APPENDIX D1
Biological Resources Report
(September 2008)

Biological Constraints and Focused Survey Results

Oak Springs (TTM 063022) Project Site Santa Clarita, California

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1.0 INTRODUCTION

1.1 Purpose

This report provides information on biological resources that may pose constraints to development of the Oak Springs project site. This report also summarizes the findings of several focused biological surveys conducted on the site in 2005 and 2006.

1.2 Project Location

The project site is bordered to the north by the Santa Clara River, beyond which is the Antelope Valley Freeway (SR-14); to the west by residential neighborhoods, beyond which is Sand Canyon Road; to the south by the Robinson Ranch Golf Course; and to the east by undeveloped rolling hills covered with native vegetation. The site is bifurcated by a Metrolink easement, which runs through the northerly portion of the site on an east/west axis.

1.3 Project Description

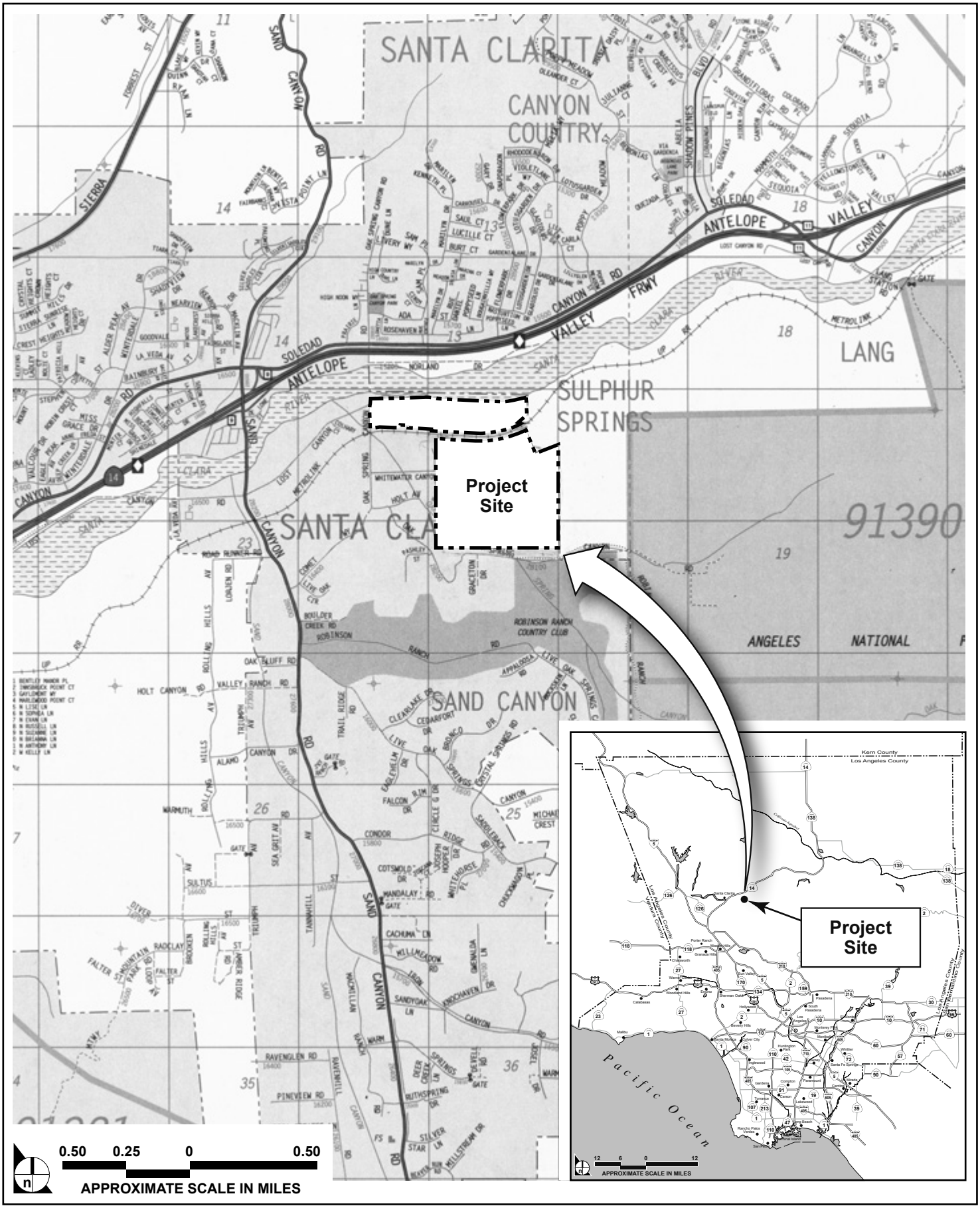
The Oak Springs project site (TTM 063022) is located adjacent to and north of the Robinson Ranch Golf Course, approximately 0.5 mile south of The SR-14 and 0.75 mile east of Sand Canyon Road in eastern Santa Clarita, California. A regional location map and a site vicinity map illustrate the project site in a regional and local context (**Figure 1, Site Location**). The project boundary encompasses 187 acres, of which approximately 150 acres would be converted into 105 residential units, and approximately 37 acres would be dedicated to the City as an equestrian center. The project also includes areas dedicated for oak tree mitigation. The precise location(s) of such areas will be determined by the City Forester.

2.0 METHODS

2.1 Database Search

Queries of the California Natural Diversity Database (CNDDB, 2006) and the California Native Plant Society database (CNPS, 2006) were performed prior to visiting the site to identify special-status plant species previously recorded in the area. A review of these databases was conducted in September, 2008 to determine whether any changes have occurred to the listing status of potentially occurring species and to confirm if any new potentially occurring species have been recorded within the vicinity of the project site from the time when the query was conducted in 2006. The CNDDB lists historical and recently recorded occurrences of both special-status plant and animal species, and the CNPS database lists historical and recent occurrences of special-status plant species. The database search included the areas

within the U.S. Geological Survey (USGS) 7.5-minute Mint Canyon Quadrangle and the surrounding eight USGS Quadrangles: Agua Dulce, Green Valley, Newhall, Oat Mountain, San Fernando, Sleepy Valley, Sunland, and Warm Springs Mountain.



SOURCE: Thomas Brothers – 2006, Impact Sciences, Inc. – May 2006

FIGURE **1**

Site Location

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The potential for special-status plant and animal species to occur on the project site was based on the proximity of the site to previously recorded occurrences, on-site vegetation and habitat characteristics, topography, elevation, soils, surrounding land uses, known habitat preferences, and geographic ranges.

2.2 Presence/Absence Plant Surveys

Focused plant surveys were conducted during the appropriate blooming periods to determine if any special-status plants are located on the project site. The methodology used for performing the focused plant surveys followed the California Department of Fish and Game's (CDFG) 2000 *Guidelines for Assessing the Effects of Proposed Projects on Rare, Threatened, and Endangered Plants and Plant Communities*, and the CNPS 2001 *Botanical Survey Guidelines of the California Native Plant Society*. These *Guidelines* outline methods for performing plant surveys and for considering the environmental impacts that may result from new development. They also provide guidance for developing mitigation for potential project-related impacts to potentially occurring special-status plants.

