPRING TRAILS
BIOLOGICAL RESOURCES ASSESSMENT
EXHIBIT 2: LOCAL VICINITY USGS TOPOGRAPHIC MAP
PBS&J
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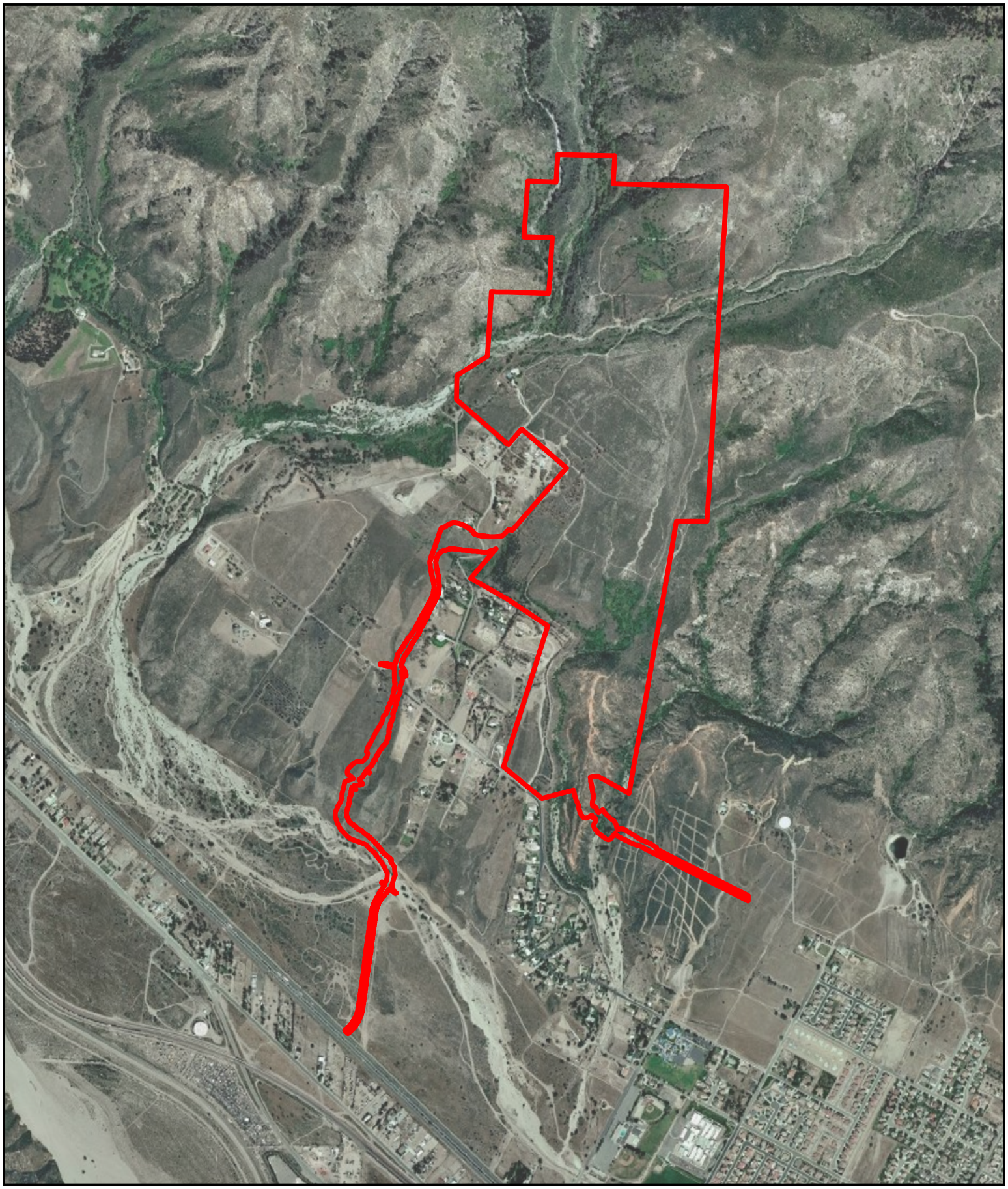

SPRING TRAILS
BIOLOGICAL RESOURCES ASSESSMENT

EXHIBIT 3: LOCAL VICINITY AERIAL MAP

PBS&J

Source: PBS&J, USGS| 10/22/2009
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2.3.1 Development Footprint

For purposes of this report, the terms “developed areas” or “development footprint” refer to those portions of the site where ground disturbance or vegetation modification would occur. These areas include all areas proposed for grading as well as areas within the various fuel modification zones. Of the 376.5-acre overall project site area, approximately 265.2 acres would be graded or included in fuel modification zones and the remainder of the site (111.3 acres) would remain as natural open space. See Exhibit 4 for a depiction of the proposed project layout, including residential lots, streets, parks, trails and fuel modification zones. Exhibit 5 depicts the overall development footprint inclusive of each of these components.

2.3.2 Housing Areas

Upon completion, the Spring Trails project would be comprised of approximately 307 single-family detached residential units. The housing area would be split into three principal neighborhoods, with each neighborhood separated by open space corridors, drainages, roadways, or sloped areas.

2.3.3 Primary Access Road

Primary access to the site would be via a new road connecting the southeast corner of the project site to Little League Drive. The primary entry roadway would consist of two lanes of travel, two emergency/bicycle lanes, and a sidewalk within a 50-foot right-of-way (ROW).

2.3.4 Secondary Access Road

The secondary access road would emerge from the project site at its southwestern corner and then extend to the frontage road along I-215. The secondary access road would consist of two travel lanes and associated drainage structures within a 50-foot ROW. The total area of disturbance of the secondary access road would equal approximately 23.7 acres. This area is included in the overall development footprint of the project discussed above in Section 2.3.1.

2.3.5 Fuel Modification Zones

The Spring Trails project site is within an area of high wildfire hazard potential. To deny potential fuel to an approaching wildfire, the vegetation between the structural components of the project and the natural open space along the perimeter of the project site will be subject to a variety of treatments within a series of Fuel Modification Zones (FMZ). The area required for the FMZs are included in the overall development footprint of the project discussed above in Section 2.3.1. Three types of FMZs are planned, and each zone varies in the type, spacing, irrigation, and maintenance of landscaping. The three zones are described below.

SPRING TRAILS
BIOLOGICAL RESOURCES ASSESSMENT

EXHIBIT 4: DEVELOPMENT PLAN

10/22/2009
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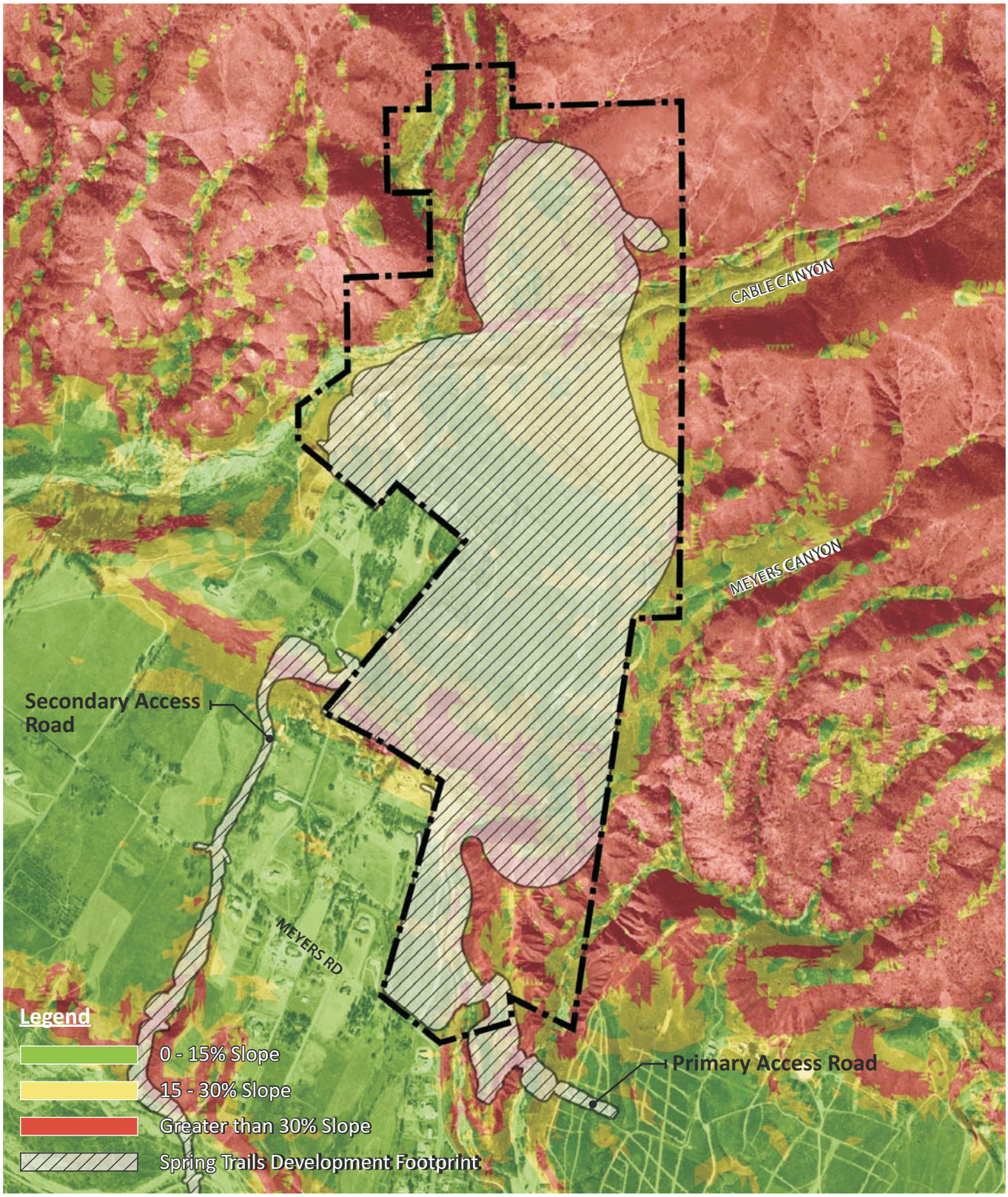

Site Boundary

NOT TO SCALE

Source: Google Earth

SPRING TRAILS
BIOLOGICAL RESOURCES ASSESSMENT

EXHIBIT 5: DEVELOPMENT FOOTPRINT

PBS&J

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Zone A This zone provides a 20- to 35-foot defensible space for fire suppression forces and protects structures from radiant and convective heat. The construction of combustible structures and the planting of fire-prone plant species is prohibited in this zone. Shrubs must not exceed 18 inches in height, and regular maintenance of the vegetation will be required in this zone.

Zone B This zone provides 50 to 200 feet of irrigated landscaped areas to help reduce combustible fuels. A specific plant palette is required in this zone, and shrubs shall be spaced to avoid the accumulation of excessive fuel mass.

Zone C This zone provides a non-irrigated, 50-percent thinning zone with removal of all dead and dying vegetation and undesirable species. The zone is 40 to 185 feet in width surrounding areas with structures. Remaining vegetation must be maintained to reduce the occurrence of ladder fuels, excessive fuel mass, and appropriate spacing.

2.3.6 Trails, Parks, and Open Space

The development would include a number of parks and trails for pedestrian and equestrian use. Several of the trails could connect to existing offsite trails. The eastern perimeter of the site would contain a 12-foot-wide equestrian/pedestrian trail, and several hiking trails/walkways measuring four feet in width would be scattered along the western perimeter and within the project site itself. In all, approximately 111.3 acres of the site would remain as undeveloped and unmodified natural open space.

Chapter 3 Regulatory Setting

The project area is subject to a number of laws, regulations, and other directives that are applicable to biological resources. This section provides an overview of each of these directives.

This chapter and the following chapters contain a great number of acronyms. A list of acronyms used in this report is provided in Chapter 8.

3.1 Federal Endangered Species Act

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

The ESA prohibits *take* of threatened or endangered species, which means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in such conduct. Take can include disturbance to habitats used by a threatened or endangered species during any portion of its life history. The presence of any federally threatened or endangered species in a project area generally imposes severe constraints on development, particularly if development would result in take of the species or its habitat. Under the regulations of the ESA, the USFWS may authorize take when it is incidental to, but not the purpose of, an otherwise lawful act.

3.1.1 Critical Habitat

The USFWS is required under the ESA to designate specific areas as protected *Critical Habitat*. Critical Habitat is required to contain all areas essential to the conservation of the target species. Such lands may be private or public. Federal agencies are prohibited from authorizing, funding or carrying out actions that destroy or adversely modify Critical Habitat.

3.1.2 Section 7 and Section 10 Compliance

There are two sections of the ESA, Sections 7 and 10, that authorize incidental take. Section 7 regulates take associated with federal projects or projects that require a federal permit. Section 10 regulates take on non-federal lands or for projects without a federal nexus.

Federal agencies must undertake programs for the conservation of endangered and threatened species, and are prohibited from authorizing, funding, or carrying out any action that will jeopardize a listed species, in addition to its Critical Habitat. As defined in the ESA, “individuals, organizations, states, local governments, and other non-federal entities are

affected by the designation of Critical Habitat only if their actions occur on federal lands, require a federal permit, license, or other authorization, or involve federal funding."

Even though the project is being reviewed by a non-federal entity (the City of San Bernardino), the project is subject to Section 7 of the ESA due to the presence of Critical Habitat on a portion of the project site, and also because the project will require the issuance of a federal Section 404 permit from the U.S. Army Corps of Engineers (USACE). Therefore, a federal nexus will be established, and the rules of Section 7 of the ESA will apply to the project. The Section 7 process is usually completed via consultation with the USFWS. During the consultation process, the USFWS may dictate conditions or mitigation that must be implemented to avoid or mitigate take of a listed species.

3.2 California Endangered Species Act

The State of California considers an endangered species as one whose prospects of survival and reproduction are in immediate jeopardy; a threatened species as one present in such small numbers throughout its range that it is considered likely to become an endangered species in the near future in the absence of special protection or management; and a rare species as one present in such small numbers throughout its range that it may become endangered if its present environment worsens. The designation of *rare species* applies only to California native plants. State threatened and endangered species include both plants and wildlife, with the exception of invertebrates, and are legally protected against take as this term is defined in the California Endangered Species Act (CESA).

3.3 California Species of Special Concern

California Species of Special Concern (SSC) status applies to animals not listed under the ESA or the CESA, but which nonetheless are declining at a rate that could result in listing, or historically occurred in low numbers and known threats to their persistence currently exist. SSC species share one or more of the following criteria:

1) Occur in small, isolated populations or in fragmented habitat, and are threatened by further isolation and population reduction;

2) Show marked population declines. Population estimates are unavailable for the vast majority of taxa. Species that show a marked population decline, yet are still abundant, do not meet the Special Concern definition, whereas marked population decline in uncommon or rare species is an inclusion criterion;

3) Depend on a habitat that has shown substantial historical or recent declines in size. This criterion infers the population viability of a species based on trends in the habitats upon which it specializes. Coastal wetlands, alluvial fan sage scrub and coastal sage scrub in the southern coastal basins, and arid scrub in the San Joaquin Valley, are examples of California habitats that have seen dramatic reductions in size in recent

history. Species that specialize in these habitats generally meet the criteria for Threatened or Endangered status or Special Concern status;

4) Occur only in or adjacent to an area where habitat is being converted to land uses incompatible with the animal's survival;

5) Have few California records, or which historically occurred here but for which there are no recent records; and

6) Occur largely on public lands, but where current management practices are inconsistent with the animal's persistence.

The SSC designation is intended to result in special consideration for these species by the California Department of Fish and Game (CDFG), land managers, and others, and is intended to focus attention on the species to help avert the need for listing under federal and State endangered species laws and the necessity of recovery efforts. This designation does not provide specific legal protection, but signifies that these species are recognized as vulnerable by CDFG.

3.4 California Native Plant Society

The California Native Plant Society (CNPS) is a statewide resource conservation organization that has developed an inventory of California's special-status plant species. This inventory is a summary of information on the distribution, rarity, and endangerment of California's vascular plants. This rare plant inventory consists of four lists, defined as follows:

- List 1A plant species are presumed to be extinct in California because they have not been seen in the wild for many years;
- List 1B plants are considered rare, threatened, or endangered throughout their range;
- List 2 plant species are considered rare, threatened, or endangered in California, but more common in other states;
- Plant species on lists 1A, 1B, and 2 meet CDFG criteria for endangered, threatened, or rare listing.
- Plant species for which CNPS requires additional information in order to properly evaluate their status are included on List 3.
- List 4 plant species are those of limited distribution in California whose susceptibility to threat is considered low at the current time.

The CNPS listing is a guideline for lead agencies to assist in identification of plant species that are rare in California. The goal is to establish awareness of native plants and take action to avoid or reduce impacts to plants on the list.

3.5 Nesting and Migratory Birds

The Migratory Bird Treaty Act (MBTA) protects all common wild birds found in the United States 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.

The 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. The code further protects all birds of prey such as hawks and owls and their eggs and nests from any form of take.

Based on the requirements of the MBTA and the CFG Code, it is unlawful to disturb the nests of birds during nesting season. Nesting season is typically considered to begin on February 15 and run through August 31, and disturbance to nesting birds may not occur during that time period. Avoidance of nesting birds is the only way to eliminate impacts during nesting season. Obviously, the best way to avoid impacts to nesting birds is to perform any potential nest-disturbing activities such as construction outside of the nesting season (i.e., September 1 through January 31). If construction must occur during the nesting season, then preconstruction nesting bird surveys must be conducted no more than 30 days prior to initiation of construction. If nests are discovered, they must be avoided by an appropriate buffer, as determined by a qualified wildlife biologist. The temporary “no construction” area would need to be maintained until the nest has completed its cycle, as determined by a qualified wildlife biologist. Once the nesting cycle has been completed, construction in the area may resume.

3.6 Jurisdictional Waters and Wetlands

Impacts to natural drainage features and wetland areas are regulated by the USACE, the Regional Water Quality Control Board (RWQCB), and CDFG based upon the policies and regulations discussed below.

3.6.1 United States Army Corps of Engineers Regulations

Federal Clean Water Act – Section 404

The USACE administers Section 404 of the federal Clean Water Act (CWA), which regulates the discharge of dredge and fill material into waters of the U.S. To this end, the USACE has established a series of nationwide permits that authorize certain activities in waters of the U.S. if a proposed activity can demonstrate compliance with standard conditions. Normally, the USACE requires an individual permit for an activity that will affect an area equal to or in excess of 0.5 acre of waters of the U.S. Projects that result in impacts to less than 0.5 acre can generally be conducted pursuant to one of the nationwide permits, if consistent with the

standard permit conditions. Use of any nationwide permit is contingent on the activities having no impacts to endangered species.

Waters of the U.S.

Waters of the U.S., as defined in the Code of Federal Regulations (CFR), include all waters or tributaries to waters such as lakes, rivers, intermittent and perennial streams, mudflats, sand-flats, natural ponds, wetlands, wet meadows, and other aquatic habitats. Frequently, waters of the U.S. with at least intermittently flowing water or tidal influences are demarcated by an ordinary high water mark (OHWM). The OHWM is defined as the line on the shore established by the fluctuations of water and indicated by physical characteristics such as a clear, natural line impressed on the bank shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas. In the southern California region, where streams are often intermittent, the OHWM is typically indicated by the presence of an incised streambed with defined bank shelving.

In 2001, the USACE South Pacific Division issued *Guidelines for Jurisdictional Delineations for Waters of the United States in the Arid Southwest*. The purpose of this document was to provide background information concerning physical characteristics of dry land drainage systems. These guidelines were reviewed and used to identify jurisdictional drainage features on the Spring Trails project site.

Wetlands

According to the USACE Wetlands Delineation Manual, three criteria must be satisfied to classify an area as a jurisdictional wetland:

1) A predominance of plant life that is adapted to life in wet conditions (hydrophytic vegetation);

2) Soils that saturate, flood, or pond long enough during the growing season to develop anaerobic conditions in the upper part (hydric soils); and;

3) Permanent or periodic inundation or soils saturation, at least seasonally (wetland hydrology).

Wetland vegetation is characterized by vegetation where more than 50 percent of the composition of dominant plant species are obligate wetland, facultative wetland, and/or facultative species that occur in wetlands. A wetland must show connectivity to a stream course in order for such a feature to be considered jurisdictional.

U.S. Army Corps of Engineers Regulated Activities

The USACE regulates the discharge of dredged or fill material including, but not limited to, grading, placing of rip-rap for erosion control, pouring concrete, laying sod, and stockpiling excavated material. Activities that generally do not involve a regulated discharge, if

performed specifically in a manner to avoid discharges, include driving pilings, drainage channel maintenance, temporary mining and farm/forest roads, and excavating without stockpiling.

3.6.2 Regional Water Quality Control Board Regulations

Clean Water Act – Section 401

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

Porter-Cologne Water Quality Act

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

Regional Water Quality Control Board Regulated Activities

Under Section 401 of the CWA, the RWQCB regulates all activities that are regulated by the USACE. Additionally, under the Porter-Cologne Water Quality Act, the RWQCB regulates all activities, including dredging, filling, or discharge of materials into waters of the state that are not regulated by the USACE due to a lack of connectivity with a navigable water body and/or lack of an OHWM.

Dischargers whose projects disturb one or more acres of soil or whose projects disturb less than one acre but are part of a larger common plan of development that in total disturbs one or more acres, are required to obtain coverage under the General Permit for Discharges of Storm Water Associated with Construction Activity (Construction General Permit, 99-08-DWQ). Construction activity subject to this permit includes clearing, grading, and disturbances to the ground such as stockpiling, or excavation, but does not include regular maintenance activities performed to restore the original line, grade, or capacity of the facility.

The Construction General Permit requires the development and implementation of a Storm Water Pollution Prevention Plan (SWPPP). The SWPPP should contain a site map(s), which shows the construction site perimeter, existing and proposed buildings, lots, roadways, storm water collection and discharge points, general topography both before and after construction, and drainage patterns across the project. The SWPPP must list Best Management Practices (BMPs) the discharger will use to protect storm water runoff and the placement of those BMPs. Additionally, the SWPPP must contain a visual monitoring program; a chemical monitoring program for "non-visible" pollutants to be implemented if there is a failure of

BMPs; and a sediment monitoring plan if the site discharges directly to a water body listed on the 303 (d) list for sediment. Section A of the Construction General Permit describes the elements that must be contained in a SWPPP.

3.6.3 California Department of Fish and Game Regulations

California Fish and Game Code – Sections 1600 to 16003

The CFG Code mandates that it is unlawful for any person to substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake designated by the department, or use any material from the streambeds, without first notifying the department of such activity. CDFG jurisdiction includes ephemeral, intermittent, and perennial watercourses, including dry washes, characterized by the presence of hydrophytic vegetation, the location of definable bed and banks, and the presence of existing fish or wildlife resources.