Impact Sciences conducted focused, presence/absence botanical surveys on July 22, July 27, and August 1, 2005, and on May 4, May 17, June 2 and June 6, 2006. To determine the blooming periods for the slender mariposa lily, Plummer's mariposa lily, and the San Fernando spineflower, biologists visited known populations of similar habits growing in the project region. Two qualified botanists walked parallel transects at approximately 20 feet apart in suitable on-site habitats and all suitable habitats within 200 feet of proposed grading limits, to achieve 100 percent visual coverage. During these surveys, on-site plant communities were characterized and mapped (see, **Section 3.1, Plant Communities**). All plant species observed during site visits conducted by Impact Sciences in 2005 and 2006 are provided in **Appendix A, Plant Species and Common Animal Species Observed on the Oak Springs Project Site**.

On August 13, 2008, Impact Sciences revisited the project site to determine if the condition of the site had changed since the 2006 site visits and biological surveys. During this effort, plant communities were re-mapped and the acreages of each plant community were recalculated (See, **Section 3.1, Plant Communities**).

2.3 Presence/Absence Animal Surveys

An initial habitat assessment was conducted by Impact Sciences to identify whether the project site contains suitable habitat for supporting special-status animal species. All common animal species observed during site visits conducted by Impact Sciences in 2005 and 2006 are provided in **Appendix A**.

Based on the initial habitat assessment, the following surveys were conducted:

Western spadefoot toad (*Spea (= Scaphiopus) hammondii*), red-legged frog (*Rana aurora draytonii*), arroyo chub (*Gila orcutti*), unarmored threespine stickleback *(Gasterosteus aculeatus williamsoni)*, and Santa Ana

sucker *(Catostomus santaanae)*. On March 30, 2006, a site assessment was conducted by Compliance Biology and Impact Sciences, to assess the potential for these species to occur on the project site. Based on the site assessment, it was determined there is no suitable habitat on the project site, or in adjacent areas, for supporting red-legged frogs. Conversely, the site assessment concluded that there is suitable habitat for the western spadefoot toad; therefore, a focused survey was conducted. Methods and results of the amphibian surveys are provided in **Appendix B, Amphibian Data Forms and Memos of Results**. No aquatic surveys were conducted due to the lack of suitable habitat. See **Section 4.0, Results**, for further discussion regarding the potential for special-status fish to occur within the proximity of the project site.

Surveys for the western spadefoot toad were conducted by Compliance Biology and Impact Sciences on April 3, 2006, between 8:30 PM and 10:00 PM, following measurable rainfall earlier in the day. Surveys were conducted as silently as possible, as talking or other human-generated noises may cause the toads to stop calling or to leave the area. Strong flashlights were used to visually locate and identify toads and other amphibians. Temporary shallow pools created by the recent rains were inspected. Water in the pools was generally murky, approx 4 to 8 inches deep and water temperatures ranged from 45 to 50 degrees F. Surveys were ceased following the observation of a spadefoot toad.

Coast horned lizards (*Phrynosoma coronatum*), silvery legless lizards (*Anniella pulchra pulchra*), and San Diego desert woodrats (*Neotoma lepida*). Focused surveys for coast horned lizards, silvery legless lizards, and San Diego desert woodrats were conducted on June 16 and July 12, 2006. To achieve 100 percent visual coverage, parallel transects at approximately 20 feet apart were walked in on-site habitat suitable for coast horned lizards and woodrats. Hand raking was performed to determine the presence of silvery legless lizards. Raking surveys for silvery legless lizards were conducted in areas of sandy, loose and moist soils, typically under the sparse vegetation of scrub, chaparral, and within the duff of the on-site oak woodlands.

Least Bell's vireo *(Vireo bellii pusillus)*, southwestern willow flycatcher *(Empidonax traillii extimus)*, coastal California gnatcatcher *(Polioptila californica californica)*, and cactus wren (*Campylorhynchus brunneicapillus*). Protocol surveys of least Bell's vireo and southwestern willow flycatcher were conducted by Ecological Sciences, Inc., during the course of nine site visits in the spring and summer of 2006. A detailed discussion of the methods employed during these protocol surveys are provided in the relevant technical reports provided in **Appendix C**.

Two separate protocol-level (U.S. Fish and Wildlife Service) surveys were conducted for the coastal California gnatcatcher and cactus wren by Langdon Biological Consulting in 2005 and 2006. Subsequent reports were prepared by Langdon for both the 2005 and 2006 protocol surveys. The methods employed during Langdon's surveys are provided in the respective 2005 and 2006 reports (**Appendix C**).

2.4 City of Santa Clarita Oak Tree Surveys

Impact Sciences biologists mapped on-site oak trees and conducted oak tree evaluations in December 2005 and April 2006. A subsequent oak tree report was prepared for submittal to the City of Santa Clarita in July 2006. Only oak trees protected under the City of Santa Clarita's Oak Tree Preservation and Protection Guidelines were surveyed (trees with a minimum diameter at breast height [dbh] of 1.91 inches). Oak tree locations were collected from the base of each tree. The locations of trees that occurred within or immediately adjacent to the grading limit line were resurveyed by a professional surveyor (Sikand Engineering) in order to precisely locate such trees. A summary of the City of Santa Clarita's Oak Tree Ordinance, a detailed discussion of the methods employed during the oak tree survey, and the results of the oak tree survey are in the Oak Tree Survey Report for the Oak Springs Project Site, dated July 2006.

2.5 Jurisdictional Delineation

To determine if on-site water features are jurisdictional, a formal delineation of jurisdictional waters was performed. The delineation of jurisdictional waters was conducted by Impact Sciences with a mapping-grade Trimble Global Positioning System (GPS) in December 2005, and a subsequent delineation report was prepared in May 2006. This process involved walking the course of each jurisdictional drainage or wetland and recording the boundaries of both the high water bank and associated riparian vegetation. A summary of the regulation of jurisdictional waters and a detailed discussion of the methods and results of the jurisdictional delineation are provided below in **Section 4.5, Jurisdictional Waters**, and in **Appendix D, Jurisdictional Delineation Report**.

3.0 ENVIRONMENTAL SETTING

Grasses, native shrubs, and oak woodland, typifies the vegetation cover on the project site. City-protected coast live oak and Tucker's oak trees occur in the northwest portion of the site. Several dirt paths and access roads traverse in various directions throughout the project site. The site lies within a shallow alluvial basin at 1,600 feet elevation, possibly formed from the nearby Santa Clara River, with gradual uphill slopes bordering the site to the east. The Oak Springs Canyon Channel, an ephemeral wash, extends across the southwestern portion of the site from the northwest to the southeast.

An aerial view of the property with proposed grading limits is shown below in **Figure 2, Aerial View of Property Boundaries, Grading Limits and Proposed Mitigation Areas**. A view of the site to the east from the Metrolink tracks is below in **Figure 3, View of the Site to the East from the Metrolink Tracks**.

3.1 Plant Communities

Vegetation nomenclature used to describe plant communities is based on the CDFG's *List of California Terrestrial Natural Communities* (CDFG 2003); however, in circumstances where CDFG's List did not provide descriptions, plant communities were characterized based on the most dominant plant species within the vegetation type. Common plant names are taken from J.C. Hickman (1993) and P.A. Munz (1974). There are sixteen plant communities on the project site: Big Sagebrush Scrub, Four-wing Saltbush – Big Sagebrush Scrub, Chamise Chaparral Scrub, Coast Live Oak Woodland, Holly-leaf Cherry Scrub, Non-native Grassland, Southern Riparian Scrub, Tucker's Oak Scrub, River Wash, Buckwheat Scrub, Buckwheat - Buckhorn Cholla Cactus Scrub, Buckhorn Cholla, Buckwheat – Chaparral Yucca Scrub, Skunkbush Scrub, Blue Elderberry Scrub, and Yerba Santa Scrub. The dominant plant species that occur within each of the plant communities are described in detail below. A complete list of all plant species observed during the focused botanical surveys is provided in **Appendix A.**

Legend:

- Project Boundary
- Grading Limit Line
- Proposed Oak Tree Mitigation Areas

500 250 0 500

APPROXIMATE SCALE IN FEET

SOURCE: Impact Sciences, Inc. – February 2006

FIGURE **2**

Aerial View of Property Boundaries, Grading Limits and Proposed Mitigation Areas

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SOURCE: Impact Sciences, Inc. – October 2006

FIGURE **3**

View of the Site to the East from the Metrolink Tracks

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Areas that are void of vegetation or covered with river wash also occur on the site. Although such areas are not considered plant communities, these areas are discussed in this section, and the acreages that these areas cover are provided.

Figure 4, Plant Communities and Sensitive Plants on the Oak Springs Project Site, maps the locations of the on-site plant communities.

3.1.1 Big Sagebrush Scrub (34.85 acres)

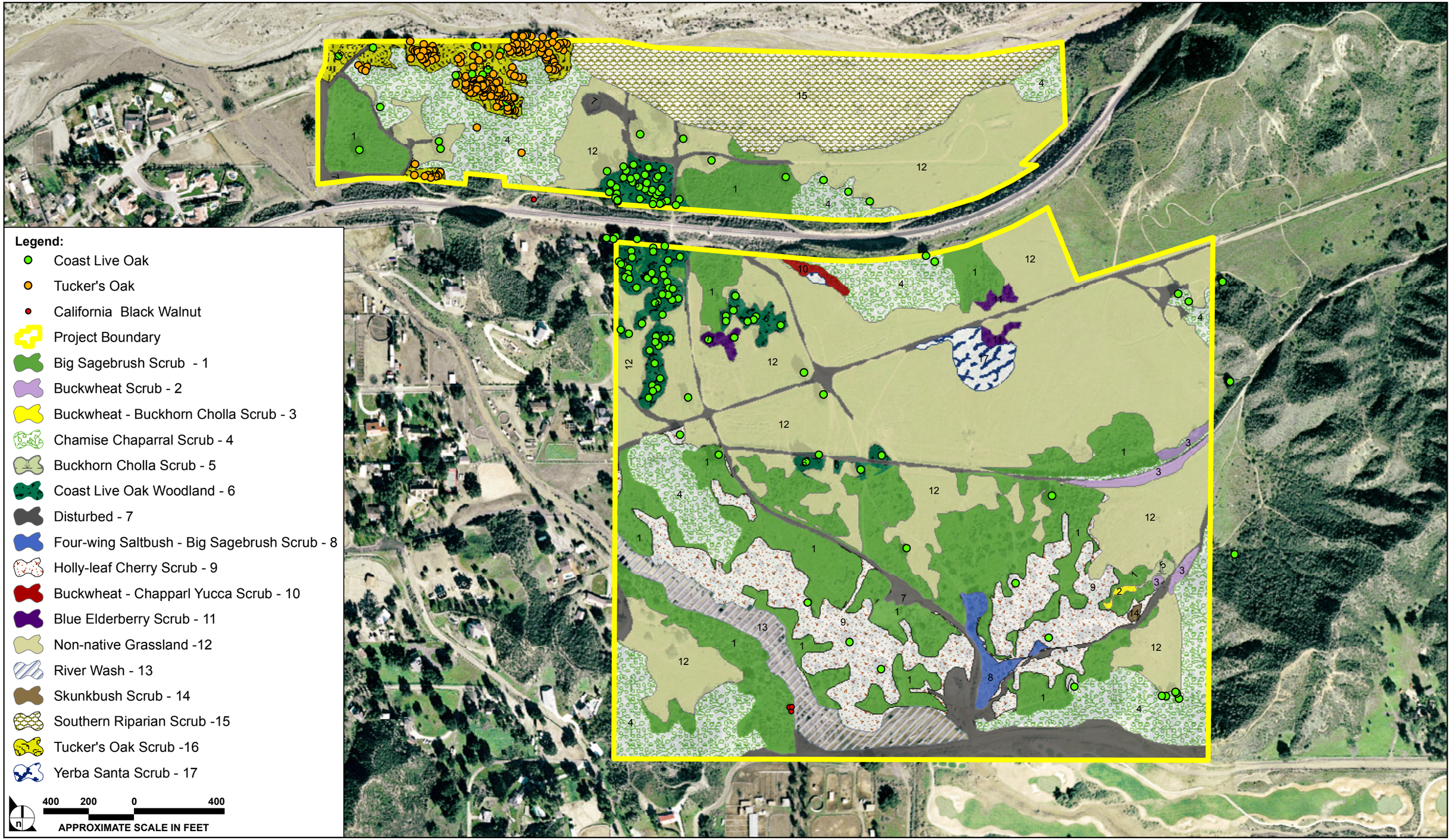
This community is dominated by big sagebrush (*Artemesia tridentata*), but includes shrubs such as scalebroom (*Lepidospartum squamatum*), skunkbush (*Rhus trilobata),* and saltbush (*Atriplex polycarpa*). The understory within this community is predominantly comprised of non-native grasses and herbaceous annuals including red brome (*Bromus madritensis* ssp. *rubens*), wild oats (*Avena fatua*), black mustard (*Brassica nigra*), prickly lettuce (*Lactuca seriola*), and wire lettuce (*Stephanomeria virgata*).

3.1.2 Four-wing Saltbush – Big Sagebrush Scrub (1.03 acres)

This community is co-dominated by four-wing saltbush (*Atriplex canescens*) and big sagbrush. Similar as to ther bBig Sagebrush Scrub plant community, associated shrubs present within the community include scalebroom (*Lepidospartum squamatum*), skunkbush (*Rhus trilobata),* and saltbush (*Atriplex polycarpa*); while non-native grasses and herbaceous annuals primarily include red brome (*Bromus madritensis* ssp. *rubens*), wild oats (*Avena fatua*), black mustard (*Brassica nigra*), prickly lettuce (*Lactuca seriola*), and wire lettuce (*Stephanomeria virgata*).

3.1.3 Chamise Chaparral Scrub (25.53 acres)

Dense stands of Chamise Chaparral Scrub, dominated by chamise (*Adenostoma fasciculatum*), occur within the northern, eastern, and western portions of the site. Associated plants observed in this community include hoaryleaf ceanothus *(Ceanothus crassifolius)*, California buckwheat (*Eriogonum fasciculatum*), Yerba Santa (*Eriodictyon crassifolium*), and California sagebrush (*Artemesia californica*). Grasses and herbaceous annuals occur within the understory of this community. Two native grass species were observed, desert needlegrass (*Acnatherum speciosum*) and one-sided bluegrass (*Poa secunda*), and several exotic species also occur, which include, cheat grass (*Bromus tectorum*), red brome, and wild oats. Other species observed in this community include chaparral yucca (*Yucca whipplei*), beavertail cactus (*Opuntia basilaris* var. *basilaris*), Splendid Mariposa lily (*Calochortus splendens*), and common phacelia (*Phacelia distans*).