Furthermore, CDFG jurisdiction is often extended to habitats adjacent to watercourses, such as oak woodlands in canyon bottoms or willow woodlands that function as part of the riparian system. A number of court cases have further extended CDFG jurisdiction to include watercourses that seemingly disappear, but re-emerge elsewhere. Under the CDFG definition, a watercourse need not exhibit evidence of an OHWM to be claimed as jurisdiction. However, CDFG does not regulate isolated wetlands; that is, those that are not associated with a river, stream, or lake.

California Department of Fish and Game Regulated Activities

The CDFG regulates activities that involve diversions, obstruction, or changes to the natural flow or bed, channel, or bank of any river, stream, or lake that supports fish or wildlife resources.

3.7 Relevant Land Management Plans and Local Regulations

A number of management plans and regulatory elements are applicable to the project site or the areas immediately surrounding the site. These documents are described below.

3.7.1 San Bernardino National Forest Resource Management Plan

San Bernardino National Forest (SBNF) public lands, which are managed by the U.S. Forest Service (USFS), are found immediately adjacent to the project site. In addition, the northern portion of the project site is a privately-owned inholding within the SBNF boundary. However, only federally-owned, non-private lands within the forest boundary are subject to the SBNF Land Management Plan (LMP).

While the project site is not subject to the forest's LMP, the SBNF may have an interest in activities that occur adjacent to their lands. The USFS refers to developed areas around their lands as the Wildland-Urban Interface (WUI), and activities within WUI areas can have both

direct and indirect impacts on USFS lands, especially in regards to the increased danger of human-caused fires, the introduction of invasive species, unmanaged recreation, and trespass. Since the Spring Trails project is located within the forest's WUI, the USFS may have an interest in the project even though the project site is not under their jurisdiction.

3.7.2 City of San Bernardino General Plan

The City of San Bernardino General Plan Natural Resources and Conservation Element (2005) adopted a number of goals, policies, and implementation measures regarding biological resources. Relevant goals and policies are listed below.

Goal 12.1 Conserve and enhance San Bernardino's biological resources.

Policy 12.1.2 Site and develop land uses in a manner that is sensitive to the unique characteristics of and that minimizes the impacts upon sensitive biological resources.

Policy 12.1.3 Require that all proposed land uses in the "Biological Resource Management Area" (BRMA), Figure NRC-2, be subject to review by the Environmental Review Committee (ERC).

Policy 12.1.4 Require that development in the BRMA:

a) Submit a report prepared by a qualified professional (s) that addresses the proposed project's impact on sensitive species and habitat, especially those that are identified in State and Federal conservation programs;

b) Identify mitigation measures necessary to eliminate significant adverse impacts to sensitive biological resources;

c) Define a program for monitoring, evaluating the effectiveness of, and ensuring the adequacy of specified mitigation measures; and

d) Discuss restoration of significant habitats.

Goal 12.2 Protect riparian corridors to provide habitat for fish and wildlife

Policy 12.2.1 Prohibit development and grading within 50 feet of riparian corridors, as identified by a qualified biologist, unless no feasible alternative exists.

Policy 12.2.2 Generally permit the following uses within riparian corridors:

a) Education and research, excluding buildings and other structures;

b) Passive (non-mechanized) recreation;

c) Trails and scenic overlooks on public land;

d) Fish and wildlife management activities;

e) Necessary water supply projects;

f) Resource consumptive uses as provided for in the CFG Code and Title 14 of the California Administrative Code;

g) Flood control projects where no other methods are available to protect the public safety;

h) Bridges and pipelines when supports are not in significant conflict with corridor resources.

Policy 12.2.3 Pursue voluntary open space or conservation easements to protect sensitive species or their habitats.

Policy 12.2.4 Development adjacent to riparian corridors shall:

a) Minimize removal of vegetation;

b) Minimize erosion, sedimentation, and runoff by appropriate protection or vegetation and landscape;

c) Provide for sufficient passage of native and anadromous fish as specified by the CDFG;

d) Minimize wastewater discharges and entrapment;

e) Prevent groundwater depletion or substantial interference with surface flows and provide for natural vegetation buffers.

Policy 12.2.5 Permit modifications of the boundaries of the designated riparian corridors based on field research and aerial interpretation data as part of biological studies.

3.7.3 City of San Bernardino Tree Ordinance

The City of San Bernardino has adopted an ordinance (City of San Bernardino Municipal Code Section 19.28.090) that is designed to conserve important tree resources. The text of the ordinance is as follows:

> Removal of healthy, shade providing, aesthetically valuable trees shall be discouraged. In the event that more than five trees are to be cut down, uprooted, destroyed or removed within a 36-month period, a permit shall first be issued by the Department of Parks, Recreation and Community Services.
>
> Prior to any permit issued for tree removal, all existing trees on-site shall be surveyed by the Department of Parks, Recreation and Community Services at the developer's expense. Unless there is a pre-approved tree replacement plan, each tree that is

removed in a new subdivision and is considered to be of significant value by the Department shall be replaced with a 36-inch box specimen tree in the subdivision in addition to any other required landscaping. Such a plan does not necessarily require a tree-for-tree replacement provision. Commercial tree farms, City Government projects, and individual, single-family residential lots less than one acre shall be exempt from this provision.

3.7.4 South Coast Missing Linkages Project

The South Coast Missing Linkages Project (SCMLP) is an inventory of critical linkages and wildlife corridors in southern California that are believed to be necessary for the continued functioning of area ecosystems. The project is a joint effort undertaken by a number of federal land management and regulatory agencies, state resource management agencies, and national and local conservation organizations. Notable participants include the SBNF, the National Park Service, the California State Parks Department, the Wildlands Conservancy, and the Nature Conservancy. The project produced a report in 2004 entitled *A Linkage Design for the San Gabriel-San Bernardino Connection*. The report identified known wildlife corridors in the Cajon Pass area and recommended actions to conserve or enhance wildlife movement capabilities in the area.

The SCMLP does not have the force of law; rather, it is considered a baseline document that provides guidance to land managers and lead agencies in meeting regional conservation goals relating to wildlife movement and species viability.

Chapter 4 Methodology

PBS&J (known as "Atkins" after April 1, 2011) began its analysis of the biological resources associated with the development of the site with a thorough review of available literature and an examination of previously prepared surveys and reports for the project site. This preliminary work was followed by a series of general and focused surveys of the site. The purpose of the surveys was to document existing site conditions and to supplement the information that has already been gathered for the site during previous survey efforts. The primary objective of all of the work conducted on the site was to determine the potential presence of any sensitive biological resources. The specific steps taken as a part of that process are presented below.

4.1 Literature Review

The literature review provided a baseline to evaluate the biological resources potentially occurring upon the project site and within the surrounding area.

4.1.1 Existing Surveys and Reports

The Spring Trails project site has been the subject of numerous assessments and surveys dating back to 1998. Each of these documents was consulted and their findings summarized in a spreadsheet. This information served as baseline data for comparing previously recorded site conditions with current conditions. Citations for each of the reports and other consulted documents can be found in the References section of this report. A listing of the major reports is provided below in the order of publication date. The documents listed below are also included in this report as Appendix B on a separate CD-ROM.

- Integrated Urban Forestry. 1998. *Arborist Report, Martin Ranch, San Bernardino County.*
- PCR Services Corporation. 1999. *Biological Resources Assessment and Report for the Martin Ranch Property, San Bernardino County, California.*
- S.C. Dodd Biological Consulting. 2002. *Results of a Live Trapping Survey for the Federally Endangered San Bernardino Kangaroo Rat on the Secondary Access Route for the Proposed Martin Ranch Project.*
- White and Leatherman Bioservices. 2002a. *Biological Technical Report Update: Proposed Martin Ranch Project, San Bernardino, California.*
- White and Leatherman Bioservices. 2002b. *Results of Focused Presence/Absence Surveys for the Coastal California Gnatcatcher on the Martin Ranch Access Road Project.*
- White and Leatherman Bioservices. 2002c. *Biological Technical Report: Proposed Secondary Access Road, Martin Ranch Project, San Bernardino, California.*

- Natural Resources Assessment, Inc. 2004. *General Biological Resources Assessment Update, Martin Ranch Property, San Bernardino County, California.*
- Michael Brandman Associates. 2007a. *General Biological Resources Report, Martin Ranch Project Site, Unincorporated San Bernardino County, California.*
- Michael Brandman Associates. 2007b. *Least Bell's Vireo and Southwestern Willow Flycatcher Focused Survey Report, Martin Ranch.*
- Michael Brandman Associates. 2007c. *Post-Disturbance Arborist Report Update, Martin Ranch Project Site, Unincorporated San Bernardino County, California.*
- Michael Brandman Associates. 2008. *Habitat Assessment Report, Spring Trails Project Site (Access Roads), Unincorporated San Bernardino County, California.*
- PBS&J. 2009a. *Delineation of Jurisdictional Waters and Wetlands, Spring Trails Specific Plan (Access Roads), San Bernardino County, California.*
- PBS&J. 2009b. *Delineation of Jurisdictional Waters and Wetlands, Spring Trails Specific Plan, San Bernardino County, California.*
- PBS&J. 2009c. *San Bernardino Kangaroo Rat Presence/Absence Trapping Surveys, Spring Trails Project Site.*
- PBS&J. 2009d. *Rare Plant Survey Letter Report, Spring Trails Specific Plan.*
- PBS&J. 2009e. *Review and Update of the Biological Resources Associated with the Spring Trails Development and Associated Access Roads.*

It should be noted that each of the general habitat assessment reports include the results of focused surveys specific to each report. Therefore, even though separate reports for each surveyed species were not prepared or are not available, the results of those surveys are provided in the general reports. Species for which focused surveys were conducted include San Bernardino kangaroo rat (*Dipodomys merriami parvus*) (SBKR), coastal California gnatcatcher (*Polioptila californica californica*) (CAGN), least Bell's vireo (*Vireo bellii* ssp. *pusillus*) (LBV), southwest willow flycatcher (*Empidonox traillii extimus*) (SWF), focused amphibian and reptile surveys, and focused plant surveys.

4.1.2 Sensitive Species

PBS&J/Atkins compiled a list of threatened, endangered, and otherwise sensitive species previously recorded to occur on or in the vicinity of the project site. The list was based on a search of the CDFG's California Natural Diversity Database (CNDDB), 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.S-minute topographic quadrangle maps containing the proposed alignments and immediate vicinity.

The CNDDB GIS database along with ArcGIS software was used to determine the distance between known and recorded occurrences of sensitive species and the project site. Federal

Register listings, protocols, and species data provided by the 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 the References section of this report.

4.1.3 Topographic Maps and Aerial Photographs

PBS&J/Atkins reviewed current USGS 7.5-minute topographic quadrangle map(s) and aerial photographs for preliminary analysis of the existing conditions within the project site 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.

4.1.4 Soil Surveys

Many sensitive plant species have a limited distribution based exclusively on soil type. The U.S. 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 project area and to determine if soil conditions are suitable for any sensitive plant species.

4.2 Field Investigations

Field investigations were carried out to compare current site conditions with those reported in previous studies. For this updated survey, these observations were carried out by qualified biologists during work on the project jurisdictional delineation, the focused plant survey, and the SBKR focused survey. Data collected during these efforts was combined with data collected during previous surveys to provide a comprehensive overview of species composition and overall site conditions.

4.2.1 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 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 the PBS&J/Atkins biologist where appropriate.

4.2.2 Plant Species

Common plant species observed during the surveys 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. Focused surveys were conducted for sensitive plant species where suitable habitat was determined to be present.

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.

4.2.3 Wildlife Species

Wildlife species detected during the surveys by sight, calls, tracks, scat, or other sign were recorded in a field notebook. Notations were made regarding suitable habitat for those sensitive species determined to potentially occur at the site. Appropriate field guides were used to assist with species identification during surveys. Focused surveys were conducted for sensitive wildlife species where it was determined that suitable habitat was present.

Common names of wildlife species are standard; however, scientific names are provided immediately following common names for the first reference only.

4.2.4 Jurisdictional Waters and Wetlands

Wetland delineations were conducted on the project site in accordance with the 1987 *Corps of Engineers Wetlands Delineation Manual.* A report was prepared for the access roads and a separate report was prepared for the larger project site. The reports were prepared in accordance with the September 2008 *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0).* A Level 2 Onsite Inspection was conducted (as defined in the *Wetland Delineation Manual*), evaluating three parameters that identify and delineate the boundaries of jurisdictional wetlands, including: 1) the dominance of wetland vegetation; 2) the presence of hydric soils; and 3) the presence of hydrologic conditions that result in periods of inundation or saturation on the surface from flooding or ponding. The *National List of Plant Species That Occur in Wetlands: California (Region 0)* was used to determine the wetland indicator status of plants observed within the project site. The *United Sates Department of Agriculture's soil survey for San Bernardino County, California* and the *National List of Hydric Soils* were used to identify soil types within the project site.

PBS&J/Atkins biologists delineated the boundaries of and collected field data from all drainage features and seasonal wetlands located within the project site boundary. Acreages of these features were calculated. Arid West Data Sheets were prepared for sample sites within drainage features that exhibited potential wetland features. Data on vegetation, soils, and hydrology characteristics were recorded in the field and sampling points were located in areas considered to be potential wetland habitat. In addition, bed and bank features and adjacent

riparian vegetation were also recorded to determine potential CDFG jurisdiction. All sample locations were examined for the presence of positive hydrologic indicators (e.g., direct evidence of inundation, sediment deposits, saturated soils, oxidized rhizospheres). Soils were examined via soil test pits to determine composition, matrix color, and the presence of reducing conditions (e.g., mottles). The percent dominance by hydrophytic vegetation was also recorded at each sample location. Coordinates of each sample location and measurement location were recorded in the field with a Garmin GPSMAP 60CSx hand-held GPS.

4.2.5 Wildlife Movement Corridors and Nursery Sites

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. Nursery sites are areas where the habitat present offers features that are advantageous for the rearing of young. These features include appropriate terrain and cover, food and water resources, or protection from predators.

The project site was evaluated for evidence of wildlife movement corridors and nursery sites. 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 the study was to determine if the alteration of current land use within the project site 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, resource maps for the vicinity, field surveys, and knowledge of desired topography and resource requirements for wildlife potentially utilizing the project site and vicinity.

4.3 Problems and Limitations

Many wildlife species are secretive by nature and some are nocturnally active, making night-time observations problematic. Where species could not be directly observed, conclusions regarding potential occurrence are based on consideration of habitat suitability factors.

The numerous surveys conducted on the project site since 1998 were conducted at various times of the year and by a number of different biologists working for several different firms. Despite this, the findings of the reports produced over the last 12 years have been very consistent. Some benefit has probably derived from this situation since each subsequent survey has served as a type of peer review for the previous surveys and the observations of the different biologists have provided a more complete picture of the resources on the site. The relatively long record of surveys is also unusual for a project of this type; most projects receive only one assessment whereas the Spring Trails site has been assessed numerous times. Therefore, the level of knowledge about the site is much greater than would typically be the case.

Chapter 5 Results

5.1 General Trend of Previously Conducted Studies

A comparison of current conditions with those reported in earlier studies demonstrates that vegetation and wildlife on the project site has remained relatively stable over the last decade, despite the occurrence of one major fire and one minor fire event during that time. Vegetative composition has remained essentially unchanged, though some of the species and communities are less fully developed than was reported before the 2003 and 2007 fires. Wildlife species either confirmed to be on the site or with a high probability of occurrence on the site have also been highly stable. So far as is known, no sensitive species confirmed to be present on the site during earlier survey work have been extirpated since the site was first surveyed in 1998. Conversely, no species confirmed to be absent from the site or with a low probability of occurrence on the site have been found to be present. This level of stability is not particularly surprising due to the vigorous reestablishment of vegetation on the site and the subsequent reestablishment of suitable habitats following the 2003 and 2007 fire events.

5.2 Existing Conditions

This section describes the existing conditions at the project site including topography and soils, vegetation, and wildlife.

5.2.1 Topography

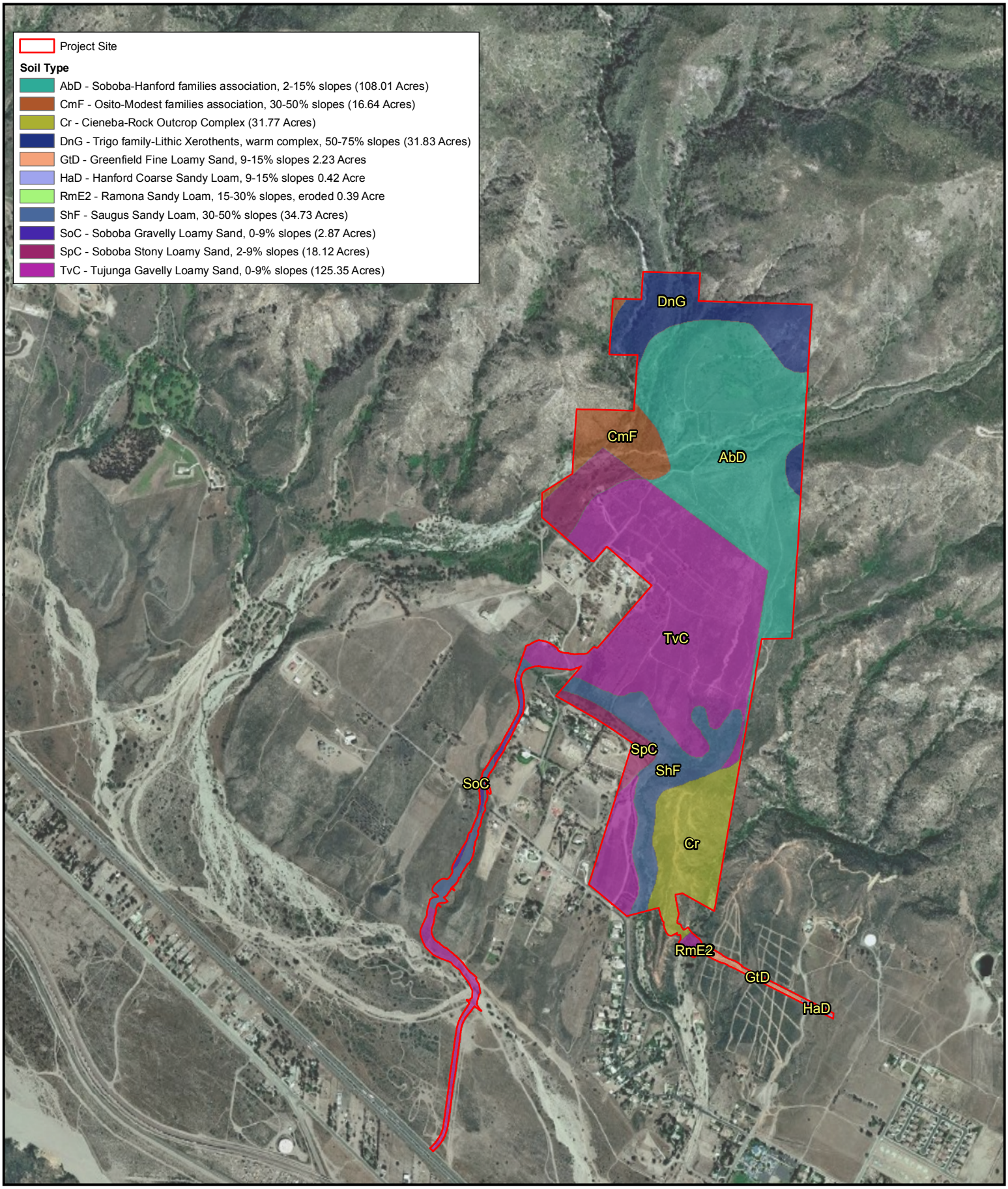
The project site is in the foothills of the San Bernardino Mountains and is approximately 1.5 miles due east of the junction of the I-15 and I-215 freeways. The majority of the site consists of a southwestward sloping alluvial terrace bracketed on the west by Cable Canyon and on the east by Meyers Canyon. Elevations onsite vary from approximately 1,860 feet above sea level to 3,540 feet above sea level.

5.2.2 Soils

The majority of the soils on the project site are either Tujunga gravely loamy sand (zero to nine percent slopes) or Soboba stony loamy sands (two to none percent slopes). Both of these soil series are associated with the broad, smooth alluvial fans found onsite. The other soil type on the site is Saugus sandy loam (30 to 50 percent slopes), found in the deeply incised canyon areas and along the San Andreas Fault. A map of the soils on the project site is presented as Exhibit 6.

5.2.3 Historic Land Use

Portions of the project site were used for agricultural purposes from the mid-19th century through 1989. The site has remained fallow and generally undisturbed since that time, with the exception of wildfires (PCR 1999).



N

0 500 1,000 2,000 Feet

1 in = 1,500 feet

SPRING TRAILS
BIOLOGICAL RESOURCES ASSESSMENT

PBS&J

EXHIBIT 6: SOILS MAP

Source: PBS&J, ESRI Streetmap | 10/22/2009
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5.2.4 Fire History

The project area has been subjected to a number of wildfires in the last several decades. In November 1980, the Panorama Fire burned the site, leaving only the mature eucalyptus trees and vegetation within the canyon areas. In October 2003, the Old Fire swept across the site, burning nearly all of the site's vegetation with the exception of the northernmost portion of Cable Canyon. Portions of the site burned again in October 2007. The Old Fire was especially severe, and resulted in nearly 100 percent consumption of combustible materials on the site.