SOURCE: AirPhoto USA – 2003, Impact Sciences, Inc. – September 2008

FIGURE **4**

Plant Communities and Sensitive Plants on the Oak Springs Project Site

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3.1.4 Coast Live Oak Woodland (5.39acres)

There are mature stands of coast live oak woodland located on the site, primarily in the northeast portion of the property that is located to the east of the Metrolink tracks. This community is dominated by coast live oak trees, some of which are up to 60 feet in height. The understory is composed primarily of herbaceous species, such as ripgut brome (*Bromus diandrus*), soft chess (*Bromus hordeaceus*), and common phacelia. Hoaryleaf ceanothus and skunkbush were also observed within this community.

3.1.5 Holly-Leaf Cherry Scrub (13.5 acres)

Holly-leaf cherry scrub occurs within the southern portion of the site. This community is dominated by holly-leaf cherry shrubs and trees *(Prunus illicifolia),* ranging between 10 feet and 20 feet in height. The understory is composed primarily of herbaceous species, such as ripgut brome (*Bromus diandrus*), soft chess (*Bromus hordeaceus*), and common phacelia. Associated shrubs observed within this community include skunkbush and hoaryleaf ceanothus.

This plant community area is not considered"woodland." The "Holly-Leaf Cherry Woodland" is considered a sensitive natural community by the CDFG. Woodland is defined as a plant community containing trees with a canopy cover over 30 percent (Mueller-Dombois 1974) percent or greater, which does not occur within this community on the project site.

3.1.6 Non-Native Grassland (67.4 acres)

Non-Native Grassland dominates 74.5 acres of the project site. This community is comprised mostly of exotic weed species; however, some scattered native species were observed. Dominant plants observed include red brome, wild oats, black mustard and wire lettuce. Native herbaceous species observed include devil's lettuce (*Amsinckia tessellata*), Turkish rugging (*Chorizanthe staticoides*), and turkey mullein (*Eremocarpus setigerus*).

3.1.7 Southern Riparian Scrub (14.69 acres)

The northern portion of the project site incorporates part of the Santa Clara River bed, which contains sparse vegetation that can be typified as Southern Riparian Scrub. Much of this area contains rocks, cobblestones, and river sand, and has relatively sparse vegetation cover. Plant species observed within this community include mulefat *(Baccharis salicifolia)*, arroyo willow *(Salix lasiolepis)*, Fremont cottonwood *(Populus fremontii)*, and stinging nettle *(Urtica dioica).*

3.1.8 Tucker's Oak Scrub (4.17 acres)

Tucker's Oak Scrub is predominantly located on a north-facing slope in the northwest portion of the project site facing the Santa Clara River. The Tucker's oak is the dominant plant within this community, averaging between 10 to 15 feet in height. There are few understory plants in this community, due to the thick Tucker's oak canopy. The few understory plants observed are similar to those observed in the chaparral and other oak communities within the project site.

3.1.9 River Wash (5.0 acres)

The Oak Canyon Springs Canyon Channel is characterized as a River Wash. Vegetation is sparse within this community, probably because of seasonal flows, which scour the vegetation. Species observed within this on-site community include scalebroom, big sagebrush, cholla *(Opuntia parryi)*, and Yerba Santa.

3.1.10 Buckwheat Scrub (1.1 acre)

The Buckwheat Scrub found on the project site occurs along the margins of the berm that traverses in a westerly to easterly direction near the center of the project site. Buckwheat Scrub dominates this plant community with few other perennial species present. The few herbaceous plant species observed within this community include common phacelia and ripgut brome.

3.1.11 Buckwheat – Buckhorn Cholla Scrub (0.1 acre)

Two small clusters of Buckwheat – Cholla Cactus Scrub occur within the southeastern quadrant of the project site. This plant community is dominated with buckwheat and buckhorn cholla (*Cholla acanthocarpa*) with an understory composed of herbaceous species, such as ripgut brome, soft chess, and common phacelia.

3.1.12 Buckhorn Cholla (0.2 acre)

An almost monotypic cluster of buckhorn cholla occurs within the southeast quadrant of the project site. Common phacelia and non-native grasses occur within this community, while no other perennial shrubs are present (within the plant community).

3.1.13 Buckwheat – Chaparral Yucca Scrub (0.3 acre)

This plant community dominates the south-facing slopes located in the northern portion of the project site, south of the railroad tracks. As its name suggests, this plant community is dominated with buckwheat and chaparral yucca. Associated plants observed in this community include, Yerba Santa (*Eriodictyon crassifolium*), California sagebrush (*Artemesia californica*), desert needlegrass (*Acnatherum*

speciosum) and one-sided bluegrass (*Poa secunda*); and several non-native herbaceous species, which include, cheat grass (*Bromus tectorum*), red brome, wild oats, and common phacelia (*Phacelia distans*).

3.1.14 Skunkbush Scrub (0.1 acre)

The Skunkbus Scrub located on the project site is an almost monotypic plant community, comprised of skunkbush (*Rhus trilobata*) with no other perennial species present. Scattered ripgut brome and common phacelia may be found within this plant community as well.

3.1.15 Blue Elderberry Scrub (0.7 acre)

Blue elderberry (*Sambucus mexicana*) is the only shrub species found within this plant community. Other plants that occur within this community include non-native herbaceous grasses and forbs, such as ripgut brome, red brome, black mustard, and common phacelia.

3.1.16 Yerba Santa Scrub (1.4 acres)

Yerba Santa Scrub occurs within the northern portion of the project site. This monotypic plant is comprised of Yerba Santa (*Eriodictyon californicum*) with no other perennial shrubs species present. Red brome and common phacelia dominate the herbaceous understory of this plant community.

3.1.17 Disturbed (11.55 acres)

This incorporates areas that are void of vegetation due to human-associated activities, such as dirt roads, trash and debris, and water-monitoring sites.

3.2 Protected Oak Resources

Impact Sciences conducted an oak tree survey in 2005 and prepared a subsequent report in 2006 per the City's requirements and guidelines. Three hundred forty-nine (349) jurisdictional oak trees occur within the boundaries of the project. A detailed discussion of the following is included in the 2006 Oak Tree Report: oak tree survey methodology, likely findings based on project-related impacts, proposed (and required) mitigation measures, and the appraised value of trees that would be impacted.

The City of Santa Clarita Oak Tree Ordinance requires locating, tagging, and characterizing jurisdictional oaks to provide the data needed to prepare a formal oak tree report. The protection of oak trees is administered by the City's Community Development Department.

Under the ordinance, a jurisdictional oak is defined as an oak tree with a dbh of 1.91 inches or more. A permit is required for moving, removing, or encroaching into the protected zone of an oak (any member

of the genus *Quercus*) for development. Heritage Oaks are those oak trees that are equal to or greater than 34 inches dbh or two trunks 72 inches or more in total dbh. A permit shall be obtained if damage or encroachment will occur within the protective zone of a protected tree (the area 5 feet from the dripline or 15 feet from the trunk of the tree, whichever distance is greater). The need for a report can be waived at the pre-application meeting (below) if healthy oaks are a sufficient distance from project activities. A permit may be obtained at the discretion of the City's Community Development Department, based on the findings of the oak tree report.

4.0 RESULTS

4.1 Special-Status Plant Species

Those special-status plant species known to occur in the vicinity of the project site, as reported in the CNDDB and CNPS databases, and based upon habitat suitability (i.e., topography, elevation, soils, range, etc.) are listed below in **Table 1, Special-Status Plant Species Potentially Occurring or Observed on the Oak Springs Project Site**. Those species that appear in the CNDDB and/or CNPS database searches but are not expected to occur on the site due to poor habitat suitability are excluded from this table.

Table 1
Special-Status Plant Species Potentially Occurring or Observed on the Oak Springs Project Site

Common Name and *Scientific Name*	Status			Habitat Requirements
	Federal	State	CNPS	
Greata's aster *Symphotrichum greatae*	--	--	1B.3	Moist/dry places in canyons, associated with chaparral, oak woodland; 2,000–4,000 feet.
Nevin's barberry *Berberis nevinii*	FE	SE	1B.1	Steep, north-facing slopes or low-grade sandy washes in chaparral, cismontane woodland, coastal sage scrub, or riparian scrub; between approximately 950–5,170 feet above mean sea level (msl).
Slender mariposa lily *Calochortus clavatus* var. *gracilis*	--	--	1B.2	Shaded foothill canyons below 2,500 feet, often in association with chaparral, coastal sage scrub, and grassy slopes in between habitats.
Plummer's mariposa lily *Calochortus plummerae*	--	--	1B.2	Rocky and sandy sites, usually of granitic or alluvial material, within coastal sage scrub, chaparral, valley and foothill grassland, and forests and woodlands; between approximately 295–5,280 feet above feet msl.
Slender-horned spineflower *Dodecahema leptoceras*	FE	SE	1B.1	Coastal sage scrub vegetation; sandy, flood deposited rivers and washes.
Palmer's grapplinghook *Harpagonella palmeri*			4.2	Chaparral, coasta scrub, valley and foothill grassland. Clay soils; open grassy areas within shrubland.

Common Name and *Scientific Name*	Status			Habitat Requirements
	Federal	State	CNPS	
California black walnut *Juglans californica* var. *californica*	--	--	4.2	Slopes, canyons, and valleys in coastal sage scrub, alluvial scrub, chaparral, and cismontane woodland; between approximately 150–2,700 feet above msl.
Davidson's bush mallow *Malacothamnus davidsonii*	--	--	1B.2	Sandy washes within coastal scrub, riparian woodland, and chaparral; between approximately 590–2,805 feet above msl.

STATUS KEY:
Federal
FE = Federally Endangered
FC = Federal Species of Concern
State
SE = State Endangered
SR = State Rare

The 2005 and 2006, presence/absence plant surveys were performed during the appropriate blooming period for all of the potentially occurring special-status plant species. All suitable habitats for supporting special-status plant species were surveyed. Suitable habitat occurs on the project site for supporting the species listed above in **Table 1**. Although the "known" range for Greata's aster is between 2,000 and 4,000 feet, Impact Sciences believes that this species has the potential to occur on the site, even though the peak elevation of the site is 1,600 feet.

The Southern California black walnut (*Juglans californica*) was observed during the 2005 and 2006 focused plant surveys. A total of three Southern California black walnut trees occur within the southwestern portion of the site, on the west bank of the Oak Springs Canyon Channel. A Southern California black walnut was also observed to the north of the Metrolink tracks, just outside of project boundary. Their locations are depicted above in **Figure 4.** No other sensitive plant species were observed during the 2005 and 2006 focused surveys.

4.1.1 Recommendation

The project applicant should consult with CDFG regarding measures that should be employed to reduce/mitigate potential impacts to Southern California black walnut trees.

4.2 Special-Status Animal Species

Special-status animal species known to occur in the vicinity of the project site, as reported in the CNDDB database, and based upon habitat suitability (i.e., topography, elevation, soils, range, etc.) are listed below in **Table 2, Special-Status Animal Species Potentially Occurring or Observed on the Oak Springs**

Project Site. A total of 14 special-status animal species have the potential to occur on the project site, of which four are federally- and state-listed Threatened/Endangered species: the unarmored threespine stickleback *(Gasterosteus aculeatus williamsoni)*, coastal California gnatcatcher, Least Bell's vireo, and the Southwestern willow flycatcher. The following nine Species of Special Concern also have the potential to occur on the site: the arroyo chub *(Gila orcutti)*, Santa Ana sucker *(Catostomus santaanae)*, silvery legless lizard (*Anniella pulchra pulchra)*, orange-throated whiptail (*Aspidoscelis hyperythra*), Western spadefoot toad (*Spea hamondii*), San Diego black-tailed jackrabbit (*Lepus californicus bennettii*), San Diego desert woodrat (*Neotoma lepida intermedia*), coast (San Diego) horned lizard (*Phrynosoma coronatum (*blainvillei), and Coastal Cactus Wren (*Campylorhynchus brunneicapillus sandiegensis)*. One fully protected bird, the white-tailed kite *(Elanus leucurus)*, was observed on the site, and has the potential to nest on the site as well.

Table 2
Special-Status Animal Species with the Potential to Occur on or Adjacent to the Oak Springs Project Site

Species	Federal	State	CNDDB	Habitat
Fishes				
Santa Ana sucker *Catostomus santaanae*	FT	SE	--	Habitat generalists but prefer cobblestone, boulder, or stone bottoms in cool, clear water with abundant vegetation.
Unarmored threespine stickleback *Gasterosteus aculeatus williamsoni*	FE	SE	--	Weedy pools, backwaters, and among emergent vegetation at the stream edge in small Southern California streams. Cool, clear water with abundant vegetation.
Arroyo chub *Gila orcutti*	--	CSC	--	Found in flowing pools, creeks, intermittent streams, and small to medium rivers with sandy or muddy bottoms.
Reptiles and Amphibians				
Southwestern pond turtle *Actinemys marmorata pallida*	--	CSC	--	Inhabitats permanent or nearly permanent bodies of water in many habitat types. Requires basking sites.
Silvery legless lizard *Anniella pulchra pulchra*	--	CSC	--	Sandy or loose loamy soils under sparse vegetation with high moisture content.
Orange-throated whiptail *Aspidoscelis hyperythra*	--	CSC	--	Washes and other sandy areas within low-elevation coastal sage scrub, with patches of rocks and brush, including the perennial plants necessary for its major food, termites.
Coast (San Diego) horned lizard *Phrynosoma coronatum (blainvillei)*	FSC	CSC	--	Friable, rocky, or shallow sandy soils within coastal sage scrub and chaparral in arid or semi-arid climate.
Western spadefoot toad *Spea (= Scaphiopus) hammondii*	--	CSC	--	Primarily grassland habitats, also valley-foothill hardwood woodlands; requires vernal pools.

Species	Federal	State	CNDDB	Habitat
Two-striped garter snake *Thamnophis hammondii*	--	CSC	--	Found in or near permanent fresh water. Often along streams with rocky beds and riparian growth.
Birds				
Coastal cactus wren *Campylorhynchus brunneicapillus sandiegensis*	--	CSC	--	Coastal sage scrub vegetation, often in association with cholla and prickly pear cactus; below 3000 feet msl. Known to occur in the Santa Clara river drainage as far as Agua Dulce.
White-tailed kite (nesting) *Elanus leucurus*	None	FP	--	Grasslands, agriculture, oak-woodland and savannah habitats, as well as riparian areas associated with open areas.
Birds (continued)				
			--	
Coastal California gnatcatcher *Polioptila californica californica*	FT	CSC	--	Coastal sage scrub below 2,500 feet in Southern California, especially scrub in arid washes, on mesas, and on slopes.
Least Bell's vireo *Vireo bellii pusillus*	FE	SE	--	Low riparian growth in vicinity of water or in dry river bottoms, usually vegetated with willow, mulefat, or mesquite.
Mammals				
San Diego black-tailed jackrabbit *Lepus californicus bennettii*	--	CSC	--	Coastal sage scrub with intermediate canopy stages of shrub habitats and open shrub, herbaceous and tree elements, and herbaceous edges.
San Diego desert woodrat *Neotoma lepida intermedia*	--	CSC	--	Moderate to dense canopies of vegetation, especially with rock outcrops and rocky cliffs and slopes.