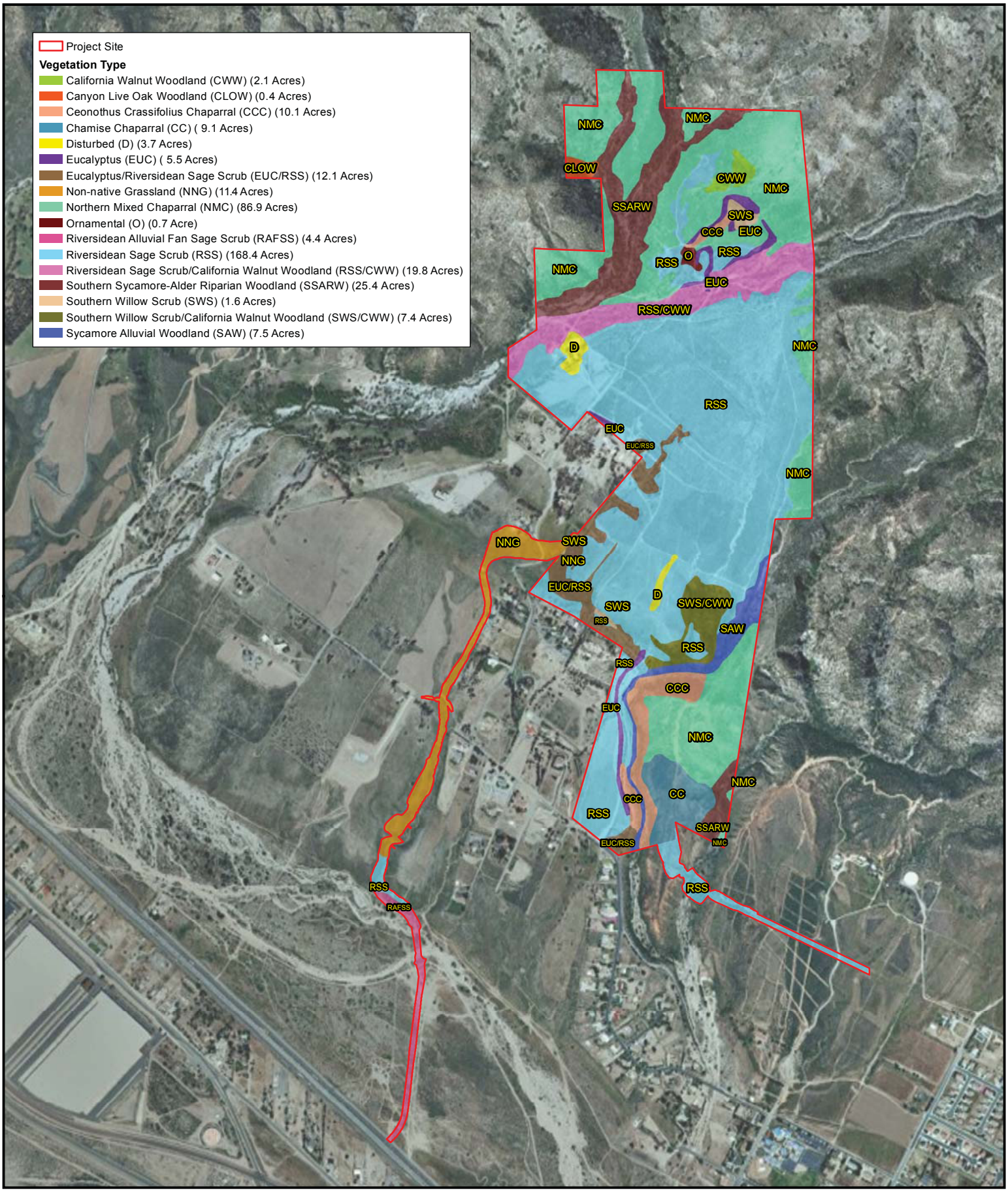
The effects that these fires have had on the vegetation of the site should not be overstated. After each fire event, the fire-adapted native vegetation has reestablished itself in very short order. In many areas there is little evidence of the fire's effects. The vegetative composition on the site has remained virtually unchanged, and most of the locations where the inventoried plant communities were located before the fires have remained the same. This conclusion is based on observations of current site conditions as compared to those discussed in the numerous habitat assessments that have been prepared for the site since 1998, as well as the post-fire arborist report prepared in 2007 (Michael Brandman Associates 2007c).

While type conversion from native sage scrub to non-native grassland has been observed in other areas of the San Bernardino Mountains foothills (the Highway 330 corridor, for example), this phenomenon is not yet apparent on the Spring Trails site. This is probably due to the relatively low historic frequency of fire on the project site as compared to other locations. In other areas, fires have been occurring for decades and at substantially closer intervals. It is likely, however, that some level of type conversion will eventually occur on the site if the fire frequencies experienced over the last decade continue. Such a conversion would eventually have an impact on plant species composition and the occurrence of wildlife species that require specific mixes of native vegetation for their long term viability.

5.3 Vegetation Communities and Plants

5.3.1 Vegetation Communities

The project site is comprised of a variety of plant communities and vegetation types. Seventeen different plant communities were identified on the site, and a brief description of each community, the plant species common to these communities, and the current condition of the habitat is provided below. Exhibit 7 shows the distribution of the communities on the site. Table A-1 in Appendix A of this report summarizes each community and their areas of coverage.



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SPRING TRAILS
BIOLOGICAL RESOURCES ASSESSMENT

EXHIBIT 7: PLANT COMMUNITIES MAP

PBS&J

Source: PBS&J, ESRI Imagery | 08/10/2010
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California Walnut Woodland (CWW)

CDFG lists California walnut woodland (CWW) as rare and it is considered a sensitive plant community. CWW was found in the northeastern portion of the property in a dense patch at the base of the hillsides (see Exhibit 7). The woodland is healthy and has substantially recovered from the Old Fire. This community occupies 2.1 acres of the project site and integrates with the surrounding chaparral and Riversidean sage scrub (RSS) plant communities. Characteristic species found onsite included California walnut (*Juglans californica* var. *californica*), coast live oak (*Quercus agrifolia*), sugar bush (*Rhus ovata*), and skunkbrush (*Rhus trilobata*). Understories consist of rushes (*Juncus* sp.), western ragweed (*Ambrosia psilostachya*), and tarragon (*Artemisia dracunculus*).

Canyon Live Oak Woodland (CLOW)

Canyon live oak woodland is dominated by canyon live oak (*Quercus chrysolepis*), holly-leaved cherry (*Prunus ilicifolia*), and skunkbrush (*Rhus trilobata*) and is found on gentle to steep, north-facing hillsides in the northwestern portion of the site in a small 0.4-acre patch. This woodland has recovered from the 2003 Old Fire and younger trees have reestablished within this community.

Ceonothus Crassifolius Chaparral (CCC)

Ceonothus crassifolius (hoary leaf ceonothus) chaparral occupies 10.1 acres and occurs in a large patch in the southern portion of the project site, with a much smaller patch in the north (see Exhibit 7). Ceonothus chaparral is a fire-adapted plant community. The community has substantially recovered from the 2003 Old Fire and is in an intermediate successional stage. Dominant plant species occurring onsite included hoary leaf ceonothus, chamise (*Adenostama fasciculatum*), toyon (*Heteromeles arbutifolia*), scrub oak (*Quercus berberidifolia*), and sugar bush (*Rhus ovata*) occurring as subdominants.

Chamise Chaparral (CC)

Chamise chaparral comprises approximately 9.1 acres in the southern portion of the project site (see Exhibit 7). Chamise chaparral is a fire-adapted plant community. The chamise chaparral community has substantially recovered from the 2003 Old Fire and is in an intermediate successional stage. Although chamise is the dominant shrub, other shrubs are present, including California buckwheat (*Eriogonum fasciculatum*) white sage (*Salvia apiana*), golden yarrow (*Eriophyllum confertifolium*), deerweed (*Lotus scoparius*), and California sagebrush (*Artemisia californica*).

Disturbed (D)

Scattered areas of disturbed habitat occur throughout the project site. Types of disturbed areas found on the property include cleared land, an existing residential area, and unpaved roads. In total, there are 3.7 acres of disturbed habitat.

Eucalyptus (EUC) and Eucalyptus/Riversidean Sage Scrub (EUC/RSS)

Eucalyptus species occurring onsite include red gum (*Eucalyptus camaldulensis*), blue gum (*Eucalyptus globulus*), silver-dollar gum (*Eucalyptus polyanthemos*), and flooded gum (*Eucalyptus rudis*). These trees are scattered throughout the project site and intermix with RSS. The eucalyptus trees on the site are remnants of a commercial fuel wood plantation and are not native to the area. In total, there are 17.6 acres of eucalyptus trees at various levels of intermixing with surrounding plant communities: pure eucalyptus stands (5.5 acres) and EUC/RSS (12.1 acres).

Non-Native Annual Grassland (NNG)

This community is largely restricted to the upper portion of the proposed secondary access road alignment (see Exhibit 7). All together, approximately 11.4 acres of the project site are vegetated by this community, and it is mostly restricted to the flatter areas of the site. 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*). NNG is often one of the first plant communities to re-establish following a disturbance such as a fire, and large areas can be permanently converted to this vegetation type if fires become too frequent. The relatively small size of this plant community attests to the overall recovery of the native plant communities on the project site.

Northern Mixed Chaparral (NMC)

This is the largest occurring chaparral community found on the site. It contains a diversity of broadleaved, drought adaptive shrubs, including chamise chaparral (*Adenostoma Jasciculatum*), whitethorn (*Ceanothus leucodermis*), scrub oak (*Quercus berberidifolia*), birch-leaf mountain-mahogany (*Cercocarpus betuloides*), hoary leaf ceanothus (*Ceanothus crassifolius*), Mexican elderberry (*Sambucus mexicana*), holly-leaf redberry (*Prunus illicifolia*), toyon (*Heteromeles arbutifolia*), and skunkbrush (*Rhus trilobata*). NMC comprises 86.9 acres of the project site and occurs on the steeper, rocky slopes predominantly in the northern and eastern portions of the project site (see Exhibit 7). Chaparral is a fire-adapted plant community. The chaparral community has substantially recovered from the 2003 Old Fire and is in an intermediate successional stage.

Ornamental (O)

Less than an acre (approximately 0.7 acre) of ornamental vegetation occurs in the northern portion of the property around an old house foundation. The area includes tree of heaven (*Ailanthus altissima*), olive (*Olea europaea*), eucalyptus (*Eucalyptus* sp.), California black walnut (*Juglans californica* var. *californica*), and incense cedar (*Calocedrus decurrens*).

Riversidean Alluvial Fan Sage Scrub (RAFSS)

CDFG lists RAFSS as rare and it is considered a sensitive plant community. CDFG's list of natural communities categorizes plant communities first by general habitat, then as alliances within the general habitat, and finally as associations within alliances. RAFSS is an association within the RSS alliance, which falls within the general habitat type of coastal scrub. RAFSS is an open plant community adapted to the harsh conditions of periodic flooding. It grows on sandy, rocky alluvium deposited by streams that experience infrequent episodes of flooding. Alluvial sage scrub 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*) has a high fidelity to alluvial substrates 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 (*Eriodictyon trichocalyx*) and deerweed (*Lotus scoparius*). The RAFSS onsite is also comprised of yerba santa (*Eriodictyon trichocalyx*), buckwheat (*Eriogonom fasiculatum*), croton (*Croton californicus*), and deerweed (*Lotus scoparius*) and annuals, including sun cup (*Camissonia* sp.), popcorn flower (*Cryptantha* sp.), and phacelia (*Phacelia distans*). There are approximately 4.4 acres of this plant community on the project site, all of which is located along the southern portion of the proposed secondary access road alignment within the alluvial channel of Cable Creek (see Exhibit 7).

Riversidean Sage Scrub (RSS)

CDFG lists Riversidean sage scrub (RSS) as a sensitive plant community. 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 until 1989. Major fires can temporarily reduce or destroy this plant community. Today the RSS onsite has substantially recovered from the 2003 and 2007 fires and is currently in an intermediate phase of succession. This community is dominated by California buckwheat, deer weed, white sage, yerba santa (*Eriodictyon trichocalyx*) and black sage (*Salvia mellifera*). There are currently 168.4 acres of RSS within the project site. The largest block of RSS occurs within the central portion of the site, but several smaller patches are located in the northern and southern portions of the site, as well as along the primary access road alignment (see Exhibit 7).

Riversidean Sage Scrub/California Walnut Woodland (RSS/CWW)

There are approximately 19.8 acres of this mixed plant community located primarily within the unnamed tributary of Cable Creek that traverses the northern third of the site (see Exhibit 7). CDFG lists both Riversidean sage scrub (RSS) and California walnut woodland (CWW) as sensitive plant communities.

Southern Sycamore-Alder Riparian Woodland (SSARW)

CDFG lists southern sycamore-alder riparian woodland (SSARW) as rare and it is considered a sensitive plant community. There are 25.4 acres of SSARW onsite, primarily found in association with Cable Creek in the northwest comer of the site (see Exhibit 7). A small patch of this woodland also occurs near the extreme southeastern comer of the site. Plants found within this community consisted primarily of big leaf maple (*Acer macrophyllum*), coast live oak (*Quercus agrifolia*), white alder (*Alnus rhombifolia*), western sycamore (*Platanus racemosa*), California bay (*Umbellularia californica*), California black walnut (*Juglans californica*), scrub oak (*Quercus berberidifolia*), and Mexican elderberry (*Sambucus Mexicana*). Understory species included California blackberry (*Rubus ursinus*), poison oak (*Toxicodendron diversilobum*), wild grape (*Vitus californica*), and mugwort (*Artemisia douglasiana*). This riparian woodland occurs within the canyon bottoms and was not as adversely affected from the wildfires as those plant communities found on the alluvial fans and hilltops. Vegetation within this woodland is diverse and healthy and shows no remaining adverse impacts from the 2003 Old Fire.

Southern Willow Scrub (SWS)

CDFG lists southern willow scrub (SWS) as a sensitive plant community. Two small areas, comprising 1.6 acres, of SWS occur on the project site (see Exhibit 7). One large patch is located in the northern portion of the site and a smaller patch is located along the western boundary. The community is found primarily in association with Meyer Canyon and supports arroyo willow (*Salix lasiolepis*) and red willow (*Salix laevigata*), with lesser amounts of mule fat (*Baccharis salicifolia*), Fremont's cottonwood (*Populus fremontii* ssp.*fremontii*), and Mexican elderberry (*Sambucus Mexicana*). The understory consists of wild grape (*Vitis californicus*), poison oak (*Toxicodendron diversilobum*), mugwort (*artemisia douglasiana*), California blackberry (*Rubus ursinus*), and numerous ferns. This riparian woodland occurs within the canyon bottoms and was not as adversely affected as those plant communities found on the alluvial fans and hilltops. Vegetation within this woodland is diverse and healthy and shows no remaining adverse impacts from the 2003 Old Fire.

Southern Willow Scrub/California Walnut Woodland (SWS/CWW)

The southern willow scrub (SWS) found onsite is mixed with California walnut woodland (CWW) in one large patch totaling 7.4 acres in the southern portion of the project site in the vicinity of the San Andreas Fault Zone (see Exhibit 7). This community requires more moist conditions than what is present on the surrounding RSS areas. The community is probably present at this location because of upswellings of groundwater along the fault. The jurisdictional delineation conducted for the site (PBS&J 2009b) classified this area as a seasonal wetland. Vegetation within this woodland is diverse and healthy and shows no remaining adverse impacts from the 2003 Old Fire. CDFG lists both SWS and CWW as sensitive plant communities.

Sycamore Alluvial Woodland (SAW)

CDFG lists sycamore alluvial woodland (SAW) as a sensitive plant community. Sycamore alluvial woodland is located on the site, and is dominated by western sycamore (*Platanus racemosa*), scrub oak (*Quercus berberidifolia*), and Mexican elderberry (*Sambucus Mexicana*). The 7.5 acres of woodland are associated with the braided, depositional channels of Meyers Canyon in the southern portion of the site (see Exhibit 7). Vegetation within this woodland is diverse and healthy and shows no remaining adverse impacts from the 2003 Old Fire.

5.3.2 Special Status Plant Species and Plant Communities

Special Status Plant Species

A number of special status plant species appear on CNDDB searches for the project area or are otherwise considered as having a potential to occur on the project site. Numerous focused plant surveys and other assessments have been conducted on the site since 1998. Table A-2, included within Appendix A of this report, provides a summary of the results of these surveys, together with a listing of the specific reports and surveys from which the information was derived.

No plant species listed as either endangered or threatened under the ESA or the CESA have been observed on the project site. These negative findings have been consistent for all surveys performed on the site since 1998.

Plummer's mariposa lily (*Calochortus plummerae*) has been observed on the site and is expected to occur in other areas where it has not been directly observed based on the presence of suitable habitat and known occurrences in the area. Plummer's mariposa lily is classified as a CNPS List 1B species, which means that the plant is considered to be rare in California and elsewhere.

California black walnut (*Juglans californica var. californica*) is present on the project site. California black walnut is only listed as a CNPS List 4 species, but since it is the primary constituent of the California Walnut Woodland community, which is considered a special status plant community, it is included here as a special status plant species.

A number of CNPS List 3 and 4 plant species have been recorded on the site, and information regarding those species is presented in Table A-2, included within Appendix A of this report. List 3 and 4 species are species for which more information is needed or are plants with limited distribution. These lists are maintained as review and watch lists and the species listed are not necessarily considered rare or endangered.

Special Status Plant Communities

Of the 17 plant communities described above, eight are considered sensitive by either the USFWS, CNPS, or CDFG. These communities are listed below. See Exhibit 7 for the location of these communities within the project site.

- California Walnut Woodland (CWW)
- Riversidean Alluvial Fan Sage Scrub (RAFSS)
- Riversidean Sage Scrub (RSS)
- Riversidean Sage Scrub/California Walnut Woodland (RSS/CWW)
- Southern Sycamore-Alder Riparian Woodland (SSARW)
- Southern Willow Scrub (SWS)
- Southern Willow Scrub/California Walnut Woodland (SWS/CWW)
- Sycamore Alluvial Woodland (SAW)

A small portion of the site (12.1 acres) is occupied by an intermixed community of eucalyptus and Riversidean sage scrub (EUC/RSS). Even though this intermixed community contains elements of RSS, which would normally qualify for sensitive community status, it is sufficiently dominated by eucalyptus to where the native RSS habitat has been substantially degraded. For this reason, the combined 12.1 acres of EUC/RSS on the site are not considered a sensitive plant community.

5.3.3 Tree Resources on the Project Site

Arborist reports were prepared for the site in 1998 and 2007 (Integrated Urban Forestry 1998; Michael Brandman Associates 2007c). The 2007 report was prepared as an update of conditions on the site following the October 2003 Old Fire. A general inventory and assessment of the condition of the trees on the site was undertaken during both the 1998 and 2007 surveys. The 2007 report found that the native tree species on the site had vigorously recovered from the effects of the 2003 fire.

The 1998 survey found approximately 4,000 trees on the project site. Approximately 34 percent of that number was comprised of native tree species, while the remaining 66 percent was comprised of eucalyptus and non-native ornamental species. Eucalyptus trees constituted the majority of the non-native species, with approximately 2,560 trees located on the site. These trees were originally planted for lumber and fuel wood. Evidence was present to suggest that the eucalyptus on the site had been harvested numerous times. Evidence was also present to suggest that the trees had also been damaged during previous fire events, most likely the 1980 Panorama Fire. Both of these determinations were made based on the presence of stump sprouts that likely became established following fire damage or coppicing. A number of other non-native species were also observed on the site, including Tree-of-Heaven (*Ailanthus altissima*), olive (*Olea europaea*), and fruit-bearing orchard trees such as apricot, peach, and apple trees.

The 1998 survey found approximately 1,350 native trees on the project site, not including small trees or multi-trunked shrubs. Native trees included California bay-laurel (*Umberrularia californica*), California black walnut (*Juglans californica*), white alder (*Alnus rhombifolia*), California sycamore (*Plantus racemosa*), and canyon live oak (*Quercus chrysolepis*). Table A-3, included within Appendix A of this report provides a summary of the native tree species identified on the site during the 1998 survey.

The 2007 arborist survey gathered data on each sensitive native tree vegetation community and provided an update as to their condition and outlook following the 2003 Old Fire. Individual trees were not specifically evaluated. Rather, the focus of the evaluation was extended to the entire community. The analysis concluded that each of the communities had recovered well from the 2003 fire. All communities exhibited resprouting or other forms of reestablishment and the outlook for full recovery was considered very good.

5.4 Wildlife

The project site contains a variety of habitats and thus has the potential to support a wide number of wildlife species. Table A-4, included within Appendix A of this report, provides a summary of the results of the various habitat assessments and focused surveys that have been conducted on the site since 1998, together with a listing of the specific reports and surveys from which the information was derived. Narrative summary discussions of the findings for each wildlife group are provided below.

5.4.1 Mammals

Overview

A number of mammal species have been either directly observed, or their presence deduced by diagnostic sign (track, scat, burrows, etc.). Among these were the desert cottontail (*Sylvilagus audubonii*), California ground squirrel (*Spermophilus beecheyi*), bobcat (*Lynx rufus*), coyote (*Canis latrans*), mule deer (*Odocoileus hemionus*), mountain lion (*Puma concolor*), and black bear (*Ursus americanus*).

Mammal-trapping sessions conducted in 1998, 2002, 2007, and 2009 revealed the presence of numerous small mammal species within the Spring Trails project area. Species found include deer mouse (*Peromyscus maniculatus*), California mouse (*Peromyscus californicus*), cactus mouse (*Peromyscus eremicus*), dusky-footed woodrat (*Neotoma fuscipes*), San Diego pocket mouse (*Chaetodipus fallax*), Los Angeles pocket mouse (*Perognathus longimembris brevinasus*), western harvest mouse (*Reithrodontomys megalotis*), and Pacific kangaroo rat (*Dipodomys agilis*).

Special Status Mammal Species

A summary of sensitive mammal species with the potential to occur on the project site is presented in Table A-4 within Appendix A of this report, together with a listing of the specific

reports and surveys from which the information was derived. A narrative of the sensitive species known to occur on the site or otherwise deserving of additional explanation is presented below.

San Bernardino Kangaroo Rat

San Bernardino kangaroo rat (*Dipodomys merriami parvus*) (SBKR) is listed as endangered under the ESA. The species has not been captured on the site during any of the abovementioned trapping efforts. However, the project site does provide suitable habitat for the species and SBKR were trapped on a nearby property in 2004. Additionally, a portion of the proposed secondary access road alignment is within designated USFWS critical habitat for SBKR. Therefore the area has a high probability of being occupied by SBKR, and because it is within critical habitat and a federal discretionary action will be required (issuance of a Section 404 permit by the USACE), consultation with the USFWS under Section 7 of the ESA will be required.

San Diego Pocket Mouse

San Diego pocket mouse (*Chaetodipus fallax fallax*) is a SSC. The species has been captured on the project site during each of the abovementioned trapping efforts. Potential impacts to San Diego pocket mouse are not typically considered significant under the California Environmental Quality Act (CEQA) because this species is widespread and abundant on a local and regional level.

Los Angeles Pocket Mouse

Los Angeles pocket mouse (*Perognathus longimembris brevinasus*) is a SSC. The species has been captured on the project site during each of the abovementioned trapping efforts. Unlike the San Diego pocket mouse, the range and preferred habitat of Los Angeles pocket mouse is narrow, and the species is not known to be locally or regionally abundant. Therefore, even though the status of SSC does not afford any specific legal protection, potential impacts to the species may be of concern to regulatory agencies such as CDFG.