Status Key:
Federal: FE = Federal Endangered; FT = Federal Threatened; FC= Federal Candidate; FSC = Federal Species of Concern; FP = Fully Protected
State: SE = State Endangered; ST = State Threatened; SR = State Rare; CSC = California Species of Concern; FP = Fully Protected
CNDDB: G1 = less than 6 viable element occurrences (Eos) or less than 1,000 individuals or less than 2,000 acres
G2 = 6–20 Eos or 1,000–3,000 individuals or 2,000–10,000 acres
G3 = 2–80 Eos or 3,000–10,000 individuals or 10,000–50,000 acres
G4 = Apparently secure, some threat or somewhat narrow habitat
G5 = Population or stand demonstrably secure
T = Rank applies to a subspecies or variety
1 = Other considerations used when ranking the species
2 = Uncertainty about the rank of an element

The following special-status animals were observed on the project site by Impact Sciences in 2005 and 2006: the western spadefoot toad, coast horned lizard, orange-throated whiptail, white-tailed kite, and black-tailed jackrabbit. The orange-throated whiptail was also observed by Langdon Biological Consulting during bird surveys conducted in 2005 and 2006 (see, **Appendix C**). Several woodrat nests of unknown species were observed on the site.

Below is a discussion of the results from the 2005/2006 focused surveys conducted on the site, and an explanation of the potential for a special-status species to occur on the site based on habitat suitability.

4.2.1 Fish

The arroyo chub, unarmored threespine stickleback, and Santa Ana sucker have known occurrences within the Santa Clara River (CNDDB 2005). The Oak Springs Canyon Channel is an ephemeral tributary to the Santa Clara River, and was dry during all site visits conducted by Impact Sciences in 2005 and 2006. Flows are not perennial or intermittent within the Channel, and likely to be fast flowing when water is present. According to Dave Crawford, a fish expert and president of Compliance Biology, the Oak Springs Canyon Channel lacks suitable habitat for supporting the aforementioned fish species (Crawford, 2006). Additionally, no project-related impacts are proposed to the Santa Clara River.

4.2.2 Reptiles and Amphibians

4.2.2.1 California Red-Legged Frogs

The red-legged frog often occurs in lowlands and foothills in or near permanent sources of deep water with dense, shrubby, or emergent riparian vegetation. This species requires 11 to 20 weeks of permanent water for larval development and must have access to estivation habitat (CNDDB, 2006). The characteristics of the adjacent portions of the Santa Clara River and the Oaks Springs Canyon Channel do not provide suitable habitat for supporting red-legged frogs. These water features are shallow, sparse of vegetation, and when water is present the current is too strong for breeding pools. Furthermore, surface flows are intermittent and primarily present during the rainy season. Poor over-wintering habitat is present and atypical of habitats with known red-legged frog occurrences. Following a discussion with Chris Dellith of the Ventura Fish and Wildlife Service (FWS) office, protocol surveys would not be expected to yield positive results. However, prior to construction activities, a cursory pre-construction survey is recommended. Impact Sciences conducted a formal red-legged frog habitat assessment. A memo describing the results of the site assessment and field data forms are provided in **Appendix B**.

4.2.2.2 Arroyo Toads

The arroyo toad (*Bufo californicus*) occurs in semi-arid regions near washes or intermittent streams, including valley-foothill, desert riparian, and desert wash. It is also known to occur in rivers with sandy banks, willows, cottonwoods, and sycamores; and loose, gravelly areas of streams in drier parts of its range. The characteristics of the Santa Clara River within the project boundaries are not consistent with known occupied habitats of the arroyo toad. The nearest record is 3 miles upstream from the project site.

When water is present, the current within the River is too strong for breeding pools. The majority of adjacent terrace habitat supports more rock and boulders than typically occur in occupied areas. Loose sand required for burrowing does not occur on upper terraces. Poor over-wintering habitat is present and atypical of habitats with known occurrences. This species would not occur within the Oak Spring Channel, because of adjacent atypical habitats within the Santa Clara River.

4.2.2.3 Western Spadefoot Toads

Two western spadefoot toads were observed during focused surveys conducted by Compliance Biology and Impact Sciences in 2006 (see **Figure 5, Photo of Western Spadefoot Toad Observed During 2006 Surveys**). They were observed in ephemeral vernal pools, created by tire ruts on dirt roads traversing the property. The sightings were adjacent to slopes covered with chamise on silty-sandy soils. A memo describing the results of the site assessment and field data forms are provided in **Appendix B**.

4.2.2.4 Coast Horned Lizard and Orange-Throated Whiptail

Two coast horned lizards were observed by Impact Sciences on the southwestern portion of the site, in Chamise Chaparral habitat containing friable, sandy soils. An orange-throated whiptail was also observed in a similar habitat in open, sandy patches between the chaparral canopy. A second orange-throated whiptail was observed in the southern portion of the Oak Springs Canyon Channel, where it extends through the project site. As indicated above, an orange-throated whiptail was observed by Langdon Biological Consulting in 2005 and again in 2006 (**Appendix C**).

4.2.2.5 Silvery Legless Lizards

No silvery legless lizards were observed during raking surveys conducted on the site by Impact Sciences in 2006.

4.2.2.5 Southwestern Pond Turtle and Two-striped Garter Snake

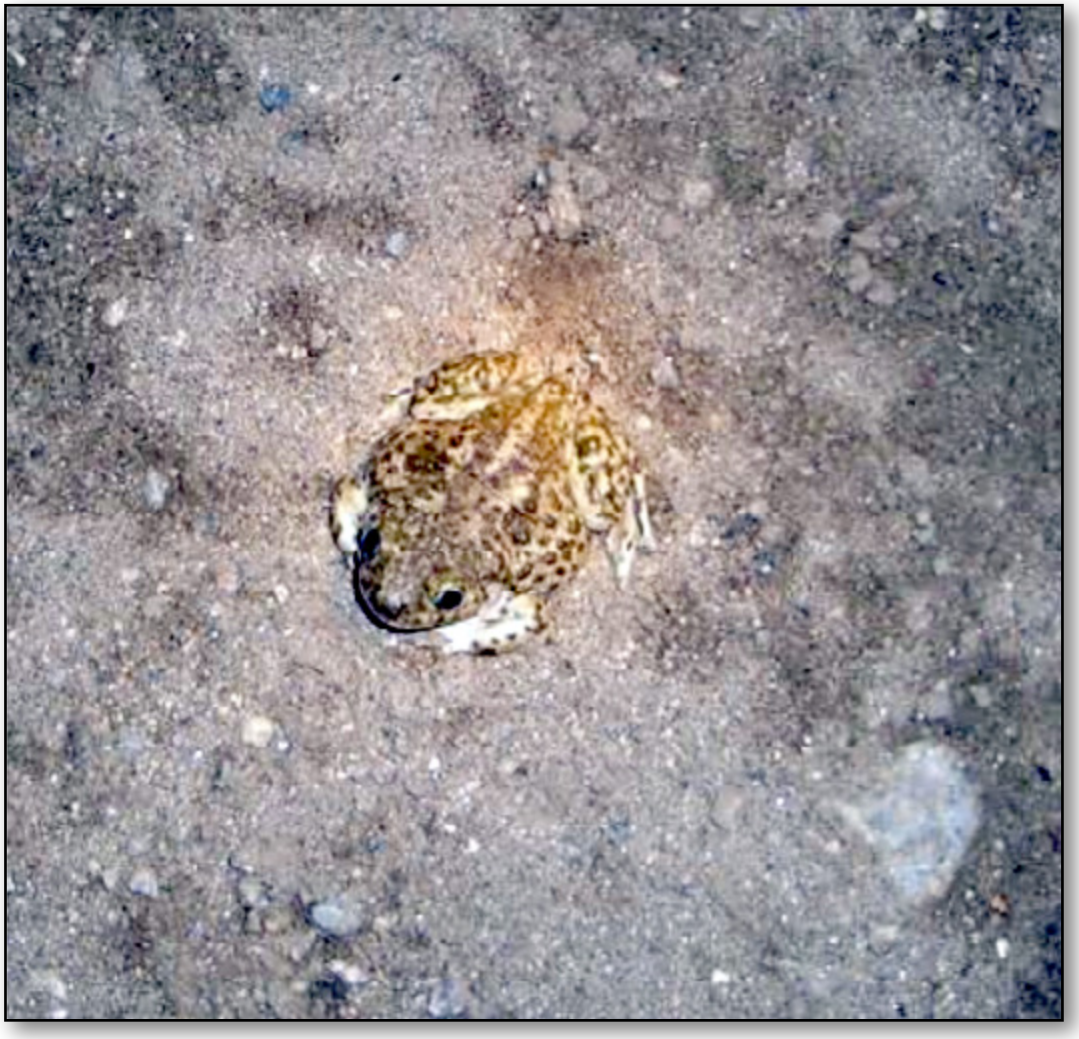
No southwestern pond turtles or two-striped garter snakes have been observed on the project site. These two species are highly aquatic and require permanent fresh water sources. Both species has the potential to occur within the Santa Clara River; however, neither would be expected to be present within the ephemeral Oak Springs Canyon Channel that extends through the project site. As previously indicated, no project-related impacts are proposed to the Santa Clara River.

4.2.3 Birds

According to the focused survey report prepared for the willow flycatcher and least bell's vireo surveys conducted in 2006 (**Appendix C**), 63 species of birds were observed on the site, of which 18 have the potential to breed on the site. One fully protected bird species, the white-tailed kite, was observed foraging on the site. No Least Bell's vireo or southwestern willow flycatchers were detected or observed. Furthermore, as stated in Langdon Biological Consultants' 2005 and 2006 California gnatcatcher survey reports, no California gnatcatchers or cactus wrens have been observed on the project site (**Appendix C**).

4.2.4 Mammals

No individual woodrats were observed; however, several woodrat nests were observed on the site, often within the crotch of a Tucker's oak tree. Suitable woodrat nesting habitat primarily exists in the Tucker's Oak Scrub located in the northwest portion of the property (**Figure 4**).



SOURCE: Impact Sciences, Inc. October 2006

FIGURE **5**

Photo of Western Spadefoot Toad Observed During 2006 Surveys

4.2.5 Recommendations

To avoid potential impacts, a qualified biologist with a CDFG Scientific Collection permit and Memorandum of Understanding should conduct a series of 30-day preconstruction surveys for the silvery legless lizard, coast horned lizard, orange-throated whiptail, western spadefoot toad, and the San Diego woodrat. The project applicant should consult with the CDFG regarding measures for reducing or avoiding impacts to these species. The project applicant may need to prepare a relocation plan, which should be approved by the CDFG. If the aforementioned species are observed prior to construction, CDFG may require that the species be relocated by a qualified biologist to an approved site with suitable habitat present. Proposed mitigation measures and a mitigation monitoring plan may need to be prepared and approved by the CDFG, and should be addressed in the California Environmental Quality Act (CEQA) document prepared for the project site. Survey and relocation methods should be approved by the CDFG prior to commencement of grading.

Breeding birds and their active nests are protected under the Fish and Game Code of California and the federal Migratory Bird Treaty Act; therefore, impacts on bird nests from grading and/or construction-related activities shall be avoided.

Where an active bird nest is located by a qualified biologist, CDFG guidelines indicate that a 300-foot buffer (or 500-foot buffer for raptors and special-status bird species) should be established around it until the qualified biologist deems the nest inactive and there is no evidence of a second attempt to use the nest. The buffer area shall be delineated with orange construction fencing, and a qualified biologist shall verify the installation. Most birds breed between the months of February and September; therefore, if construction occurs outside of this time frame, there is a lower probability that breeding birds would be impacted by construction-related activities. A qualified biologist should conduct a pre-construction nesting bird survey no more than three days prior to the commencement of ground-disturbing activities on the site.

4.3 Oak Resources

A total of five oak trees are proposed to be removed. Four are coast live oak trees, one of which is considered a Heritage Tree, and one is a Tucker's oak. A total of 26 oak trees may be encroached during grading or construction-related activities. The project applicant should consult with the City Forester regarding project-related measures that should be employed to reduce/mitigate potential impacts to protected trees, based on the findings discussed in the 2006 Oak Tree Survey Report.

4.4 Jurisdictional Waters

According to the Jurisdictional Report prepared by Impact Sciences in 2006 (**Appendix D**), a total of 0.63 acres of the Oak Springs Canyon Channel occurring within the project boundary is within U.S. Army Corps of Engineers (ACOE) jurisdiction, and 5.29 acres of the Santa Clara River lie within the project boundary, and are also within ACOE jurisdiction. In addition, a total of 0.01 acre of wetland located immediately adjacent to the Santa Clara River occurs within the project boundary, which is within ACOE jurisdiction.

On-site CDFG jurisdiction includes 3.82 acres of the Oak Springs Canyon Channel and 14.97 acres of the Santa Clara River, totaling 18.79 acres. The delineated jurisdictional areas located on the project site are presented below in **Figure 6, Jurisdictional Waters of the Oak Springs Property**.

4.4.1 Recommendation

The project applicant should consult with the ACOE and CDFG to determine whether a permit is required prior to construction-related activities.

0 250 500 Feet

Source: GIS and GPS by ISI, 2006
Aerial by Airphoto USA, 2003.
Project Number 818.001

This delineation map was prepared by Impact Sciences, Inc. using regulatory agency's approved methodologies. This map is being submitted to those agencies for concurrence. Until this concurrence is received, this map should be considered a draft and should not be relied on for purposes such as engineering or impact analysis.