5.4.2 Birds

Overview

A number of bird species have been directly observed on the site, or have been determined to be present based on vocalizations. General habitat assessments were conducted on the project site in 1998, 2002, 2007, 2008, and 2009. In addition, focused surveys were conducted for CAGN in 1998, 2002, and 2007. Focused surveys were also conducted for least Bell's vireo and southwestern willow flycatcher in 2007.

Special Status Bird Species

A summary of sensitive bird species with the potential to occur on the project site is presented in Table A-4 within Appendix A of this report, together with a listing of the specific reports and surveys from which the information was derived. A narrative discussion of the sensitive

species known to occur on the site or otherwise deserving of additional explanation is presented below.

Coastal California Gnatcatcher

Coastal California gnatcatcher (*Polioptila californica*) (CAGN) is listed as threatened under the ESA. The species has not been observed on the site during any of the abovementioned survey efforts. Portions of the project site were formerly included within USFWS designated critical habitat for the species. However, USFWS revisions to CAGN critical habitat in 2007 modified the extent of designated habitat throughout the region and the project site is now no longer within designated critical habitat.

Based on repeated negative findings for CAGN during numerous survey efforts, as well as the site's exclusion from designated critical habitat, it is reasonable to assume that the species does not occur upon the project site. However, suitable habitat is present on the site so it is also reasonable to conclude that the species has a low to moderate potential to occur on the site at some point in the future.

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), which is listed as endangered under both the ESA and the CESA. Focused surveys conducted in 2007 returned negative findings, and previous and subsequent general habitat assessment surveys have also been negative. The nearest recorded occurrence of the species is seven miles from the project site. However, the riparian habitat on the site in 2007 was still recovering from the 2003 Old Fire and was observed to be nearly fully recovered in 2009. As this habitat more fully matures it will provide more suitable habitat for the species. Therefore, owing to the quality of the available habitat on the site, it is reasonable to assume that there is a moderate potential for the 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), which is listed as endangered under both the ESA and the CESA. A focused survey for the species conducted in 2007 confirmed species presence off the property to the west of the site in the relatively lush riparian areas of Cable Creek. These riparian areas extend northeastwards along Cable Creek into the northwestern portion of the site, so there is a high probability that LBV could utilize the riparian habitat that is present on the northwestern side of the project site. It is not known if the observation that was made in 2007 was a bird that was actively nesting in the area or was simply passing through. As the riparian vegetation in this area continues to recover from the effects of the 2003 Old Fire, it will provide more suitable high quality habitat for LBV. Based on the findings of the 2007 focused survey and the presence of suitable habitat, it is therefore assumed that this portion of the project area is occupied by LBV.

5.4.3 Reptiles and Amphibians

The project site possesses the potential to support a variety of reptile species. Reptile species observed during surveys included the western fence lizard (*Scleroporus occidentalis*), side-blotched lizard (*Uta stansburiana*), western rattlesnake (*Crotalus viridis*), and California whipsnake (*Masticophis lateralis*). Other species expected to occur include the western skink (*Eumeces skiltonianus*), sagebrush lizard (*Scleroporus graciosus*), gopher snake (*Pituophis catenifer*), ringneck snake (*Diadophis punctatus*), and common kingsnake (*Lampropeltis getulus*).

Cable Creek traverses the property and the occurrence of this perennial stream onsite provides adequate habitat for common amphibian species. In addition, the project site can support a variety of amphibians in the more moist woodland areas and canyon bottoms. California tree frog (*Hyla cadaverina*) was observed on the project site during surveys. Additional species with the potential to occur due to the presence of riparian habitat include the Pacific slender salamander (*Batrachoseps pacificus*), western toad (*Bufo boreas*), western spadefoot toad (*Scaphiopus hammondii*), mountain yellow-legged frog (*Rana muscosa*), and arroyo southwestern toad (*Bufo microscaphus californicus*). Species not likely to occur onsite due to lack of suitable habitat include the California red-legged frog (*Rana aurora draytonii*).

Special Status Reptile and Amphibian Species

A summary of sensitive reptile and amphibian species with the potential to occur on the project site is presented in Table A-4 within Appendix A of this report, together with a listing of the specific reports and surveys from which the information was derived. A narrative discussion of the sensitive species known to occur on the site or otherwise deserving of additional explanation is presented below.

Arroyo Southwestern Toad

The perennial stream in Cable Creek provides suitable habitat for arroyo southwestern toad (*Bufo californicus*); however, focused surveys conducted in 2007 in the vicinity were negative. The closest recorded occurrence is approximately six miles from the project site. However, owing to the presence of suitable habitat, there is a moderate potential for this species to occur on the project site.

California Red-Legged Frog

A habitat evaluation conducted for California red-legged frog (*Rana aurora draytonii*) in 2002 (White and Leatherman Bioservices 2002a) determined that suitable habitat for the species is not present and that the potential for species occurrence on the site is low. This is largely due to the high stream gradient, the lack of pools, and the high silt content of Cable Creek. These characteristics are not conducive to the known habitat requirements of the species. Historic occurrences of the species were known to occur in the Inland Empire and western San Bernardino Mountains, but those populations are now presumed to have been extirpated (Jennings and Hayes 1994).

Mountain Yellow-Legged Frog

A habitat evaluation conducted for mountain yellow-legged frog (*Rana muscosa*) in 2002 determined that marginally suitable habitat for the species is present along Cable Creek through the northwestern corner of the project site and for at least one mile upstream of the site (White and Leatherman Bioservices 2002a). Focused surveys for the species conducted that same year, however, failed to detect any mountain yellow-legged frogs within any of the areas where suitable habitat was present. The survey was notable in that no evidence of any stream-breeding amphibians was detected during the survey. The surveyor determined that the likely reason for such a low diversity of herpetofauna was the combined effects of sedimentation, water diversion, and human disturbance along the creek bed.

The nearest known extant occurrence of mountain yellow-legged frogs to the project site is City Creek, approximately seven miles to the east of the site. Until this population was discovered in 1999, it was believed that the species had been extirpated from the San Bernardino Mountains, but based on the survey findings, the distance to the nearest known occurrence, and the presence of only marginally suitable habitat on the site, it is reasonable to assume that the species is not present on the project site and has a low potential for future occurrence.

5.4.4 Wildlife Movement Corridors, Nursery Sites, and Other Wildlife Values

Wildlife Movement Corridors

Formal wildlife movement corridor studies such as the use of track plates, camera stations, scent stations, or snares have not been conducted on the project site. However, general conclusions can be made regarding the presence and movement of wildlife on the site based on habitat characteristics and the observation of animals and their sign during reconnaissance surveys. In addition, a regional-level evaluation of wildlife corridors and linkages was recently compiled (South Coast Missing Linkages Project 2004), and that information can also be used in determining the value of the site to wildlife.

Based on the information that has been gathered on the site over the last decade and on the information contained in the available literature, it can be determined that the project site is likely to be utilized by a variety of wildlife species for foraging and movement. This finding has been consistently reported in each of the habitat assessments and focused surveys conducted on the site since 1998. The reasons for this finding are as follows:

1) There are few physical barriers surrounding the site, especially in the northern half of the property;

2) Adjacent properties to the east, north, and west are mostly undeveloped and part of the much larger natural open space of the SBNF;

3) The large expanse of undisturbed open space surrounding the site harbors an abundance of wildlife which may, in turn, facilitate a substantial amount of wildlife movement and use of the site;

4) Cable Creek Canyon provides a natural wildlife corridor and also contains a year-round water source for wildlife that is not common in the region. The vegetation associated with this water source also provides cover and food resources for animals traveling between upland areas above the project site to valley areas below the site, and vice versa. This corridor allows animals to travel from higher elevation montane coniferous forest communities, through oak woodland and chaparral habitats, and then to lowland alluvial communities while accessing the additional resources provided by each community;

5) Interviews with local residents and persons familiar with the site have indicated that substantial numbers of animals use the site. Specific large mammal species for which multiple observations have been recorded include black bear, mule deer, and mountain lion.

6) The South Coast Missing Linkages Project (2004) identified the site and the surrounding area as an important component in maintaining wildlife population linkages between the San Bernardino Mountains and the San Gabriel Mountains to the west of the site. Species such as mountain lion, American badger (*Taxidea taxus*), mule deer, and a number of small mammal and bird species were identified as being likely to use the site and the surrounding area for travel between various habitat areas in the greater Cajon Pass area.

Exhibit 8 illustrates the generalized locations of wildlife movement corridors on the project site. Canyon bottoms and riparian areas provide the greatest opportunity for wildlife movement since they provide suitable cover, forage resources, and year-round or seasonal water sources. Another area on the project site that appears to be utilized by wildlife is along the eastern boundary of the site. Animals traveling within this area appear to be using it to access the seasonal wetland that is located in the southern portion of the site (see the discussion below on jurisdictional waters and wetlands and also Exhibit 10 for the location of this resource).

Wildlife Nursery Sites

In regards to wildlife nursery locations, the site has been confirmed to provide fawning habitat for mule deer. Groups of does and fawns have been observed on the site in substantial quantities (PBS&J 2009e). Based on the time of year that these observations were made, it is reasonable to assume that the fawns were born on the project site. The site is likely serving as a nursing area because of the presence of flat terrain, high-quality foraging habitat, high quality cover habitat, and a year-round water source. Based on each of these considerations, it seems reasonable to conclude that the site serves as a wildlife nursery site for mule deer.

Exhibit 8 shows the locations of specific areas on the project site that are likely to be used for mule deer nursery sites.

Nesting Birds

The project site contains a variety of nesting habitats for many avian species. Under Sections 3503 and 3503.5 of the CFG Code and the MBTA, it is unlawful to take, possess, or needlessly destroy any bird of prey or the nests or eggs of any bird species. Disturbance of any active bird nest during the breeding season, including active owl burrows, would be prohibited by law. Breeding season typically runs from March through late August. Disturbing or destroying active nests is a violation of the MBTA.

Raptor Foraging Habitat

Based on observations recorded in each of the biological resources assessments prepared for the site, there is evidence that the project site provides limited amounts of raptor foraging habitat. The site has been shown to be used by Swainson's hawk and sharp-shinned hawk, for instance, as well as a number of other raptor species including great-horned owl, turkey vulture, red-tailed hawk, red-shouldered hawk and American kestrel.

Despite the relatively large number of raptor species observed on the site over the years, it does not appear that the site is frequented for long periods of time by raptor species. The project site lacks expansive grassland habitat and is generally dominated by dense Riversidean sage scrub and chaparral. These habitats do not provide particularly favorable conditions for foraging raptors due to the lack of prey visibility. It can therefore be concluded that the site provides only marginally suitable foraging habitat for raptors and that these species would be more likely to rely on other areas for the majority of their foraging activities.

5.5 Critical Habitat

Portions of the proposed secondary access road alignment is within a designated critical habitat area for SBKR as per a January 8, 2011 judicial ruling, which reverted designated SBKR critical habitat areas from the USFWS's revised 2008 designation back to the substantially larger areas designated by USFWS in 2002. Exhibit 9 shows the location of designated SBKR critical habitat in relation to the project site.

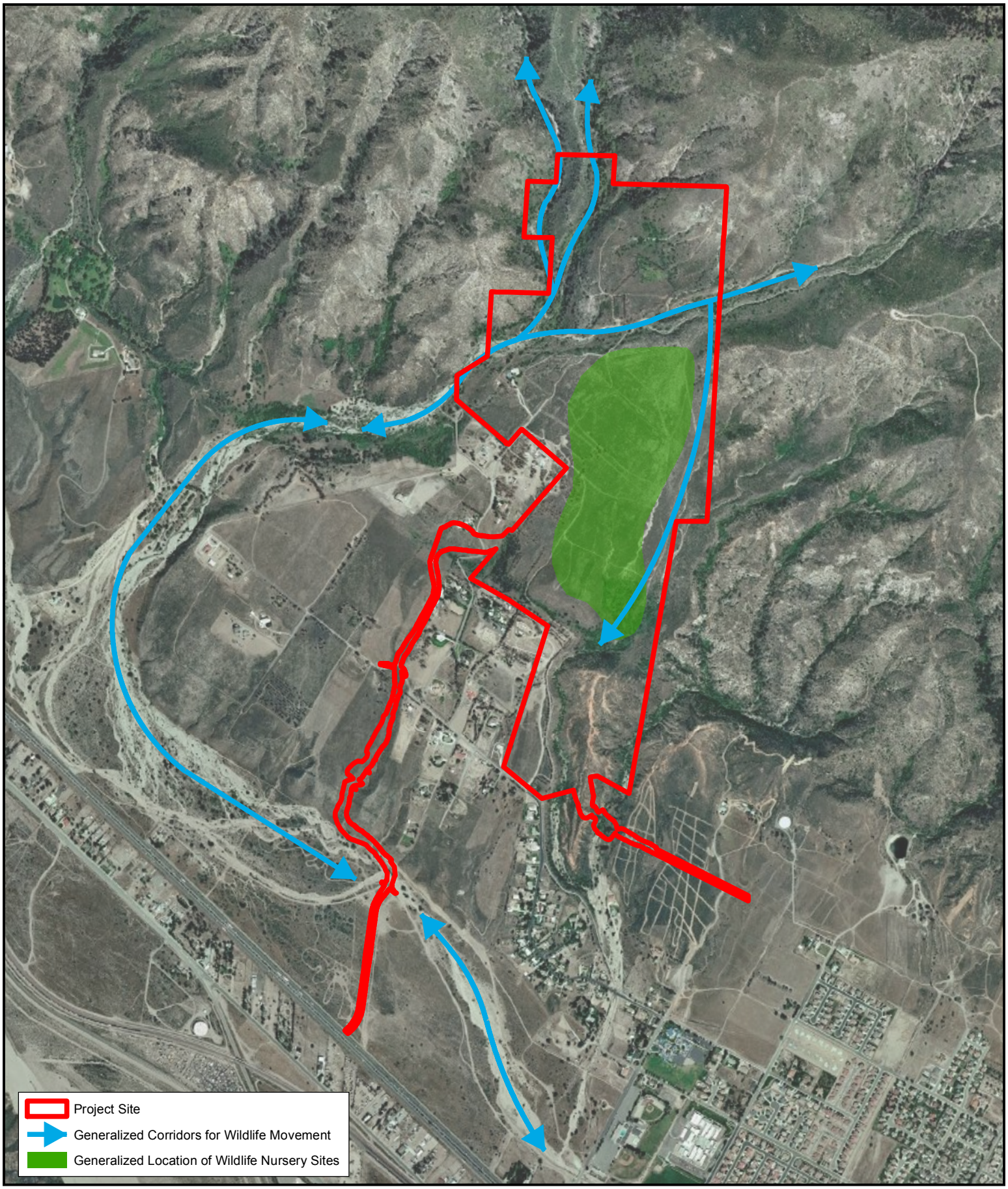
Portions of the site were also formerly within designated critical habitat for CAGN, but the USFWS revised the designated critical habitat for CAGN in 2007 and the site is no longer within critical habitat for the species.

Loss or adverse modifications of critical habitat must be evaluated by federal agencies prior to authorizing or conducting a major federal action, even if the area in question is determined to be absent of the listed species. Since the project will require a Section 404 permit from the USACE, a federal nexus is established, and the USACE will be required to consult with the USFWS prior to the issuance of the permit.

5.6 Jurisdictional Waters and Wetlands

The jurisdictional delineations prepared for the project site (PBS&J 2009a, 2009b) determined that approximately 15.8 acres within the project site could be under the jurisdiction of USACE and the Regional Water Quality Control Board (RWQCB). The delineations also determined that the project site supports approximately 27.1 acres of streambed and banks, and associated riparian vegetation that could fall under the regulatory authority of the CDFG. Exhibit 10 shows the general location of these jurisdictional features. Specific details of each tributary, along with detailed maps and illustrations, are contained in the two delineation reports cited above.

A potential seasonal wetland is present in the southern third of the site near the San Andreas Fault (see Exhibit 10). This feature is likely the result of groundwater upwelling along the fault. This feature is somewhat problematic because while hydrophytic vegetation and wetland hydrology were present, no apparent hydric soil indicators were present during the delineation. Hydrophytic vegetation was dominated by cattails (*Typha latifolia*) and sedges, and oxidized rhizospheres along living roots were the primary hydrology indicator. Nonetheless, since this feature resembles hydric soil indicators and exhibits wetland conditions, it could be considered a potential seasonal wetland. The approximate boundary of this seasonal wetland area was delineated based primarily on vegetation and hydrology criterion, with the potential jurisdictional limits being defined by an overall dominance of hydrophytic vegetation, and hydrology indicators such as potential saturation visible on aerial imagery. Approximately 6.2 acres of this seasonal wetland could fall under the jurisdiction of the USACE, RWQCB, and the CDFG.



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0 500 1,000 2,000 Feet

1 in = 1,500 feet

SPRING TRAILS
BIOLOGICAL RESOURCES ASSESSMENT

PBS&J

EXHIBIT 8: WILDLIFE CORRIDORS AND NURSERY SITES

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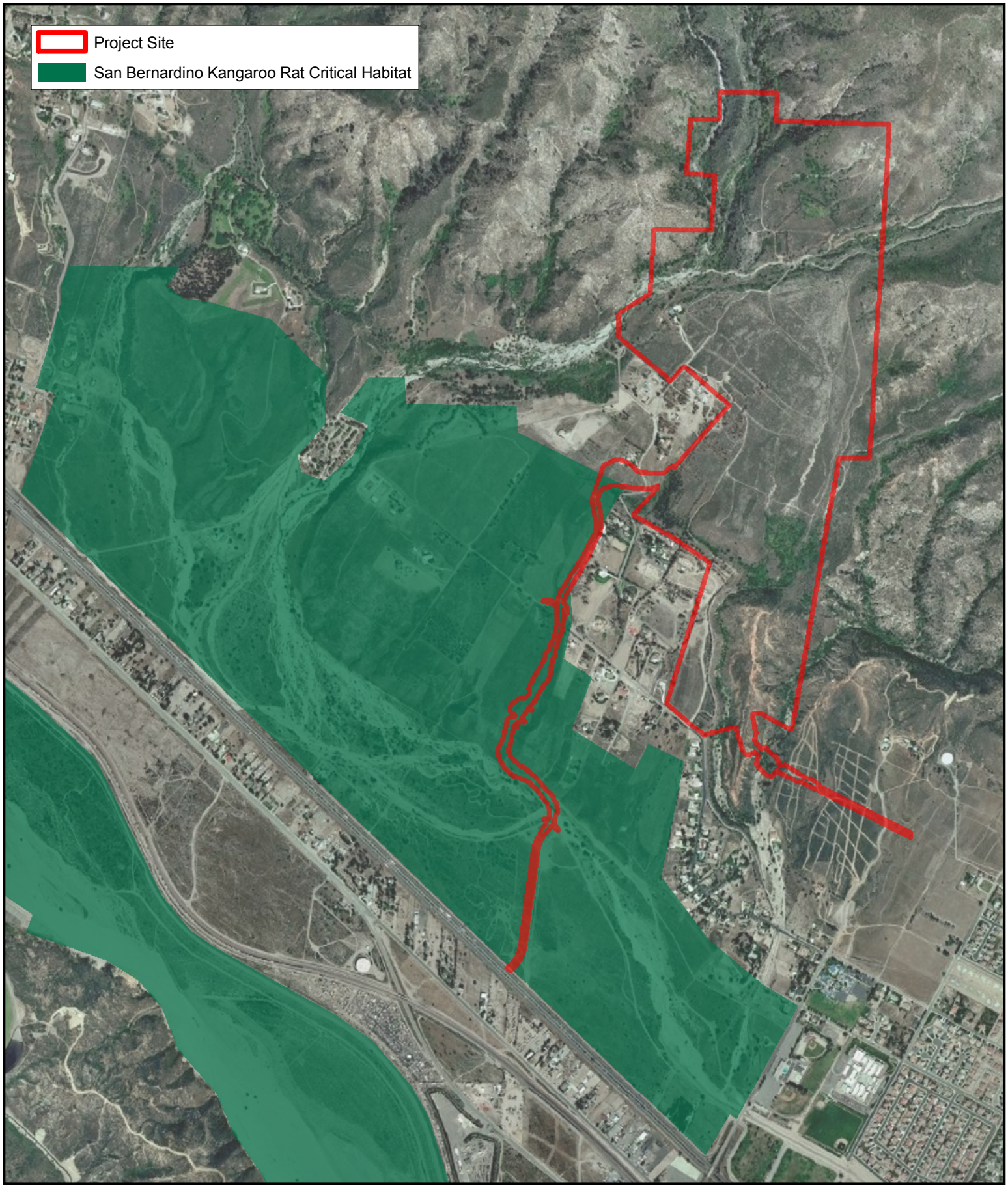

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1 in = 1,500 feet

SPRING TRAILS
BIOLOGICAL RESOURCES ASSESSMENT

FIGURE 9: CRITICAL HABITAT MAP

PBS&J

Source: PBS&J, ESRI Streetmap | 10/22/2009
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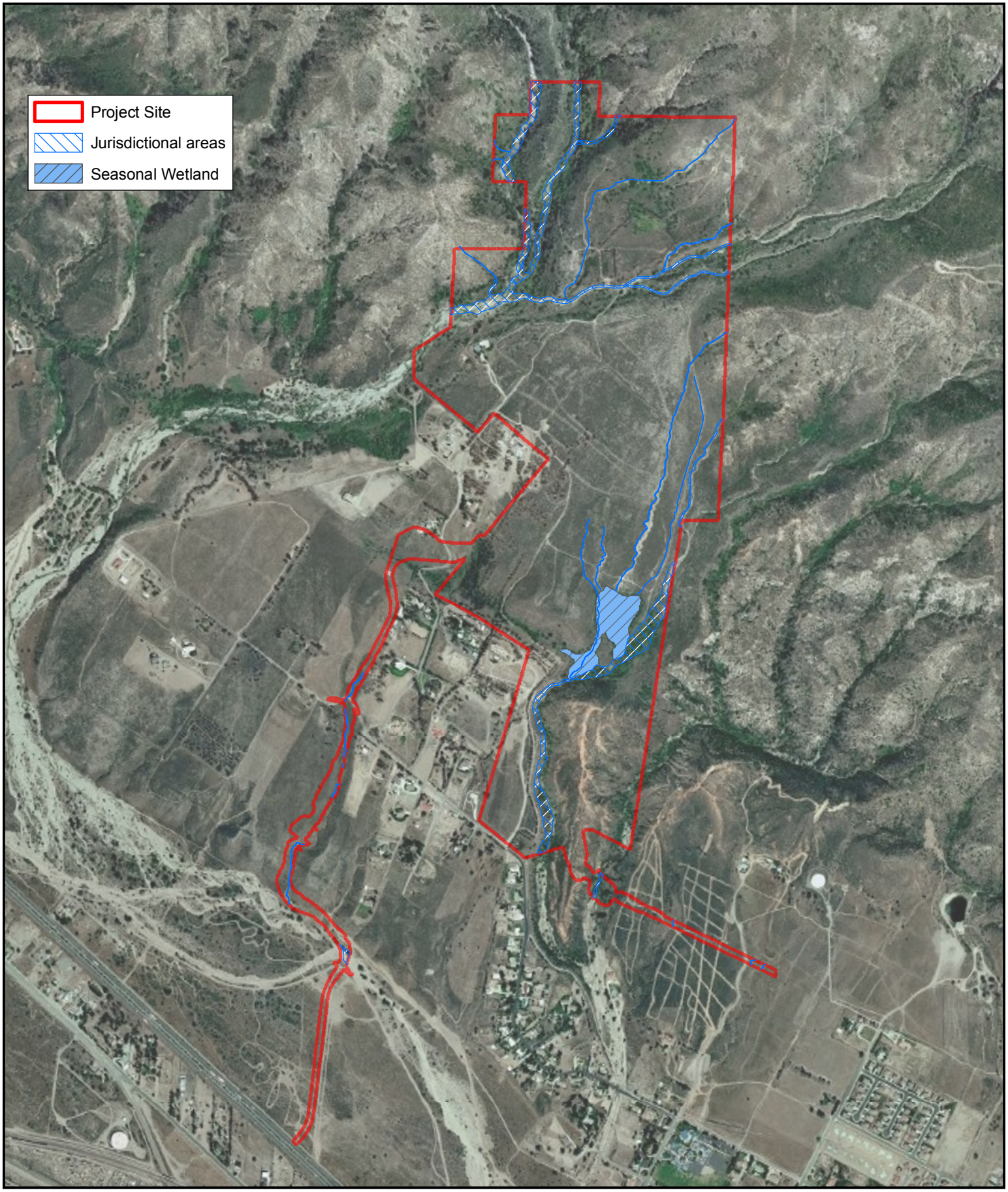

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1 in = 1,250 feet

SPRING TRAILS
BIOLOGICAL RESOURCES ASSESSMENT

EXHIBIT 10: JURIDICTIONAL AREAS MAP

PBS&J

Source: PBS&J, ESRI Streetmap | 10/22/2009
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Chapter 6 Impacts

This section presents the impacts to the existing biological resources on the site from project development. It compares the existing site conditions as documented in the previous chapter with those likely to be present if the project is developed as currently proposed. For an overview of the proposed development and the overall development footprint, refer to Exhibits 4 and 5, respectively.

For the purposes of this report, impacts are assessed in relation to CEQA and the Thresholds of Significance contained in Appendix G of the CEQA Guidelines. According to those guidelines, a project would normally have a significant effect on biological resources if the project would:

1) Have a substantial effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the CDFG or USFWS.
2) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the CDFG or USFWS.
3) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the CWA (including but not limited to marsh, vernal pool, coastal waters, etc.) through direct removal, filling, hydrological interruption, or other means.
4) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors or impede the use of native wildlife nursery sites.
5) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.
6) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

6.1 Special Status Plant Species and Plant Communities

6.1.1 Special Status Plant Species

No plant species listed as either threatened or endangered under the ESA or the CESA is known to occur on the project site. This finding is based on numerous focused surveys and habitat assessments conducted on the site since 1998. Two plant species listed as sensitive by the CNPS have been documented to occur on the project site.

Plummer's Mariposa Lily

Plummer's mariposa lily is designated by the CNPS as a List 1B.2 plant, which means it is considered rare or endangered in California and throughout its range. The species has been previously observed within unconfirmed areas of the project site during at least two surveys (White and Leatherman Bioservices 2002a and Michael Brandman Associates 2007a), none of which have ever been formally mapped or reported. The plant was recorded to occur in relatively small quantities numbering approximately 100 to 300 plants. The species was not detected during focused plant surveys conducted in 2009 (PBS&J 2009d). Regardless, there is suitable habitat on the site and it can be assumed that the species is present. It is not known, however, if the recorded occurrences were in an area of the site that is proposed for development.

Pursuant to CEQA thresholds of significance, potential impacts to this non-listed CNPS List 1B.2 species is not anticipated to be significant due to the relative abundance of this species on a regional scale. According to the CNPS listing guidelines, this species is known from at least 21 to 80 occurrences throughout its range, interpreted as anywhere between 3,000 to 10,000 individuals or 10,000 to 50,000 occupied acres that are known. The proposed project may result in the removal of an estimated 100 to 300 individuals, if present. This represents a small portion of the total known population and any impacts would not jeopardize the existence of this species or elevate its sensitivity or listing status under the CNPS, CNDDB, global and State heritage rankings, the ESA, or CESA.

It is recommended, however, that avoidance of the areas presumed to be occupied by this species be encouraged in the final project design to minimize impacts to the maximum extent. Preconstruction measures should be encouraged to positively identify and quantify all individuals on or in the immediate vicinity of the proposed impact areas. Surveys for this species should be conducted prior to project construction by a qualified biologist between the months of May and July. Any individuals confirmed within the project impact area should be considered for possible salvage and relocation into suitable receptor sites located onsite within preserved areas, if feasible for this species. Any individuals confirmed in the immediate vicinity of proposed impact areas should be flagged and appropriately fenced off from construction zones to prevent inadvertent impacts. Individuals confirmed within areas proposed for preservation onsite should be properly recorded and avoided during any revegetation or other efforts anticipated in the long-term during project operation. All observations should be accurately reported to the CNDDB, CNPS, Consortium of California Herbarium, and/or other herbarium or sensitive species databases. Specific mitigation recommendations are provided in Chapter 7 of this report.

Southern California Black Walnut

Pursuant to the CEQA thresholds of significance, potential impacts to this non-listed CNPS List 4.2 species are not anticipated to be significant due to the relative abundance of this species on a regional scale. According to the CNPS listing guidelines, this species is known

from at least 21 to 80 occurrences throughout its range, which is interpreted as anywhere between 3,000 to 10,000 individuals that are known, or 10,000 to 50,000 occupied acres. The proposed project would result in the removal of approximately 350 to 600 individuals. This represents a small portion of the total known population. These impacts would not jeopardize the existence of this species or elevate its sensitivity or status under the CNPS, CNDDB and global and State heritage rankings, FESA, or CESA.

It is recommended, however, that avoidance of these and other native trees be encouraged in the final project design, and any unavoidable impacts should be minimized and reduced through the salvage and relocation of healthy candidate specimens, and/or the replanting of new specimens within areas to be preserved onsite. Additional information regarding specific City of San Bernardino requirements relating to native tree resources is outlined below in Section 6.1.3. Appropriate assessment by a certified arborist should be conducted prior to tree removal. If trees are to be salvaged and relocated, they should be relocated according to a relocation plan or similar process. Appropriate boxing and relocation and planting techniques should be implemented by qualified personnel. A tree replacement plan, revegetation plan, or similar should be prepared by a qualified landscape architect or arborist and should contain southern California black walnut trees in the prescribed plant palette for the effort. The plan should include performance standards and measures for monitoring success over a minimum of three to five years. Specific mitigation recommendations are provided in Chapter 7 of this report.

6.1.2 Special Status Plant Communities

The various riparian plant communities found on the project site are considered sensitive plant communities by CDFG, USFWS and CNPS. These include CWW, RAFSS, SSARW, SWS, and SAW. In addition, the RSS found on the site is considered a sensitive plant community even though it is not a riparian community.

Riversidean Sage Scrub

The proposed project would remove nearly all of the 168.4 acres of the RSS located on the site. CDFG regards RSS as a sensitive community. Therefore, the loss of 168.4 acres of RSS would be a significant impact.

If the project site contained listed species that were dependent upon RSS for their continued viability, then the RSS on the site could be considered of high value and the mitigation imposed would therefore be greater. However, no listed species dependent upon RSS have been detected on the site. This conclusion is based upon over 11 years of general habitat assessment work and numerous focused surveys. While a number of California Species of Special Concern (SSC) have been observed within the RSS areas of the site, these species are not afforded specific legal protection as are formally listed species. Further, RSS remains relatively abundant throughout San Bernardino and Riverside Counties, with many thousands of acres still remaining. Any mitigation imposed should consider each of these factors and any replacement ratios or onsite mitigation requirements adjusted accordingly.

The mitigation should provide for the purchase of offsite mitigation lands and/or the payment of in lieu fees to appropriately offset the project's impact to RSS. For the reasons cited above, the prescribed mitigation for RSS for this project should be set at a ratio 1:3 (one acre replaced for every three acres impacted). The mitigation should also require that the applicant demonstrate that suitable mitigation lands have been identified and are available for acquisition, either through direct purchase or the payment of fees. The project applicant has identified several hundred acres of potential mitigation lands containing suitable RSS habitat along the alluvial fans of the San Bernardino and San Gabriel Mountains. These lands are available for purchase and dedication to an appropriate conservation management organization. This dedication and management would ensure the long-term conservation status of this sensitive habitat type in the San Bernardino Valley. It can therefore be concluded that the recommended mitigation is feasible and would thus mitigate the project's impacts in this regard to less than significant levels. Specific mitigation recommendations are provided in Chapter 7 of this report.

Riparian Plant Communities

Seven riparian plant communities are present on the site and six of these would be impacted by project development. The 25.4 acres of southern sycamore-alder riparian woodland (SSARW) present on the site is located along the upper reaches of Cable Creek and is outside of the project footprint. Therefore, it would not be impacted by the proposed development. Each of the remaining six communities that would be impacted, totaling approximately 26.4 acres, represent valuable habitat and are considered high priority for conservation by CDFG, USFWS, and CNPS. Loss of these communities would represent a significant impact.

RAFFS is one of these riparian communities. Besides the direct impacts associated with project development, indirect impacts to offsite areas of RAFSS could also result from downstream impacts to the community from the secondary access road proposed across Cable Creek. The roadway could interrupt the stream flows and the occasional scourings that are required to maintain the long-term viability of RAFSS. If these processes are interrupted, RAFSS typically begins to convert to other community types that do not offer the same habitat characteristics. This is especially relevant since the secondary access road areas are located in USFWS-designated critical habitat for SBKR. SBKR require the fluvial conditions that are present in properly-functioning RAFFS habitat, so both RAFSS and SBKR are related in the type of conditions they require for their long-term viability. Therefore, the possible indirect loss of additional RAFSS habitat would represent a further significant impact.

Based on the project's anticipated direct and indirect impacts on USACE, RWQCB, and CDFG jurisdictional areas, the project proponent will be required to receive a number of wetland permits prior to project implementation. These permits would include a Section 404 permit from the USACE, a Section 401 permit from the RWQCB, and a Section 1602 permit from CDFG. In addition, consultation with the USFWS under Section 7 of the ESA will be required as portions of the project site are within unoccupied critical habitat for SBKR. Each

of these agencies would impose mitigation measures to offset the loss of jurisdictional and habitat areas.

In anticipation of these agency-imposed requirements, mitigation is recommended to reduce the project's impacts in this regard to less than significant levels. The mitigation should include measures relating to the adoption of Best Management Practices (BMPs) to avoid direct and indirect impacts to remaining riparian areas and project design requirements to lessen impacts to offsite areas. The mitigation should also require the purchase of offsite mitigation lands and/or the payment of in lieu fees. Finally, the mitigation should require that the applicant demonstrate that suitable mitigation lands have been identified and are available for acquisition, either through direct purchase or the payment of fees.

The project applicant has identified areas of potential riparian mitigation lands containing suitable riparian habitat along the alluvial fans and foothills of the San Bernardino and San Gabriel Mountains. These lands are available for purchase and dedication to an appropriate conservation management organization. This dedication and management would ensure the long-term conservation status of these sensitive habitat types in the San Bernardino Valley. It can therefore be concluded that the recommended mitigation is feasible and would thus mitigate the project's impacts to riparian habitats to less than significant levels. Specific mitigation recommendations are provided in Chapter 7 of this report.

Mitigation for impacts to RAFSS habitat is discussed later in this report (Section 6.2.1) in relationship to mitigation for unoccupied critical habitat for SBKR. Since the unoccupied SBKR habitat that will be impacted by the project is composed exclusively of RAFFS, the mitigation prescribed for unoccupied SBKR habitat would also serve to mitigate for impacts to RAFFS. It can therefore be concluded that impacts on the project site associated with RAFFS would be mitigated to less than significant levels. Specific mitigation recommendations are provided in Chapter 7 of this report.

Indirect Impacts to Sensitive Plant Communities and Habitat

Invasive Plant Impacts

As discussed previously, the project site presents good quality habitat and a diverse mosaic of plant communities and is unusual for its relative lack of invasive plant species. Unlike other areas along the front range of the San Bernardino Mountains, the project site has not converted to large areas of non-native grassland. Only 9.8 acres of the project site, or about three percent, has converted to this community type. The areas immediately surrounding the site, particularly in the SBNF, are also relatively unaffected by type conversion.

The placement of a residential community into an area of native vegetation represents a potential impact to these surrounding natural areas. Non-native species can be inadvertently introduced into native habitats in a number of ways, including:

1) The use of invasive species within the landscaping palette can provide opportunities for invasive plants to "escape" from the development and become established in areas

of native vegetation. Once established, invasive species such as non-native grasses, vines, and other species are extremely difficult to remove and can add to a loss of native plant and associated wildlife diversity. In addition, the flashy fuels associated with non-native grasses can also contribute to increased fire danger and fire frequency, thus affecting even larger areas further from the site.

2) After construction has finished, residents can unknowingly introduce invasive species by using them for landscaping purposes on their properties.

3) Seeds or other invasive plant parts can be inadvertently imported onto the site during construction activities. Areas are particularly susceptible to invasion by non-native species during ground-disturbing activities, such as grading and site preparation. Seeds can be brought in inadvertently on construction equipment and through other means.

The first of these potential impacts can be avoided or mitigated through the selection of an appropriate plant palette that does not include species identified as invasive or otherwise undesirable. A review of the proposed plant palette for the project (contained in the Fire Protection Plan) and a comparison of the palette with a list of recognized invasive species maintained by the Natural Resource Conservation Service (NRCS) determined that the palette contains no federal or state-listed invasive plants. A further review was conducted comparing the plant palette with the list contained in *Invasive Plants of California Wildlands* (Bossard, et al., 2000). That review determined that one species on the palette (*Aptenia cordifolia*) is potentially invasive. However, the palette specifically prohibits the use of *Aptenia cordifolia* in areas adjacent to wildlands. Rather, planned uses for the species are restricted to interior portions of the site. Since the species spreads vegetatively rather than through seed dispersal, use of the species within interior portions of the development would pose minimal risk in regards to establishment within wildland areas. Therefore, impacts in this regard can be considered less than significant.

The second of these potential impacts can be avoided or mitigated through restrictions placed on homeowners regarding the use of known invasive plants. By restricting the use of recognized invasive species by homeowners, the inadvertent introduction of invasive species can be avoided. These restrictions are usually imposed through the use of Covenant's, Codes, and Restrictions (CC&R's) and are regulated through a Homeowner's Association (HOA). Accordingly, mitigation is recommended to institute and enforce restrictions on the use of invasive plants on home sites within the development. Specific mitigation recommendations are provided in Chapter 7 of this report.

The third potential impact can be avoided or mitigated by imposing controls on activities during the construction process that could result in the transport of invasive species onto the site on vehicles and construction equipment. These measures can include the thorough washing of vehicles and equipment *before* they reach the site. Straw bales, erosion control products, and other potential invasive plant nexuses should be certified "weed free". A number of other requirements can also be incorporated. With implementation of these

measures, such impacts can be rendered less than significant. Specific mitigation recommendations are provided in Chapter 7 of this report.

Human-Wildlife Conflicts and Domestic Animal Impacts

This potential impact consists of two related components, both of which result from the project's extension into undeveloped wildlands. First, the project site would be surrounded on three sides by existing wild areas that are known to provide suitable habitat for a number of animal species. Since it can be assumed that wild animals would continue to be present in these adjacent wild areas following project development, it can also be assumed that these animals would come into contact with the proposed development at the Wildland-Urban Interface (WUI) and in surrounding areas. Based on experience with other developments in the foothills of the San Bernardino Mountains, conflicts between humans and wild animals can become problematic. Large mammal species like black bear, mountain lions, bobcats, and coyotes can prey on domestic animals, or be drawn into developed areas by attractants such trash containers, water, or other resources. This can be especially true during times of drought and resource scarcity. However, scarcity is not the only factor that can drive wild animals to undertake frequent forays into human-occupied areas. Some wild animals find that foraging in open trash containers in residential neighborhoods is easier than foraging for food in the wild. In some instances, human residents can deliberately attract wild animals by feeding or otherwise encouraging animals to come into the neighborhood. In these instances, wild animals can become a nuisance or potentially dangerous, and can be labeled "problem" animals. This is especially true for larger animals like bears, which can become habituated to humans and thus become unpredictable and dangerous. CDFG routinely deals with conflicts between wild animals and humans in the WUI. This creates additional expense and staffing requirements for the agency. In many cases, problem animals have to be destroyed.

The second component of this potential impact has to do with the effects of domestic and feral animals on wildlife in adjoining wild areas. Domestic cats, for instance, are particularly adept at preying on wild animals such as birds, small mammals, and reptiles. If provided with the opportunity to range freely, domestic cats will continue to hunt even when they are sufficiently fed and cared for by their owners. Domestic cats tend to be several times as abundant in WUI areas as all other mid-sized wild predators combined, including bobcats and foxes. A study in Tucson, Arizona found that free-ranging cats killed more than 80 small animals each per year. Cats are especially hard on bird populations. Due to a combination of their opportunistic predatory behavior and their occurrence in numbers that are substantially higher than native predators, cats can eliminate bird populations from otherwise suitable habitat. In some contexts, cat predation may supersede habitat loss as a primary threat to birds' survival (Dauphine and Cooper, 2009). A study conducted in Wisconsin reported that at least 7.8 million songbirds are killed annually in that state alone by rural cats (Coleman, et al., 1997).

Cats are especially problematic when they become feral, since they reproduce rapidly and can have substantial effects on local wildlife populations. Other domestic animals, such as

unrestrained dogs, can harass wildlife and can thus deny wild animals from using otherwise suitable habitat.

Both of these issues can result in significant impacts if they are not managed correctly. Humans can be impacted by "problem" and nuisance animals, and wild animals can be harassed and killed by free-ranging domestic animals. One method of mitigating these effects is by instituting careful design of developments in WUI areas, as well as the use of wildlife-resistant containers for the storage and conveyance of refuse, recycling materials, and green waste[1]. Impacts can also be mitigated by placing restrictions or management requirements on how homeowners manage their properties and their domestic animals. These restrictions are usually imposed through the use Covenant's, Codes, and Restrictions (CC&R's) and are regulated through a Homeowner's Association (HOA). Each of these measures can reduce human-wildlife conflicts and domestic animal impacts. Accordingly, mitigation is recommended to institute and enforce management criteria for domestic animals on the project site. Specific mitigation recommendations are provided in Chapter 7 of this report.

6.1.3 Tree Resources

The arborist reports prepared for the project site (Integrated Urban Forestry 1998; Michael Brandman Associates 2007) determined that development of the proposed project will result in the removal of approximately 2,400 trees. The bulk of native trees on the site are located within and around Cable Creek or in the northern portion of the site (see A-3 in Appendix A of this report), and are not within the development footprint (see Exhibit 5). These trees will not be impacted by the project. Of the approximately 2,400 trees within the development footprint, only about 220 of these (less than one percent) are native species, mostly walnut and sycamore. The majority of the trees requiring removal are part of a remnant eucalyptus plantation (approximately 2,170 trees). The remaining non-native trees that will be removed consist of approximately 10 ornamental non-native trees.

Eucalyptus presents a specific problem for this site in that they are non-native and present a severe fire hazard. A great many of the trees are in poor condition and were classified as hazard trees in the arborist reports. Eucalyptus are extremely flammable, and in many areas are considered nuisance species. The Fire Protection Plan prepared for the project (Firesafe Planning Solutions, 2008) mandates that all eucalyptus on the site be removed. These trees were originally planted as part of a cultivated eucalyptus plantation, primarily for the purpose of fuelwood production. Since tree plantations are specifically exempted from the mitigation requirements of the City of San Bernardino Tree Ordinance, replacement of these trees is not required. While eucalyptus can provide suitable nesting locations for raptors and other birds, their marginal biological value must be weighed against the hazards they present to public safety and their ability to carry wildfire to developed areas and surrounding wildlands. Based

[1] Numerous manufactures and distributors of wildlife-resistant containers are available. See http://www.bearsaver.com/index.htm for examples of these containers.

on these considerations, the removal of the eucalyptus on the project site can be considered an overall benefit to the area and therefore a less than significant impact.

Conversely, native trees provide specific natural resource value in that they provide cover and foraging habitat for avian species and are important components of the natural ecosystem. The trees are also aesthetically pleasing and therefore constitute an important resource in this regard. The City's Tree Ordinance requires that "significant" trees be mitigated. In determining what constitutes a significant tree, the initial arborist report prepared for the site (Integrated Urban Forestry, 1998) determined that healthy, structurally sound, native and ornamental trees over 20 feet in height be considered as significant. Approximately 220 trees on the site met these criteria during the 1998 tree inventory. Thus the removal of these trees during project development would be considered a potentially significant impact and thus subject to the mitigation requirements of the City's Tree Ordinance.

Mitigation to this effect is recommended. Since the initial inventory of trees on the site is a number of years old and the exact count of significant trees may have changed, mitigation is also recommended to require an updated inventory of tree resources within the project footprint. The mitigation also recommends that specific management recommendations contained in the arborist reports be implemented. These recommendations include protocols for removal and relocation of native trees, tree protection during construction, and the preservation of specific trees on the project site. Performance measures are provided to mandate replacement ratios and the types and sizes of specimens required to meet the terms of the mitigation. Measures are also recommended to mandate improvements to tree resources in specific areas of the site. Implementation of this mitigation would comply with the City of San Bernardino Tree Ordinance and would lessen the project's impacts in this regard to less than significant levels. Specific mitigation recommendations are provided in Chapter 7 of this report.

6.2 Sensitive Wildlife Species

6.2.1 Special Status Mammal Species

Numerous small mammal trapping sessions have been conducted on the project site over the last 11 years, but none of the survey efforts have revealed the presence of any federal or state listed small mammal species. Even though portions of the site are within designated critical habitat for SBKR, it would appear that the species is absent from the site. This is likely due to the separation of the site from existing SBKR populations by the I-215 freeway, other roadways, a railroad, and residential and commercial development. The RAFSS habitat on the site is suitable for SBKR, but apparently there is no effective linkage with adjacent populations. Regardless, since portions of the site are within designated critical habitat for the species, consultation with the USFWS under Section 7 of ESA will be required. Mitigation requirements derived from this consultation would serve to lessen the project's potential impacts to SBKR.

In anticipation of those agency-imposed requirements, mitigation is recommended to reduce the project's impacts in this regard to less than significant levels. The mitigation should require the adoption of BMPs to avoid direct and indirect impacts to remaining habitat areas, and also imposes specific design requirements to lessen additional impacts to offsite areas and to provide for the continued movement of animals through the area. The mitigation should also require the purchase of offsite mitigation lands and/or the payment of in lieu fees. Finally, the mitigation should also require that the applicant demonstrate that suitable mitigation lands have been identified and are available for acquisition.

Mitigation ratios for offsite habitat purchases are typically based on a number of factors, including the quality of the habitat to be replaced and whether or not the impacted area is actually occupied by the species in question. For areas of high quality habitat that is determined to be occupied by a listed species, replacement ratios are typically established at 3:1 (three acres replaced for every one acre impacted). Unoccupied critical habitat or areas of lesser habitat quality are typically mitigated at a lower ratio. In the case of this project, the onsite RAFSS habitat that would support SBKR is of good quality but has been determined through repeated survey efforts to not be occupied by SBKR. Any mitigation imposed should consider each of these factors and any replacement ratios or onsite mitigation requirements adjusted accordingly.

For the reasons cited above, the prescribed mitigation for the loss of unoccupied SBKR critical habitat for this project should be set at a ratio 1:1 (one acre replaced for every one acre impacted). The mitigation should require that the applicant demonstrate that suitable mitigation lands have been identified and are available for acquisition, either through direct purchase or the payment of fees. The project applicant has identified several hundred acres of potential mitigation lands containing suitable RAFSS habitat along the alluvial fans of the San Bernardino and San Gabriel Mountains. These lands are available for purchase and dedication to an appropriate conservation management organization. This dedication and management would ensure the long-term conservation status of this sensitive habitat type in the San Bernardino Valley. It can therefore be concluded that the recommended mitigation is feasible and would thus mitigate the project's impacts in this regard to less than significant levels. Specific mitigation recommendations are provided in Chapter 7 of this report.

Two SSCs are known to occur on the project site. Both San Diego pocket mouse and Los Angeles pocket mouse have been captured during each of the survey efforts on the site. Potential impacts to San Diego pocket mouse are not typically considered significant under CEQA because this species is widespread and abundant on a local and regional level. Impacts to Los Angeles pocket mouse, however, could be considered potentially significant since the preferred habitat of the species is narrow and the species is not known to be locally or regionally abundant. The status of SSC, however, does not afford any specific legal protections and as such the impact can be considered less than significant. Nevertheless, the potential adverse impact to Los Angeles pocket mouse could be of concern to regulatory agencies such as CDFG. It is likely that CDFG will impose some level of mitigation during the Section 1602 permitting process to account for this impact. Since Los Angeles pocket

mouse generally occurs in the same area as the SBKR's designated critical habitat, mitigation imposed by the USFWS during the Section 7 process and as discussed in the paragraph above will serve as mitigation for Los Angeles pocket mouse as well. For that reason, mitigation specific to Los Angeles pocket mouse is not recommended. Rather, it is recommended that the same mitigation for SBKR be implemented for impacts to Los Angeles pocket mouse. Implementation of these measures would lessen the project's impact to both SBKR and Los Angeles pocket mouse to less than significant levels. Specific mitigation recommendations are provided in Chapter 7 of this report.

6.2.2 Special Status Bird Species

Based on repeated negative findings for coastal California gnatcatcher (CAGN) during numerous survey efforts, as well as the site's recent exclusion from designated critical habitat, it is reasonable to assume that the species does not occur upon the project site.

The riparian areas within Cable Creek provide suitable habitat for the southwestern willow flycatcher (SWF), though focused surveys conducted in 2007 returned negative findings. However, the same survey effort did detect the presence of least Bell's vireo (LBV) in an offsite riparian area of Cable Creek west of the site. It is therefore possible that the species could be present further east of this location within Cable Creek. Direct development of the riparian areas of Cable Creek is not proposed as part of the project's development. No homes or other structures would be located within the riparian areas that would be most likely to contain LBV and SWF. However, the hiking/equestrian trail that is planned for this area could impact these species if they are present and if the trail is not designed thoughtfully with the aim of avoiding impacts to these species. For that reason, mitigation is recommended to assure that the trail's design, construction, and use would not impact the creek bottom in a manner that could create a significant impact to these species. Implementation of this measure would reduce the level of this potentially significant impact to less than significant levels. Specific mitigation recommendations are provided in Chapter 7 of this report.

6.2.3 Special Status Reptile and Amphibian Species

No federal or state listed reptile species have ever been observed on the project site, and none are expected to occur. In regards to amphibians, habitat assessments conducted over the last 11 years have concluded that marginally suitable habitat for arroyo southwestern toad and mountain yellow-legged frog is present along Cable Creek. Neither of these species, however, has been detected during both general habitat assessment surveys or focused surveys conducted in the area. Based on these findings it is likely that neither species is present on the project site. Regardless, and as noted above in the discussion on special status bird species, direct development of the riparian stretches of Cable Creek is not proposed as part of the project's development. The mitigation recommended for the proposed hiking/equestrian trail discussed in the above section would also lessen the project's potential impacts in this regard to less than significant levels. Specific mitigation recommendations are provided in Chapter 7 of this report.

6.3 Wildlife Movement Corridors, Nursery Sites, and Other Wildlife Values

6.3.1 Wildlife Movement Corridors

There is substantial evidence to indicate that the project site serves as a wildlife corridor for a wide variety of wildlife species. Such areas are usually considered significant when they are determined to be of regional importance or otherwise contribute to regional conservation goals.

For the purposes of this analysis, the project site can be considered as being composed of two principal parts in regards to wildlife movement. The first component is Cable Creek, which serves as an obvious corridor since it contains perennial water, adequate cover and food resources, and allows for the unimpeded movement of animals between higher and lower elevations. The riparian areas of Cable Creek are not planned for development, so the use of this corridor by wildlife will not be significantly impacted as a result of the proposed project. The exception to this is at the southern end of the site, where the outwash of Cable Creek will be crossed by the secondary access road. This roadway and associated culverts and drainage improvements could create a barrier to wildlife where currently no such barrier exists. However, the roadway will be relatively narrow and can be designed in such a manner so that wildlife movement is not substantially impeded. In addition, the roadway would be constructed in USFWS designated critical habitat for SBKR. As part of the consultation process, USFWS will impose mitigation aimed at reducing the impact of the roadway on SBKR. These requirements will likely result in a positive benefit for other wildlife species as well. Therefore, mitigation imposed as part of this process will likely reduce the project's impact to wildlife movement within Cable Creek to less than significant levels.

In anticipation of these agency-imposed requirements, mitigation is recommended to reduce the project's impacts in this regard to less than significant levels. The recommended mitigation should include specific design requirements aimed at allowing the unrestricted movement of wildlife within the lower portion of Cable Creek. With implementation of these measures, the project's impact in this regard would be less than significant. Specific mitigation recommendations are provided in Chapter 7 of this report.

The second component relating to wildlife movement deals with wildlife movement across the site in an east to west direction. While the Cable Creek corridor on the western side of the site provides movement along a relatively narrow corridor in a north to south direction, the project site itself provides lateral movements through a much wider area and across the base of the mountain front. Were the site to be developed without consideration for this situation then the impact could be considered significant. This would be due to the fact that the development would effectively create a substantial barrier to wildlife movement across a large area.

This potential impact can be mitigated by retaining and/or improving existing areas on the project site that are conducive to wildlife movement. As can be seen in Exhibit 8, the large tributary that crosses the northern third of the site provides the most effective avenue for wildlife movement across the site. This is due to the fact that the areas on both sides of the property at this point are essentially natural in composition and therefore allow animals to move across the site without having to navigate around substantial human-made barriers. The tributary also affords movement into and out of Cable Creek and thus to areas both to the north and south of the site. Other portions of the project area, especially the southern two-thirds of the site, do not offer these benefits. Those areas are somewhat blocked on the west by existing development, and they do not contain streams or other features that would be attractive to wildlife in terms of movement.

Retaining and/or improving this corridor would represent the greatest benefit to wildlife in terms of lateral movement across the site. The tributary offers specific characteristics, such as cover and foraging resources, that make it especially suitable for wildlife movement. Therefore, mitigation is recommended to preserve and enhance this area to allow wildlife movement across the site to continue. The mitigation should include specific design requirements aimed at allowing the unrestricted movement of wildlife through this corridor. With implementation of these measures, the project's impact to wildlife corridors would be less than significant. Specific mitigation recommendations are provided in Chapter 7 of this report.

6.3.2 Wildlife Nursery Sites

There is substantial evidence to indicate that the site provides habitat that is suitable for use as a wildlife nursery site. Based on a number of observations over the years, the use of the site as a nursery site by mule deer is reasonably well established. Other species may utilize the site for this purpose as well, but this has not been observed or confirmed. Regardless, development of the project site will disallow its continued use as a nursery site by mule deer.

In determining whether or not the loss of this nursery site would constitute a significant impact, the species making use of the site must be considered. If a sensitive or listed species were known to use the area as a nursery site, then the loss of the site would be more problematic than if it were used by more common species. For this site, no sensitive or listed species have been observed using the site for nursery purposes. The only species known to use the site for this purpose is mule deer.

Mule deer are a common species that are not regionally or locally threatened or endangered. The species occurs in great quantities throughout the region and western North America. Statewide, CDFG considers mule deer to be common and abundant (Ahlborn, 2008). In 2008, CDFG issued 237,083 deer hunting tags statewide and an estimated 29,612 animals were harvested. In Deer Hunt Zone D14, the CDFG management zone in which the proposed project is located, CDFG and USFS consider mule deer populations to be stable or slightly declining (CDFG, 2003; USFS, 2006a). Both agencies attribute this gradual decline to a

number of factors, but primarily to fire suppression activities that have allowed vegetation to become overly mature and dense and thus less suitable for mule deer. The ongoing drought in the region has also impacted mule deer populations, in that the drought has dried up streams and springs that had previously been considered perennial and has also decreased forage production. The large fires of 2003 and 2007, however, have improved habitat conditions in many areas and it is projected that deer populations will increase if normal rainfall returns. Fuel treatments and fuel reduction efforts in many areas have also assisted in overall habitat recovery, and these efforts remain ongoing throughout the San Bernardino Mountains (USFS, 2006a).

When it compiled its latest land management plans for the four southern California national forests in 2006, the USFS designated mule deer as a Management Indicator Species (MIS). The MIS designation is not a sensitive species listing and is not an indicator that the species is imperiled. Rather, the designation is intended to assist in monitoring the results of management on the national forests. In the case of mule deer, the MIS designation is intended to determine if USFS management activities are providing for the types of habitat that the species requires. One of the principal aims of the MIS designation in this regard is to track how fuels management and/or fire suppression on the forests can affect habitat characteristics and thus the species in general. Since the USFS has as one of its goals the restoration of habitats to the more natural state that was present prior to the implementation of aggressive fire suppression tactics, it is likely that the overall habitat quality for mule deer in the region will increase. It is therefore reasonable to conclude that mule deer populations within the San Bernardino Mountains will be stable or perhaps even increase over the next several years (USFS, 2006a).

CDFG manages mule deer through a number of means, the most well known of which is hunting. Hunting is used as a tool to control species populations and to avoid overstocking within particular areas. The proposed project site is located within CDFG Deer Hunt Zone D14, which is a zone that covers all of the San Bernardino Mountains portion of the SBNF as well as peripheral areas. For at least the last decade, CDFG has maintained a hunt tag quota of 3,000 for Zone D14. This overall stability in CDFG's management of mule deer in the San Bernardino Mountains is consistent with the agency's determination that the mule deer population in the area is relatively stable.

Considering the overall abundance and the relative stability of mule deer populations in the area, it is reasonable to conclude that the loss of the nursery area on the project site would be unlikely to result in anything but a negligible decline in the overall population of mule deer in the region, or even in this portion of the San Bernardino Mountains. The project site is surrounded on three sides by the SBNF, which provides substantial open space opportunities for use as alternative nursery sites by mule deer. In addition, the project will continue to maintain Cable Creek as an undisturbed perennial water source and wildlife corridor. Since a lack of perennial water is a major limiting factor in the maintenance of mule deer populations, the conservation of this watercourse will provide a substantial benefit to mule deer. Accordingly, the loss of this nursery site for mule deer would be less than significant.

6.3.3 Nesting Birds

The site provides suitable habitat for a wide variety of nesting bird species. In accordance with applicable laws, it is unlawful to take, possess, or needlessly destroy any bird of prey or the nests or eggs of any bird species. Disturbance of any active bird nest during the breeding season, including active owl burrows, is prohibited by law. Breeding season typically runs from mid-February through late August. Ideally, ground disturbing activities should take place outside of the breeding season, and doing so would reduce the project's impact to nesting birds to less than significant levels. If this is not possible and it is necessary to conduct ground disturbing activities during the breeding season, then appropriate preconstruction surveys should be initiated to determine the presence or absence of nesting birds prior to construction. Compliance with this requirement would reduce the project's impact to less than significant. Specific recommendations are provided in Chapter 7 of this report.

6.3.4 Raptor Foraging Habitat

The project site lacks expansive grassland habitat and is for the most part dominated by dense Riversidean sage scrub and chaparral. These habitats do not provide particularly favorable conditions for foraging raptors due to the lack of prey visibility. It can therefore be concluded that the site provides only marginally suitable foraging habitat for raptors and that these species would be more likely to rely on other areas for the majority of their foraging activities. Accordingly, the project would not result in a significant impact to raptor foraging habitat.

6.4 Critical Habitat

Portions of the secondary access road alignment at the southern end of the site are located within USFWS designated critical habitat for SBKR (see Exhibit 9). Even though repeated surveys in the area have been negative, the presence of critical habitat requires consultation with the USFWS under Section 7 of the ESA due to the potential for adverse modifications of critical habitat.

6.5 Jurisdictional Waters and Riparian Habitats

The jurisdictional delineations prepared for the project site determined that the proposed project would impact approximately 10.6 acres of USACE/RWQCB jurisdictional areas, and 13.3 acres of CDFG jurisdictional areas. Approximately 6.2 acres of the identified jurisdictional areas are located within a potential seasonal wetland in the southern third of the site near the San Andreas Fault (see Exhibit 10). The quantities listed consider all of the identified jurisdictional areas located within the project development footprint, and consider all grading and slopes proposed for development.

The project proponent will be required to receive a number of wetland permits prior to project implementation. These permits would include a Section 404 permit from the USACE, a Section 401 permit from the RWQCB, and a Section 1602 permit from CDFG. Since the

project will impact more than 0.5 acres of USACE jurisdictional areas, the project will be required to obtain a Section 404 Individual Permit rather than apply for clearance under the Nationwide Permit. Consultations with the USFWS under Section 7 of the ESA will also be required, as portions of the project site are within critical habitat for SBKR. Each of these agencies would impose mitigation measures to offset the loss of jurisdictional and habitat areas.

In anticipation of those agency-imposed requirements, mitigation is recommended to reduce the project's impacts in this regard to less than significant levels. Mitigation should include the purchase of offsite mitigation properties or the payment of in lieu fees. Mitigation for the loss of riparian habitats should be set at a ratio 1:1 (one acre replaced for every one acre impacted). The mitigation should also require that the applicant demonstrate that suitable mitigation lands have been identified and are available for acquisition, either through direct purchase or the payment of fees. The project applicant has identified several hundred acres of potential mitigation lands containing suitable riparian habitat along the alluvial fans of the San Bernardino and San Gabriel Mountains. These lands are available for purchase and dedication to an appropriate conservation management organization. This dedication and management would ensure the long-term conservation status of riparian areas in the San Bernardino Valley. It can therefore be concluded that the recommended mitigation is feasible and would thus mitigate the project's impacts in this regard to less than significant levels. Specific mitigation recommendations are provided in Chapter 7 of this report.

6.6 City of San Bernardino General Plan

The City's General Plan provides a number of goals and policies directed towards the conservation of biological resources (see Section 3.7.2 of this report). The General Plan's goals and policies in this regard generally center around three principal areas: 1) General conservation goals and special requirements for development within Biological Resource Management Areas (BRMAs) **(Goal 12.1)**; 2) Protection of riparian areas **(Goal 12.2)**; and 3) The conservation of open space and other priority areas **Goal 12.3)**. An analysis of the project's consistency with each of these goals is discussed below.

Goal 12.1: Conservation of San Bernardino's Biological Resources

This goal contains policies that require developments to be designed in a manner that is sensitive to unique biological resources, and it also prescribes specific conditions for developments proposed within BRMAs. According to Figure NRC-2 of the General Plan, the project site is located within a BRMA. To be consistent with the General Plan, projects in BRMAs must submit biological resource assessments and other information that identifies the proposed project's impacts on sensitive biological resources. As outlined earlier in this report, the Spring Trails project site has been the subject of numerous technical studies over the last decade. As such, the project is consistent with this requirement.

Projects within BRMAs are also required to identify mitigation measures to eliminate significant adverse impacts to sensitive biological resources. As discussed later in Chapter 7 of this report, a number of mitigation measures have been recommended for the project, and upon implementation of these measures no significant impacts will remain. Therefore, the project is consistent in this regard as well.

Projects within BRMAs are also required to define a plan to monitor the effectiveness of prescribed mitigation. As such, the establishment of a monitoring program is recommended as mitigation for this project. The program includes requirements for annual surveys for a minimum of five years after project development, actions to be taken if certain performance measures are not met, and methods for overseeing the monitoring program. With implementation of these requirements the project is consistent with this policy of the General Plan. Specific recommendations are provided in Chapter 7 of this report.

Finally, the policies within Goal 12.1 require that projects consider and discuss the restoration of significant habitats. While the General Plan is not particularly clear on this issue, it appears that the intent of the policy is to provide for the restoration of habitats that have been degraded or otherwise historically altered through human activity. This policy does not particularly apply to this project since the bulk of the habitat on the site is intact and is not particularly degraded. Regardless of the policy's intent, the project as designed and mitigated will improve specific areas of habitat within the project area. Most notably, the mitigation recommended for wildlife corridor conservation also includes requirements to improve habitats in those areas. These improvements include the planting and maintenance of additional vegetation to enhance wildlife foraging and movement areas. In addition, the most significant habitat on the project site, the riparian areas of Cable Creek, will be preserved and will not be impacted by the project's development. Finally, the project applicant will be required to purchase offsite mitigation lands or pay in lieu fees for the permanent preservation of sensitive wildlife habitat within the region. Based on these considerations, it is thus reasonable to conclude that the project meets and exceeds the overall goals of the policy.

Goal 12.2: Protection of Riparian Corridors

This goal contains policies that pertain to the conservation of riparian resources. The goal also contains directives on what activities are specifically allowed to occur within riparian areas.

The plan specifies that development and grading within 50 feet of riparian corridors is prohibited, unless no feasible alternative exists. In the case of the Spring Trails project, the riparian corridor of Cable Creek lies outside of the footprint of the project. In regards to the hiking and equestrian trail that is planned for this area, mitigation is recommended in Chapter 7 of this report that imposes specific restrictions on the trail's proximity to the creek as well as other design requirements to protect riparian resources.

Two other riparian corridors on the site will be spanned by roadways. However, mitigation for these bridges and/or culverts is recommended to minimize the impacts these structures will have on the riparian areas. Mitigation is also recommended that requires the enhancement of

the large area of riparian vegetation that crosses the northern third of the site. These enhancements will allow for the onsite conservation of this area and will also provide opportunities for wildlife movement within this corridor. Based on each of these mitigation requirements, together with other project design features, the project will be in compliance with all General Plan policies relating to the conservation of riparian areas. Specific recommendations are provided in Chapter 7 of this report.

Goal 12.3: Establishment of Open Space Corridors

This goal provides directives as to types of habitats that are considered a high priority for long-term preservation. The goal specifically calls out the City's desire to preserve the riparian corridor of Cable Creek. Since the Spring Trails project will permanently conserve the Cable Creek corridor, the project is consistent with the General Plan in this regard.

The plan also specifies other high priority habitat types, including endangered species habitat, alluvial scrub vegetation, riparian vegetation, and native walnut woodlands. The Spring Trails project will provide for the conservation of each of these resource types, either through onsite conservation and/or enhancement, or through the purchase and dedication of offsite mitigation lands. Therefore, it can be determined that the proposed project is consistent with the General Plan in this regard.

Chapter 7 Mitigation Recommendations

The following mitigation measures are recommended based on the findings of the analysis in this report.

BR-1 Prior to the issuance of grading permits, preconstruction surveys within the proposed impact areas for Plummer's mariposa lily shall be conducted in the appropriate blooming period by a qualified biologist. The appropriate blooming period is defined as occurring within the months April, May, and June, or as indicated by positive verification of blooming at a documented reference location. The surveys should positively identify and quantify all individuals on or in the immediate vicinity of the proposed impact areas. Any individuals confirmed within the project impact area shall be considered for possible salvage and relocation into suitable receptor sites located onsite within preserved areas, if feasible. Any individuals confirmed in the immediate vicinity of a proposed impact area shall be flagged and appropriately fenced off from construction zones to prevent inadvertent impacts. Individuals confirmed within areas proposed for preservation onsite shall be properly recorded and avoided during any revegetation or other efforts anticipated in the long-term during project operation. All observations shall be accurately reported to the CNDDB, the CNPS, the Consortium of California Herbarium, and/or other herbarium or sensitive species databases as determined by the qualified biologist. This measure shall be implemented to the satisfaction of the Development Services Director.

BR-2 To mitigate for impacts to unoccupied critical habitat of the federally endangered San Bernardino kangaroo rat, the project applicant shall acquire offsite permanent mitigation lands of like habitat quality as determined by the U.S. Fish and Wildlife Service (USFWS) during the Section 7 consultation process. Mitigation lands must be acquired prior to the issuance of grading permits, and shall incorporate appropriate long-term management provisions such as deed restrictions, endowments, and/or other management mechanisms to provide for the long term conservation of the habitat. Potential properties include, but are not limited to, those managed by San Bernardino County Special Districts located in the Glen Helen, Rialto, and Rancho Cucamonga areas. Mitigation lands shall be acquired at a replacement ratio of 1:1 (one acre replaced for every one acre impacted). This measure does not preclude the imposition of additional mitigation requirements that may be imposed by the USFWS during the Section 7 consultation process. This measure shall be implemented to the satisfaction of the Development Services Director.

BR-3 To mitigate for potential impacts to hydrological processes and subsequent degradation of habitat for the federally endangered San Bernardino kangaroo rat

(SBKR) and other sensitive species, all roadway crossings or other improvements proposed within critical habitat for the species shall be designed in such a manner as to not substantially alter the natural flow regimes through impacted sensitive habitat areas. These designs shall include, but shall not necessarily be limited to, the installation of appropriate culverts and stream crossings that allow for natural flow and uninhibited downstream hydrological processes. Design of these improvements shall be undertaken in consultation with the U.S. Fish and Wildlife Service and other responsible agencies. This measure shall be implemented to the satisfaction of the Development Services Director prior to the issuance of grading permits.

BR-4 Any hiking and equestrian trails or other facilities developed within Cable Creek or other riparian areas on the site shall be designed so as to comply with provisions in the General Plan. These requirements shall include, but not necessarily be limited to, the following: 1) no ground disturbance may take place within 50 feet of the ordinary high-water mark of the associated stream channel; 2) erosion, sedimentation, and runoff from the proposed improvements must be minimized by the implementation of appropriate Best Management Practices, the installation of appropriate runoff diversions, and/or the planting of native vegetation; 3) Vegetation removal will be minimized to the maximum extent possible; and 4) appropriate signage shall be installed in at least five locations alongside these facilities to educate users as to the importance of riparian ecosystems, the species that rely upon them, and the importance of avoiding unnecessary impacts and disturbance. This measure shall be implemented to the satisfaction of the Development Services Director. [This measure also provides mitigation as related to impacts to wildlife corridors. See Mitigation Measure BR-8]

BR-5 To mitigate impacts to 168.4 acres of Riversidean sage scrub (RSS) and 26.4 acres of riparian plant communities, the project applicant shall do one of the following, or a combination thereof, prior to the issuance of grading permits: 1) acquire offsite permanent mitigation lands of like habitat as determined by the California Department of Fish and Game (CDFG); and/or 2) pay appropriate in lieu fees to an appropriate permanent mitigation land bank as determined by CDFG. Mitigation lands must be acquired prior to the issuance of grading permits, and shall incorporate appropriate long-term management provisions such as deed restrictions, endowments, and/or other management mechanisms to provide for the long term conservation of the habitat. Potential properties include, but are not limited to, those managed by San Bernardino County Special Districts located in the Glen Helen, Rialto, and Rancho Cucamonga areas. Mitigation lands for riparian habitat shall be acquired at a replacement ratio of 1:1 (one acre replaced for every one acre impacted). Mitigation lands for RSS shall be acquired at a replacement ration of 1:3 (one acre replaced for every three acres impacted). This

measure shall be implemented to the satisfaction of the Development Services Director.

BR-6 All real property sold within the development shall contain within the real estate contract appropriate Covenants, Codes, and Restrictions (CC&Rs) to require only the use of approved plants on any and all parcels within the development. Approved plants are defined as those listed in the Fire Protection Plan (Firesafe Planning Solutions, 2008) and incorporated into the Spring Trails Specific Plan. All plants classified as "Invasive" or "Noxious" by the U.S. Department of Agriculture Natural Resource Conservation Service (NRCS) shall be specifically prohibited from use in any part of the development, unless specifically authorized within the Fire Protection Plan or the Specific Plan. Enforcement shall be instituted through the project's Homeowner's Association (HOA) and specific enforcement measures shall be provided within the HOA's charter. Enforcement measures may include, but not necessarily be limited to, the imposition of fines, liens, property-owner reimbursed removal of unauthorized plants, and/or other mechanisms. This measure must be implemented prior to the sale of the first residential lot and shall be implemented to the satisfaction of the Development Services Director.

BR-7 Prior to the issuance of grading permits, the developer or his designee shall submit to the City a noxious weed control plan prepared by a qualified specialist that shall be implemented during construction of the project. The plan shall contain specific measures to be adopted to lessen or eliminate the inadvertent introduction of noxious weeds onto the site or surrounding areas. At a minimum, the plan shall incorporate each of the following requirements: 1) all construction equipment used on the site shall be thoroughly washed *prior* to transport to the project site; 2) cleaning and washing of equipment includes washing and/or steam cleaning of tires, undercarriages, frames, and other parts of the equipment where mud, dirt, and other debris could be located; 3) offsite cleaning areas shall be clearly identified; and 4) straw bales and other erosion control products shall be certified as "weed free". The plan shall be reviewed by a qualified third party with expertise in the field of noxious weed control. Other control measures may be added by that specialist as deemed appropriate. Following approval of the plan, the plan shall be implemented throughout the construction phase of the project and overseen by a qualified specialist at monthly intervals. During monitoring, the specialist shall have the authority to require corrective measures to assure the success of the plan. This measure shall be implemented to the satisfaction of the Development Services Director.

BR-8 Any hiking and equestrian trails or other facilities developed within Cable Creek or other riparian areas on the site shall be designed so as to comply with provisions in the General Plan. These requirements shall include, but not necessarily be limited to, the following: 1) no ground disturbance may take place within 50 feet

of the ordinary high-water mark of the associated stream channel; 2) erosion, sedimentation, and runoff from the proposed improvements must be minimized by the implementation of appropriate Best Management Practices, the installation of appropriate runoff diversions, and/or the planting of native vegetation; 3) Vegetation removal will be minimized to the maximum extent possible; and 4) appropriate signage shall be installed in at least five locations alongside these facilities to educate users as to the importance of riparian ecosystems, the species that rely upon them, and the importance of avoiding unnecessary impacts and disturbance. This measure shall be implemented to the satisfaction of the Development Services Director. [This measure is identical to Mitigation Measure BR-4 as required to mitigate potential impacts to sensitive species in Cable Creek]

BR-9 Upon the issuance of an occupancy permit, all homes in the development shall be equipped with non-pliable (i.e., steel) Wildlife Resistant Refuse Container Enclosures, within which will be stored all refuse, recycling, green waste, or any other container intended to convey solid waste materials from the home (i.e., rolling trash containers collected at curbside). The enclosures shall be fully enclosed and equipped with lockable latches, and constructed in such a manner as to prevent access by wildlife and meeting the standards of testing by the Living With Wildlife Foundation and approved by the Interagency Grizzly Bear Committee as bear resistant for 90 minutes. All internal refuse, recycling, or green waste containers stored within the enclosures (i.e., rolling trash containers collected at curbside) shall also be wildlife resistant and also meet the standards of testing by the Living With Wildlife Foundation and approved by the Interagency Grizzly Bear Committee as bear resistant for 90 minutes.

All real property sold within the development shall contain within the real estate contract appropriate Covenants, Codes, and Restrictions (CC&Rs), subject to HOA property inspection and enforceable by fine or other sanction, requiring the following: 1) The use and maintenance of Wildlife-Resistant Refuse Enclosures and Containers for the storage and disposal of ALL food or refuse edible by wildlife; 2) All wildlife-resistant rolling containers must have the residence street address and unit number permanently affixed to the container with digits no smaller than two inches in height; 3) Any enclosure or container that is damaged or defeated so that it may allow access by wildlife must be repaired or replaced within 24 hours after the damage is discovered; and 4) Residents with curbside refuse pick-up shall use only wildlife-resistant rolling containers and shall place them at the curb, alley, or public right of way at or after six o'clock (6:00) a.m. on the morning of scheduled pick-up. After pick-up, all containers must be removed from the curb, alley, or public right of way by seven o'clock (7:00) p.m. on the same day.

Refuse containers located in common areas (i.e., parks, trails, etc.) shall be maintained by the HOA or other appropriate entity and shall also meet the same wildlife-resistant standards as those presented above.

The use of other enclosures, containers, or technologies, as they become available, may be used as a substitute for the requirements prescribed above, but only if they meet the same standards of performance as that described above.

This measure shall be implemented to the satisfaction of the Development Services Director.

BR-10 All real property sold within the development shall contain within the real estate contract appropriate Covenants, Codes, and Restrictions (CC&Rs), subject to HOA property inspection and enforceable by fine or other sanction, prescribing the following: 1) With the exception of Item 2, below, governing birdfeeders, no person shall intentionally feed or knowingly leave or store any refuse, food product, pet food, or other product edible by wildlife on any premises in a manner which would constitute a lure, attraction, or enticement of wildlife on property within the development; and 2) Birdfeeders are allowed, but must be suspended on a cable or other device so as to be inaccessible to bears and other wildlife, and the area below the feeders must be kept free from seed debris. If a wild animal gains access to a birdfeeder, the condition allowing access must be corrected or the birdfeeder removed within 48 hours. This measure shall be implemented to the satisfaction of the Development Services Director.

BR-11 All real property sold within the development shall contain within the real estate contract appropriate Covenants, Codes, and Restrictions (CC&Rs) to require the following provisions, subject to HOA property inspection and enforceable by fine or other sanction: 1) All domestic animals, including cats, shall be licensed by the appropriate licensing agency, and shall wear appropriate collars, tags, or other devices identifying the license number and the owner's name and contact information; 2) No domestic animal, including cats, shall be allowed outside of a home or a private yard without a leash and under the control of a competent individual, the exception being enclosed "dog park" areas within the development; 3) Domestic cats must be restricted to private homes or backyards, and when allowed to roam in backyards, the fences or walls of such properties shall be equipped with cat-proof fencing to prevent domestic cats from accessing adjoining properties and habitat. Cat-proofing shall extend to all components of the yard and residence by which cats could escape the confines of the property, such as trees, roofs, and other structures; and 4) The feeding, watering, or deliberate attracting of wild animals to any developed area shall be prohibited. This measure shall be implemented to the satisfaction of the Development Services Director.

BR-12 In regards to the protection of nesting birds, one of the following must occur: 1) Construction should occur outside of the avian nesting season (approximately February 15 through August 31); or 2) If construction must occur during the nesting season, then a pre-construction nesting bird survey of the site shall be conducted by a qualified biologist no more than 14 days prior to construction activities. If active nests are found onsite, then they must be avoided by an appropriate buffer until any young birds have fledged and the nest has completed its cycle, as determined by a qualified biologist. If construction occurs outside of the avian nesting period, then construction may commence without further impediment. This measure shall be implemented to the satisfaction of the Development Services Director.

BR-13 Two known wildlife corridors are present on the project site and may be impacted by the proposed project unless mitigation is incorporated: 1) the unnamed tributary of Cable Creek that flows in an east-to-west direction in the northern third of the project site (referred to here as the Northern Corridor); and 2) the outwash of Cable Creek adjacent to the Interstate 215 freeway that is proposed to be crossed by the secondary access road (referred to here as the Southern Corridor). For these corridors, the following must occur:

Northern Corridor: 1) native vegetation within this corridor must be restored, enhanced and maintained to the maximum extent allowed by the Fire Protection Plan; 2) riparian vegetation that provides high-quality foraging opportunities, cover, and other habitat values shall be the preferred vegetation type in this area, unless specifically prohibited by the Fire Protection Plan; 3) this area shall be the preferred location for the planting of replacement native trees as outlined in the tree replacement requirements of Mitigation Measure BR-11, unless specifically prohibited by the Fire Protection Plan; 4) the corridor shall be maintained free of fences, walls, or other obstructions; 5) any lighting associated with the project in any portion of the development, including street lights and residential lights, shall be of the minimum output required and shall be down-shielded to prevent excessive light bleed into adjacent areas; 6) any road crossings, bridges, culverts, etc. shall be constructed with soft bottoms with an openness ratio of at least 0.9 (openness ratio=height x width/length); and 7) additional recommendations as outlined in the report entitled *A Linkage Design for the San Gabriel-San Bernardino Connection* (South Coast Missing Linkages Project, 2004) shall be incorporated as feasible and appropriate.

Southern Corridor: 1) any bridge, culvert, or other road crossing structure shall be designed in such a manner as to allow for the maintenance of natural flow through the structure and downstream of the structure, as conditioned by the U.S. Fish and Wildlife Service during the Section 7 permitting process; 2) any road crossings, bridges, culverts, etc. shall be constructed with soft bottoms with an openness ratio of at least 0.9 (openness ratio=height x width/length); and 3)

additional recommendations as outlined in the report entitled *A Linkage Design for the San Gabriel-San Bernardino Connection* (South Coast Missing Linkages Project, 2004) may be incorporated as feasible and appropriate.

These measures shall be incorporated into site development plans, and must be reviewed and approved prior to the issuance of grading permits. This measure does not preclude the requirement of additional mitigation that may be imposed by the U.S. Fish and Wildlife Service, the U.S. Army Corps of Engineers, the Regional Water Quality Control Board, or the California Department of Fish and Game during the regulatory permitting process. This measure shall be implemented to the satisfaction of the Development Services Director.

BR-14 Significant tree resources that are removed from the site during project development shall be replaced at a 1:1 ratio or at the exchange ratios specific below. Significant tree resources are defined as any native or non-native ornamental tree, excluding species of the *Eucalyptus* genus, that is healthy, structurally sound, and is over 20 feet in height. Prior to the issuance of grading permits, a certified arborist shall conduct an inventory of all significant trees within the development footprint. This inventory shall be used to determine the number and types of significant trees that will be impacted and the subsequent replacement quantities. The number of replacement trees shall be, at a minimum, 220 trees. Should the aforementioned inventory determine that a greater number of significant trees will be impacted, then that quantity shall be used in determining replacement quantities. For purposes of replacement ratios, the following exchange ratios shall be used: 1) one 36-inch box tree is equivalent to one replacement tree; 2) five 15-gallon trees are equivalent to one replacement tree; 3) 10 five-gallon trees are equivalent to one replacement tree; and 4) 15 one-gallon trees are equivalent to one replacement tree.

During the development of the project, the project applicant shall incorporate the recommendations as set forth in the project arborist report (Integrated Urban Forestry, 1998). A certified arborist shall be retained at the developer's expense to oversee the implementation of these requirements and to specify other requirements as deemed appropriate. The measures to be followed include, but are not limited to, specified protocols for the following: 1) the removal of non-native trees from the site; 2) the removal and transplantation, when feasible, of structurally sound and healthy native trees to other areas of the project site; 3) the installation of tree protection barriers on all trees to be preserved that are within the reach of vehicles and equipment; 4) tree protection training of construction personnel by a certified arborist; 5) irrigation of trees where the natural water supply is interrupted or diminished or where protected trees may require additional water to endure construction-induced stresses; 6) subsequent replacement of any trees that are damaged or have not survived transplantation and relocation; and 7) implementation of the tree replacement plan, as outlined in the first paragraph of

this measure. This measure shall be implemented to the satisfaction of the Development Services Director.

BR-15 Prior to the commencement of ground-disturbing activities, the developer shall retain the services of qualified specialists to oversee the long term effectiveness of the biological resources mitigation required in this EIR. When appropriate, the services of these specialists may be combined so long as the person(s) so employed possess the requisite training and skills necessary to effectively carry out their duties to professional standards. Those specialists shall conduct reviews of the project site for a minimum of five years, as measured from the day of beginning of initial ground disturbance. Reviews shall be conducted, as applicable, on a monthly basis for the first year following initiation, on a quarterly basis during the second and third years, and on an annual basis during the fourth and fifth years. The qualified specialists to be retained and the nature of their duties are as follows:

Biologist: a qualified biologist shall monitor the effectiveness of Mitigation Measures BR-1, BR-4, BR-8, BR-9, and BR-10.

Noxious/Invasive Plant Control Specialist: a person who is qualified in the field of noxious plant management and control shall monitor the effectiveness of Mitigation Measures BR-6 and BR-7.

Arborist: a certified arborist shall monitor the effectiveness of Mitigation Measure BR-11.

Hydrologist/Stormwater Control Specialist: a qualified hydrologist and/or stormwater control specialist shall monitor the effectiveness of Mitigation Measures BR-3, BR-4, and BR-8.

Following each monitoring session, these specialists shall file brief reports with the Development Services Director concerning the effectiveness of the prescribed mitigation. The specialist shall identify and call out any corrective actions that may be required to assure that the purposes of the mitigation is being effectively pursued. The developer shall comply with any corrective measures so prescribed. Monitoring may cease if the qualified specialist determines that the terms of the mitigation have been satisfactorily implemented and that further monitoring is no longer required. This measure shall be implemented to the satisfaction of the Development Services Director.

Chapter 8 Acronyms and Abbreviations

BMP	Best Management Practice
BRMA	Biological Resource Management Area
CAGN	Coastal California Gnatcatcher
CC	Chamise Chaparral
CCC	Ceonothus Crassifolius Chaparral
CDFG	California Department of Fish and Game
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFG	California Fish and Game Code
CFR	Code of Federal Regulations
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CWA	Clean Water Act
CWW	California Walnut Woodland
CLOW	Canyon Live Oak Woodland
EIR	Environmental Impact Report
ERC	Environmental Review Committee
ESA	Endangered Species Act (Federal)
EUC	Eucalyptus
FMZ	Fuel Modification Zone
GIS	Geographic Information System
GPS	Global Positioning System
I-15	Interstate Highway 15
I-215	Interstate Highway 215
LBV	Least Bell's Vireo

LMP	Land Management Plan
MBTA	Migratory Bird Treaty Act
NMC	Northern Mixed Chaparral
NNG	Non-Native Grassland
OHWM	Ordinary High Water Mark
RAFSS	Riversidean Alluvial Fan Sage Scrub
RSS	Riversidean Sage Scrub
ROW	Right-of-Way
RWQCB	Regional Water Quality Control Board
SAW	Sycamore Alluvial Woodland
SBKR	San Bernardino Kangaroo Rat
SBNF	San Bernardino National Forest
SCMLP	South Coast Missing Linkages Project
SR-138	State Route 138
SSARW	Southern Sycamore-Alder Riparian Woodland
SSC	Species of Special Concern (California)
SWF	Southwestern Willow Flycatcher
SWPPP	Stormwater Pollution Protection Plan
SWS	Southern Willow Scrub
USACE	United States Army Corps of Engineers
USDA	United States Department of Agriculture
USFS	United States Forest Service
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
WUI	Wildland-Urban Interface

Chapter 9 References

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Appendix A: Summary Tables

Table A-1
Plant Communities on the Spring Trails Project Site

Plant Community	*Acreage*
California Walnut Woodland (CWW)	2.1
Canyon Live Oak Woodland (CLOW)	0.4
Ceonothus Crassifolius Chaparral (CCC)	10.1
Chamise Chaparral (CC)	9.1
Disturbed (D)	2.7
Eucalyptus (EUC)	5.5
Eucalyptus/Riversidean Sage Scrub (EUC/RSS)	12.1
Non-Native Grassland (NNG)	11.4
Northern Mixed Chaparral (NMC)	86.9
Ornamental (O)	0.7
Riversidean Alluvial Fan Sage Scrub (RAFSS)	3.9
Riversidean Sage Scrub (RSS)	168.4
Riversidean Sage Scrub/California Walnut Woodland (RSS/CWW)	19.8
Southern Sycamore-Alder Riparian Woodland (SSARW)	25.4
Southern Willow Scrub (SWS)	1.6
Southern Willow Scrub/California Walnut Woodland (SWS/CWW)	7.4
Sycamore Alluvial Woodland (SAW)	7.5

Sources
Michael Brandman Associates. 2007a. General Biological Resources Report, Martin Ranch Project Site, Unincorporated San Bernardino County, California.
Michael Brandman Associates. 2008. Habitat Assessment Report, Spring Trails Project Site (Access Roads), Unincorporated San Bernardino County, California.
Natural Resources Assessment, Inc. 2004. General Biological Resources Assessment Update, Martin Ranch Property, San Bernardino County, California.
PBS&J. 2009e. Review and Update of the Biological Resources Associated with the Spring Trails Development and Associated Access Roads.
PCR Services Corporation. 1999. Biological Resources Assessment and Report for the Martin Ranch Property, San Bernardino County, California.
White and Leatherman Bioservices. 2002a. Biological Technical Report Update: Proposed Martin Ranch Project, San Bernardino, California.
White and Leatherman Bioservices. 2002c. Biological Technical Report: Proposed Secondary Access Road, Martin Ranch Project, San Bernardino, California.

Table A-2
Potential Sensitive Plant Species on the Spring Trails Project Site

Species	*Status Fed/State/CNPS*	*Observed Onsite?*					*Likelihood of Occurrence*
		1998	*2002*	*2007*	*2008*	*2009*	
Nevin's barberry (*Berberis nevinii*)	FE/SE/1B	No	No	No	No	No	Very low likelihood of occurrence as species is easily observed and recognizable and repeat surveys have been consistently negative
Slender-horned spineflower (*Dodecahema leptoceras*)	FE/SE/1B	No	No	No	No	No	Low to moderately suitable habitat is present in Cable Creek, but repeat negative surveys would strongly suggest that the species is not present
Santa Ana River woollystar (*Eriastrum densifolium ssp. Sanctorum)*	FE/SE/1B	No	No	No	No	No	Low to moderately suitable habitat is present in Cable Creek, but repeat negative surveys would strongly suggest that the species is not present
Marsh sandwort (*Arenaria paludicola*)	FE/SE/1B	No	No	No	No	No	None, no suitable habitat present on the site
Thread-leaved brodiaea (*Brodiaea filifoliai*)	FT/SE/1B	No	No	No	No	N/D	None, no suitable habitat present on the site
Parish's bush mallow (*Malacothamnus parishii*)	None/None/1A	N/D	No	N/D	N/D	N/D	Absent, presumed extinct in region
Orcutt's brodiaea (*Brodiaea orcuttii*)	None/None/1B	No	No	No	No	N/D	None, well outside of species geographic range and no suitable habitat present on the site
Plummer's mariposa lily (*Calochortus plummerae*)	None/None/1B	Yes	No	Yes	No	No	Present on site
Many-stemmed dudleya (*Dudleya multicaulis*)	None/None/1B	No	No	No	No	No	None, well outside of species geographic range and no suitable habitat present on the site
San Bernardino Mountain owl's clover (*Castilleja lasiorhyncha*)	None/None/1B	No	No	No	No	No	None, well below the species elevation range
Smooth tarplant (*Centrodadia pungens* ssp. *Laevis*)	None/None/1B	No	No	No	No	No	Unlikely to occur, only marginal habitat and at the margin of its geographic range
Parish's gooseberry (*Ribes divaricatum* var. *parishii*)	None/None/1B	No	No	No	No	No	Very low likelihood of occurrence, plant is probably extinct
Lemon lily (*Lilium parryi*)	None/None/1B	N/D	No	N/D	N/D	N/D	Absent, below elevation range
Mesa horkelia (*Horkelia cuneata* ssp. *puberula*)	None/None/1B	N/D	No	No	N/D	No	Not observed, low probability of occurrence as outside of species range and no suitable habitat is present on the site

Table A-2
Potential Sensitive Plant Species on the Spring Trails Project Site

Species	Status Fed/State/CNPS	Observed Onsite?					Likelihood of Occurrence
		1998	2002	2007	2008	2009	
Palmer's mariposa lily (*Calochortus plummerae*)	None/None/1B	N/D	No	N/D	N/D	N/D	Absent, no suitable habitat present on the site
Robinson's pepper grass (*Lepidum virgincum* var. *robinsonii*)	None/None/1B	N/D	No	N/D	N/D	N/D	Absent, above elevation range
Short-joint beavertail (*Optuntia basilaris* var. *brachyclada*)	None/None/1B	N/D	No	N/D	N/D	N/D	Not observed, low probability of occurrence, below elevation range
White-bracted spineflower (*Chorizanthe xanti* var. *leucotheca*)	None/None/1B	N/D	No	N/D	N/D	N/D	Not observed, low probability of occurrence as site is outside of species range
Black sedge (*Schoenus nigricans*)	None/None/2	N/D	No	N/D	N/D	N/D	Absent, no suitable habitat present on the site
Hot springs fimbristylis (*Fimbristylis thermalis*)	None/None/2	No	No	No	No	No	Absent, no suitable habitat present on the site
Parish's desert thorn (*Lycium parishii*)	None/None/2	N/D	No	N/D	N/D	N/D	Absent, no suitable habitat present on the site
Parry's spineflower (*Chorizanthe parryi* var. *parryi*)	None/None/3	No	No	No	No	No	Not observed, but could occur on the site as suitable habitat for the species is present
California black walnut (*Juglans californica* var. *californica*)	None/None/4	N/D	Yes	N/D	N/D	Yes	Present on site
California muhly grass (*Muhlenbergia californica*)	None/None/4	N/D	No	N/D	N/D	No	Not observed, suitable habitat is present within the riparian habitat of Cable Creek, but repeat negative surveys would strongly indicate that species is absent from the site
California spineflower (*Mucronea californica* var. *Chorizanthe californica*)	None/None/4	N/D	No	N/D	N/D	No	Not observed, low probability of occurrence in open sites in shrublands
Ocellated Humboldt lily (*Lilium humboldtii* var. *ocellatum*)	None/None/4	N/D	No	N/D	N/D	No	Not observed, high probability of occurrence in riparian habitat of Cable Creek
Golden violet (*Viola aurea*)	N/D	N/D	No	N/D	N/D	N/D	Absent, below elevation range and outside of geographical range

Table A-2
Potential Sensitive Plant Species on the Spring Trails Project Site

Note: N/D = No data

Federal (USFWS)
FE: Federally listed, endangered
FT: Federally listed, threatened

State (CDFG)
SE: State listed, endangered
ST: State listed, threatened

California Native Plant Society (CNPS) List
List 1A: Plants presumed extinct in California
List 1B: Plants rare, threatened or endangered in California and elsewhere
List 2: Plants rare, threatened or endangered in California but more common elsewhere
List 3: Plants for which more information is needed; a review list
List 4: Plants of limited distribution; a watch list

Surveys Cited
1998: PCR Services Corporation. 1999. Biological Resources Assessment and Report for the Martin Ranch Property, San Bernardino County, California. (Note: surveys conducted in 1998).
1998: Integrated Urban Forestry. 1998. Arborist Report, Martin Ranch, San Bernardino County.
2002: White and Leatherman Bioservices. 2002a. Biological Technical Report Update: Proposed Martin Ranch Project, San Bernardino, California.
2002: White and Leatherman Bioservices. 2002c. Biological Technical Report: Proposed Secondary Access Road, Martin Ranch Project, San Bernardino, California.
2007: Michael Brandman Associates. 2007a. General Biological Resources Report, Martin Ranch Project Site, Unincorporated San Bernardino County, California.
2007: Michael Brandman Associates. 2007c. Post-Disturbance Arborist Report Update, Martin Ranch Project Site, Unincorporated San Bernardino County, California.
2008: Michael Brandman Associates. 2008. Habitat Assessment Report, Spring Trails Project Site (Access Roads), Unincorporated San Bernardino County, California.
2009: PBS&J. 2009d. Rare Plant Survey Letter Report, Spring Trails Specific Plan.

Table A-3
Summary of Native Trees on the Spring Trails Project Site (1998)

Tree Species	*Total Mature Trees*	*Small Plants not Included in Count*	*Location*
California bay laurel (*Umberrularia californica*)	372	Many	Mostly in Cable Canyon
Southern California black walnut (*Juglans californica*)	310	Many	Northern portion of site and also on sides of most channels
White alder (*Alnus rhombifolia*)	218	Some	In east and west forks of Cable Creek
California sycamore (*Plantus racemosa*)	196	Many	Bottom of Myers Creek and other tributaries
Canyon live oak (*Quercus chrysolepis*)	154	Few	Largest in southeast fork of Cable Canyon
Big-leaf maple (*Acer macrophyllum*)	30	Few	In east and west forks of Cable Creek
Narrow-leaf cottonwood (*Populus angustifolia*)	17	Many	Found next to water in Cable Creek
Incense cedar (*Calocedrus decurrens*)	11	Few	Planted as an ornamental at the existing residence
Mountain mahogany (*Cercocarpus betuloides*)	8	Some	Largest occurrence in Cable Canyon
Bigcone Douglas fir (*Pseudotsuga macrocarpa*)	8	Few	On east-facing slope of Cable Canyon
Holly-leaf cherry (*Prunus ilicifolia*)	6	Some	On east side of Cable Creek, before fork
Scrub oak (*Quercus berberidifolia*)	6	Many	Some hybridization with canyon live oak
Great-berried Manzanita (*Arctostaphylus glauca*)	5	Some	Largest on steep western canyon wall of Cable Creek
Mexican elderberry (*Sambucus Mexicana*)	5	Many	Mostly shrubs throughout
Red willow (*Salix lasiandra*)	2	Some	Largest in west Meyers Canyon
Arroyo willow (*Salix lasiolepis*)	0	Many	In wet areas

Sources
Integrated Urban Forestry. 1998. Arborist Report, Martin Ranch, San Bernardino County.
Michael Brandman Associates. 2007c. Post-Disturbance Arborist Report Update, Martin Ranch Project Site, Unincorporated San Bernardino County, California.

Table A-4
Potential Sensitive Wildlife Species on the Spring Trails Project Site

Species	*Status Fed/State*	*In Critical Habitat?*	*Observed Onsite?*					*Likelihood of Occurrence*
			1998	*2002*	*2007*	*2008*	*2009*	
Mammals								
San Bernardino kangaroo rat (*Dipodomys merriami parvus*)	FE/SSC	Yes	No	No	No	N/D	No	Repeated focused surveys have been negative for this species. Nevertheless, suitable habitat is present and the area is within USFWS designated critical habitat. Therefore there remains a moderate potential for the species to occur on the site
American badger (*Taxidea taxus*)	SSC	N/A	N/D	No	N/D	No	No	Not observed, high probability of occurrence based on presence of suitable habitat
Big free-tailed bat (*Nyctinomops macrotis*)	SSC	N/A	N/D	No	N/D	N/D	N/D	Not observed, unknown probability of occurrence
California leaf-nosed bat (*Macrotus californicus*)	SSC	N/A	N/D	No	N/D	N/D	N/D	Not observed, moderate probability of occurrence and use of area for foraging
California mastiff bat (*Eumops perotis californicus*)	SSC	N/A	N/D	No	N/D	N/D	N/D	Not observed, unknown probability of occurrence
Los Angeles pocket mouse (*Perognathus longimembris brevinasus*)	SSC	N/A	Yes	Yes	Yes	N/D	Yes	Present on site based on capture during focused surveys for SBKR
Occult little brown bat (*Myotis lucifugus occultus*)	SSC	N/A	N/D	No	N/D	N/D	N/D	Not observed, moderate to high probability of occurrence and use of area for foraging and roosting
Pallid San Diego pocket mouse (*Chaetodipus fallax fallax pallidus*)	SSC	N/A	N/D	N/D	N/D	N/D	No	Suitable habitat on site, nearest recorded occurrence two miles, not observed during repeat SBKR surveys, moderate potential for occurrence
Pocketed free-tailed bat (*Nyctinomops femorosaccus*)	SSC	N/A	No	No	N/D	No	N/D	Outside of known range; unlikely to occur
San Diego black-tailed jackrabbit (*Lepus californicus bennettii*)	SSC	N/A	N/D	No	No	No	No	Not observed, high probability of occurrence
San Diego desert woodrat (*Neotoma lepida intermedia*)	SSC	N/A	Yes	Yes	Yes	Yes	No	Present on site based on capture during previous focused surveys for SBKR

Table A-4
Potential Sensitive Wildlife Species on the Spring Trails Project Site

Species	*Status Fed/State*	*In Critical Habitat?*	*Observed Onsite?*					*Likelihood of Occurrence*
			1998	*2002*	*2007*	*2008*	*2009*	
Northwestern San Diego pocket mouse (*Chaetodipus fallax fallax)*	SSC	N/A	Yes	Yes	Yes	N/D	Yes	Present on site based on capture during focused surveys for SBKR
Southern grasshopper mouse (*Onychomys torridus Ramona*)	SSC	N/A	No	No	No	No	No	Not captured during focused survey trapping effort for SBKR. Low probability of occurrence due to lack of suitable habitat
Western mastiff bat (*Eumops perotis*)	SSC	N/A	No	N/D	No	No	N/D	Marginal habitat on site, low potential to occur
White-eared pocket mouse (*Perognathus alticola alticola*)	SSC	N/A	No	No	No	No	No	Not present, site is well below known elevation range. Not captured during previous focused survey trapping efforts for SBKR
Ring-tailed cat (*Bassariscus astutus*)	USFS "special"/SSC	N/A	No	No	No	No	No	Not observed, moderate probability of occurrence due to moderately suitable habitat in Cable Creek area
Birds								
Least Bell's vireo (*Vireo bellii* ssp. *pusillus*)	FE, SSC	No	No	No	Yes	No	No	Present on site, observed along Cable Creek during focused survey in 2007
Southwestern willow flycatcher (*Empidonox traillii extimus*)	FE, SE	No	No	No	No	No	No	Moderately suitable habitat in Cable Creek, nearest recorded occurrence seven miles. Focused surveys in 2007 negative. Previous and subsequent general habitat surveys negative. Moderate potential for occurrence based on presence of quality habitat
Coastal California gnatcatcher (*Polioptila californica*)	FT, SSC	No	No	No	No	N/D	No	Absent, based on focused surveys. Nearest recorded location is five miles to the east
Bell's sage sparrow (*Amphispiza belli belli*)	SSC	N/A	Yes	Yes	Yes	No	No	Present based on previous surveys and observations
Southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*)	SSC	N/A	Yes	Yes	Yes	No	No	Present based on previous surveys and observations
Tri-colored blackbird (*Agelaius tricolor*)	SSC	N/A	No	No	No	No	No	Not observed, low probability of occurrence due to lack of suitable habitat and lack of local occurrences

Table A-4
Potential Sensitive Wildlife Species on the Spring Trails Project Site

Species	*Status Fed/State*	*In Critical Habitat?*	*Observed Onsite?*					*Likelihood of Occurrence*
			1998	*2002*	*2007*	*2008*	*2009*	
Black-chinned sparrow (*Spizella atrogularis*)	SSC	N/A	N/D	No	N/D	No	No	Not observed, but high probability of occurrence based on suitable habitat
Burrowing owl (*Speotyto cunicularia*)	SSC	N/A	No	No	No	No	No	Not observed, low probability of occurrence due to lack of suitable habitat
Cactus wren (*Campytorhynchus bruneicapillus couesi*)	SSC	N/A	N/D	No	N/D	N/D	No	Not observed, low probability of occurrence based on lack of suitable habitat
California horned lark (*Eremophila alpestris actia*)	SSC	N/A	No	No	No	No	No	Not observed, low probability of occurrence due to marginally suitable habitat
Chipping sparrow (*Spizella passerina*)	SSC	N/A	N/D	No	N/D	N/D	No	Not observed, but could use site for foraging
Cooper's hawk (*Accipiter cooperii*)	SSC	N/A	No	No	No	No	No	Not observed, but may use site for foraging
Ferruginous hawk (*Buteo regalis*)	SSC	N/A	No	No	No	No	No	Not observed, but may use site for foraging
Grasshopper sparrow (*Ammodramus savannarum*)	SSC	N/A	N/D	No	No	No	No	Not observed, low probability of occurrence based on lack of suitable habitat
Golden eagle (*Aquila chrysaetos*)	SSC	N/A	No	No	No	No	No	Not observed, but may use site for foraging
Lawrence's goldfinch (*Carduelis lawrencei*)	SSC	N/A	N/D	Yes	N/D	N/D	No	Present, based on previous observations
Loggerhead shrike (*Lanius ludovicianus*)	SSC	N/A	No	No	No	No	No	Not observed, high probability of occurrence due to suitable habitat
Long-eared owl (*Asio otus*)	SSC	N/A	N/D	No	N/D	N/D	N/D	Not observed, low probability of occurrence
Merlin (*Falco columbaris*)	SSC	N/A	No	No	No	No	No	Not observed, but may use site for foraging
Northern harrier (*Circus cyaneus*)	SSC	N/A	No	No	No	No	No	Not observed, but may use site for foraging
Olive-sided flycatcher (*Contopus borealis*)	SSC	N/A	N/D	No	N/D	N/D	No	Not observed, would be migratory but not resident
Prarie falcon (*Falco mexicanus*)	SSC	N/A	No	No	No	No	No	Not observed, but may use site for foraging

Table A-4
Potential Sensitive Wildlife Species on the Spring Trails Project Site

Species	*Status Fed/State*	*In Critical Habitat?*	*Observed Onsite?*					*Likelihood of Occurrence*
			1998	*2002*	*2007*	*2008*	*2009*	
Sharp-shinned hawk (*Accipiter striatus)*	SSC	N/A	Yes	Yes	Yes	No	No	Present, based on previous observations
White-tailed kite (*Elanus leucerus*)	SSC	N/A	No	No	No	No	No	Not observed, but may use site for foraging
Yellow-breasted chat (*Icteria virens*)	SSC	N/A	No	No	No	No	No	Not observed, moderate probability of occurrence in riparian habitat
Yellow warbler (*Dendroica petechia*)	SSC	N/A	No	No	No	No	No	Not observed, moderate probability of occurrence in riparian habitat
Bald eagle (*Haliaeetus leucocephalus*)	SE	N/A	N/D	No	N/D	N/D	No	Not observed, low probability of occurrence based on lack of suitable habitat
Western yellow-billed cuckoo (*Coccyzus americanus occidentalis*)	SE	N/A	N/D	No	N/D	N/D	No	Not observed, low probability of occurrence (local occurrences extinct)
Swainson's hawk (*Buteo swainsonii*)	ST	N/A	N/D	No	No	No	No	Not observed, but may use site for foraging
Amphibians and Reptiles								
Arroyo southwestern toad (*Bufo californicus*)	FE, SSC	No	No	No	No	No	No	Marginally suitable habitat in Cable Creek, nearest recorded occurrence 5.9 miles, moderate potential for occurrence
California red-legged frog (*Rana aurora draytonii*)	FT, SSC	No	No	No	No	No	No	Not observed, low probability of occurrence due to lack of suitable habitat and lack of nearby occurrences
Mountain yellow-legged frog (*Rana muscosa*)	FT, SSC	No	No	No	No	No	No	Marginally suitable habitat in Cable Creek, nearest recorded occurrence 6.9 miles. Low potential for occurrence based on only marginally suitable habitat and distance to nearest known occurrence
California glossy snake (*Arizona elegans occidentalis*)	SSC	N/A	N/D	No	N/D	N/D	No	Not observed, moderate to high probability of occurrence based on presence of suitable habitat
California silvery legless lizard (*Anniella pulchra pulchra*)	SSC	N/A	N/D	No	No	No	No	Not observed, moderate to high probability of occurrence based on presence of suitable habitat
Coast patch-nosed snake (*Salvadora hexalepis virgultea*)	SSC	N/A	N/D	No	No	No	No	Not observed, high probability of occurrence based on presence of suitable habitat

Table A-4
Potential Sensitive Wildlife Species on the Spring Trails Project Site

Species	*Status Fed/State*	*In Critical Habitat?*	*Observed Onsite?*					*Likelihood of Occurrence*
			1998	*2002*	*2007*	*2008*	*2009*	
Coastal western whiptail (*Cnemidophorus tigris multiscutatus*)	SSC	N/A	N/D	Yes	No	N/D	No	Present on site based on observation in 2002
Large blotched salamander (*Ensatina eschscholtzii klauberi*)	SSC	N/A	N/D	No	N/D	N/D	No	Not observed, low probability of occurrence due to lack of suitable habitat (high stream gradients, lack of pools, high silt content)
Orange-throated whiptail (*Cnemidophorus hyperythrus beldingi*)	SSC	N/A	No	No	No	No	No	Not observed, low probability of occurrence due to fact that site is outside of the species historic range
Red diamond rattlesnake (*Crotalus exsul*)	SSC	N/A	N/D	No	N/D	N/D	No	Not observed, low probability of occurrence (outside geographic range)
Rosy boa (*Lichanura trivirgata*)	SSC	N/A	N/D	No	No	No	No	Not observed, high probability of occurrence
San Bernardino Mountain kingsnake (*Lampropeltis zonata parvirubra*)	SSC	N/A	N/D	No	N/D	N/D	No	Not observed, moderate to high probability of occurrence based on presence of suitable habitat
San Bernardino ring-neck snake (*Diadophis punctatus modestus*)	SSC	N/A	No	No	No	N/D	No	Not observed, high probability of occurrence based on presence of suitable habitat
San Diego banded gecko (*Coleonyx variegates abbotti)*	SSC	N/A	N/D	No	No	No	No	Not observed, moderate probability of occurrence
San Diego horned lizard (*Phrynosoma coronatum blainvillei*)	SSC	N/A	Yes	Yes	Yes	No	No	Present based on surveys and observations
San Gabriel Mountains slender salamander (*Batrachoseps gabrieli*)	SSC	N/A	N/D	No	N/D	N/D	No	Not observed, low probability of occurrence due to lack of suitable habitat (high stream gradients, lack of pools, high silt content)
Southwestern pond turtle (*Clemmys marmorata pallida*)	SSC	N/A	No	No	No	No	No	Not observed, low probability of occurrence due to lack of suitable habitat
Two-striped garter snake (*Thamnophis hammondii*)	SSC	N/A	No	No	No	N/D	No	Not observed, high probability of occurrence based on presence of suitable habitat
Western spadefoot toad (*Scaphiopus hammondii*)	SSC	N/A	No	No	No	No	No	Not observed, low probability of occurrence due to lack of suitable habitat

Table A-4
Potential Sensitive Wildlife Species on the Spring Trails Project Site

Species	*Status Fed/State*	*In Critical Habitat?*	*Observed Onsite?*					*Likelihood of Occurrence*
			1998	*2002*	*2007*	*2008*	*2009*	
Yellow-blotched salamander (*Ensatina escschholtzii*)	SSC	N/A	N/D	No	N/D	N/D	No	Not observed, moderate to high probability of occurrence based on presence of suitable habitat
Southern rubber boa (*Charina bottae umbricata*)	ST	N/A	No	No	No	No	No	Not observed, low probability of occurrence due to site being well below species elevation range
Fish								
Unarmored threespine (*Gasterosteus aculeatus williamsonii*)	FE, SE	No	N/D	No	N/D	N/D	No	Absent based on lack of suitable habitat (species is also extinct from Santa Ana River watershed)
Santa Ana sucker (*Catostomus santaanae*)	FT, SSC	No	N/D	No	No	N/D	No	Not observed, very low probability of occurrence due to lack of suitable habitat and elevation of site
Arroyo chub (*Gila orcutti*)	SSC	N/A	N/D	No	N/D	N/D	No	Not observed, very low probability of occurrence due to lack of suitable habitat and elevation of site
Santa Ana speckled dace (*Rhinichthys osculus*)	SSC	N/A	N/D	No	N/D	No	No	Not observed, very low probability of occurrence due to lack of suitable habitat
Invertebrates								
Quino checkerspot butterfly (*Euphydryas editha quino*)	FE	No	No	N/D	N/D	N/D	No	Not observed, low probability of occurrence due to lack of suitable habitat

Note: N/D = No data
N/A = Not applicable

Federal (USFWS)
FE: Federally listed, endangered
FT: Federally listed, threatened

State (CDFG)
SE: State listed, endangered
ST: State listed, threatened
SSC: Species of Special Concern

Surveys Cited
1998: PCR Services Corporation. 1999. Biological Resources Assessment and Report for the Martin Ranch Property, San Bernardino County, California. (Note: surveys conducted in 1998).
2002: S.C. Dodd Biological Consulting. 2002. Results of a Live Trapping Survey for the Federally Endangered San Bernardino Kangaroo Rat on the Secondary Access Route for the Proposed Martin Ranch Project.

Table A-4
Potential Sensitive Wildlife Species on the Spring Trails Project Site

2002: White and Leatherman Bioservices. 2002a. Biological Technical Report Update: Proposed Martin Ranch Project, San Bernardino, California.
2002: White and Leatherman Bioservices. 2002b. Results of Focused Presence/Absence Surveys for the Coastal California Gnatcatcher on the Martin Ranch Access Road Project.
2002: White and Leatherman Bioservices. 2002c. Biological Technical Report: Proposed Secondary Access Road, Martin Ranch Project, San Bernardino, California.
2007: Michael Brandman Associates. 2007a. General Biological Resources Report, Martin Ranch Project Site, Unincorporated San Bernardino County, California.
2007: Michael Brandman Associates. 2007b. Least Bell's Vireo and Southwestern Willow Flycatcher Focused Survey Report, Martin Ranch.
2008: Michael Brandman Associates. 2008. Habitat Assessment Report, Spring Trails Project Site (Access Roads), Unincorporated San Bernardino County, California.
2009: Results for 2009 are based on observations made during surveys conducted for the following reports:
PBS&J. 2009a. Delineation of Jurisdictional Waters and Wetlands, Spring Trails Specific Plan (Access Roads), San Bernardino County, California.
PBS&J. 2009b. Delineation of Jurisdictional Waters and Wetlands, Spring Trails Specific Plan, San Bernardino County, California.
PBS&J. 2009c. San Bernardino Kangaroo Rat Presence/Absence Trapping Surveys, Spring Trails Project Site.
PBS&J. 2009d. Rare Plant Survey Letter Report, Spring Trails Specific Plan.

Appendix B: Previous Surveys and Reports

(Included on enclosed CD)