Santa Clara River
- ACOE "Wetlands" Waters of The United States (0.01 Acres)
- ACOE Waters of The United States (4.22 Acres)
- CDFG Strembeds (14.97 Acres)

Oak Springs Canyon
- ACOE Waters of The United States (0.63 Acres)
- CDFG Strembeds (3.82 Acres)

- Culvert
- Boundary

Total:
ACOE "Wetland" Waters of The United States (0.01 Acres)
ACOE Waters of The United States (4.85 Acres)
CDFG Streambeds (18.79 Acres)

Figure 6 – Jurisdictional Waters of the Oak Springs Property

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APPENDIX A

Plant Species and Common Animals Observed on the Oak Springs Project Site

Plant Species Observed on the Oak Springs Project Site

Scientific Name	Common Name	Native (Yes/No)
Vascular Plants nomenclature follows "The Jepson Manual" and http://ucjeps.berkeley.edu/interchange.html)		
GYMNOSPERMS		
CUPRESSACEAE	**CYPRESS FAMILY**	
Juniperus californica	California juniper	Yes
EPHEDRACEAE	**EPHEDRA FAMILY**	
Ephedra viridis	Green ephedra	Yes
ANGIOSPERMS		
DICOTYLEDONS		
ANACARDIACEAE	**CASHEW FAMILY**	
Rhus ovata	Sugarbush	Yes
Schinus molle	Peruvian pepper tree	No
Rhus trilobata	Skunkbush	Yes
ASTERACEAE	**SUNFLOWER FAMILY**	
Ambrosia acanthicarpa	Annual bur-sage	Yes
Artemisia californica	California sagebrush	Yes
Artemisia douglasiana	Mugwort	Yes
Artemisia tridentata	Big sagebrush	Yes
Baccharis salicifolia	Mulefat	Yes
Centaurea melitensis	Tocalote	Yes
Conyza canadensis	Horseweed	Yes
Encelia actoni	Acton Encelia	Yes
Ericameria linearifolia	Interior goldenbush	Yes
Eriophyllum confertiflorum	Golden yarrow	Yes
Eriophyllum lanosum	Wooly sunflower	Yes
Lactuca serriola	Prickly lettuce	No
Lepidospartum squamatum	Scale-broom	Yes
Machaeranthera carnosa	Shrubby alkali aster	Yes
Sonchus asper	Prickly sow thistle	No
Stephanomeria virgata	Wand chicory	No
Tetradymia axillaris	Cotton-thorn	Yes
BORAGINACEAE	**BORAGE FAMILY**	
Amsinckia menziesii ssp. *intermedia*	Rancher's fireweed	Yes
Amsinckia tessellata ssp. *gloriosa*	Devil's lettuce	Yes
Cryptantha sp.	Cryptantha	Yes
BRASSICACEAE	**MUSTARD FAMILY**	
Brassica tournefortii	African mustard	No
Brassica nigra	Black mustard	No
Descurainia sophia	Tansy mustard	No
Raphanus sativus	Wild radish	No
Rorripa nasturtium-aquaticum	Water cress	Yes
CACTACEAE	**CACTUS FAMILY**	
Opuntia basilaris spp. *basilaris*	Beavertail cactus	Yes
Opuntia littoralis	Coastal Prickly Pear	Yes
Opuntia parryi	Cholla	Yes

Scientific Name	Common Name	Native (Yes/No)
CAPRIFOLIACEAE	**HONEYSUCKLE FAMILY**	
Sambucus mexicana	Blue elderberry	Yes
CHENOPODIACEAE	**GOOSEFOOT FAMILY**	
Atriplex polycarpa	Saltbush	Yes
Chenopodium californicum	Pigweed	Yes
Salsola tragus	Russian thistle	No
EUPHORBIACEAE	**SPURGE FAMILY**	
Chamaesyce albomarginata	Rattlesnake weed	Yes
Croton setigerus	Turkey mullein	Yes
Euphorbia crenulata	Chinese caps	Yes
Ricinus communis	Castor bean	No
FABACEAE	**LEGUME FAMILY**	
Lotus scoparius	Common deerweed	Yes
Melilotus alba	White sweet clover	No
Melilotus indica	Sour-clover	No
FAGACEAE	**OAK FAMILY**	
Quercus agrifolia	Coast live oak	Yes
Quercus john-tuckeri	Tucker's oak	Yes
GERANIACEAE	**GERANIUM FAMILY**	
Erodium cicutarium	Red-stemmed filaree	No
GROSSULARIACEAE	**GOOSEBERRY FAMILY**	
Ribes speciosum	Fuschia-flowered gooseberry	Yes
HYDROPHYLLACEAE	**WATERLEAF FAMILY**	
Eriodictyon crassifolium	Yerba santa	Yes
Phacelia distans	Common phacelia	Yes
JUGLANDACEAE	**WALNUT FAMILY**	
Juglans californica ssp. *californica*	Southern California black walnut	Yes
LAMIACEAE	**MINT FAMILY**	
Marrubium vulgare	Horehound	No
Salvia apiana	White sage	Yes
Salvia mellifera	Black sage	Yes
Trichostema lanatum	Woolly bluecurls	Yes
MALVACEAE	**MALLOW FAMILY**	
Malacothamnus fasciculatus	Chaparral mallow	Yes
Malva parviflora	Cheeseweed	No
POLYGONACEAE	**BUCKWHEAT FAMILY**	
Eriogonum angulosum	Angle-stemmed buckwheat	Yes
Eriogonum fasciculatum var. *flavoviride*	California buckwheat	Yes
Eriogonum fasciculatum var. *polifolium*	California buckwheat	Yes
RHAMNACEAE	**BUCKTHORN FAMILY**	
Ceanothus crassifolius	Hoaryleaf ceanothus	Yes
Ceanothus cuneatus	Buckbrush	Yes
ROSACEAE	**ROSE FAMILY**	
Adenostoma fasciculatum	Chamise	Yes
Heteromeles arbutifolia	Toyon	Yes
Prunus ilicifolia ssp. *ilicifolia*	Holly-leaved cherry	Yes
SALICACEAE	**WILLOW FAMILY**	
Populus fremontii ssp. *fremontii*	Fremont cottonwood	Yes
Salix lasiolepis	Arroyo willow	Yes

Scientific Name	Common Name	Native (Yes/No)
SCROPHULARIACEAE	**FIGWORT FAMILY**	
Castilleja exserta	Purple owl's clover	Yes
SOLANACEAE	**NIGHTSHADE FAMILY**	
Datura wrightii	Jimson weed	Yes
Nicotiana glauca	Tree tobacco	No
URTICACEAE	**NETTLE FAMILY**	
Urtica dioica	Stinging nettle	No
ANGIOSPERMS		
MONOCOTYLEDONS		
CYPERACEAE	**SEDGE FAMILY**	
Schoenoplectus sp.	Bulrush sp.	Yes
LILIACEAE	**LILY FAMILY**	
Calochortus splendens	Splendid mariposa lily	Yes
Yucca whipplei	Chaparral yucca	Yes
POACEAE	**GRASS FAMILY**	
Achnatherum speciosum	Desert needlegrass	Yes
Avena fatua	Wild oats	No
Bromus diandrus	Ripgut brome	No
B. hordeaceus	Soft chess	No
B. madritensis ssp. *rubens*	Red brome	No
B. tectorum	Cheat grass	No
Poa annua	Annual bluegrass	No
P. secunda ssp. *secunda*	One-sided bluegrass	Yes
Polypogon monspeliensis	Rabbitfoot grass	No
Vulpia myuros	Foxtail fescue	No
TYPHACEAE	**CATTAIL FAMILY**	
Typha latifolia	Broadleaf cattail	Yes

Common Animal Species Observed on the Oak Springs Project Site

Scientific Name	Common Name
Aphelocoma californica	Western scrub jay
Callipepla californica	California (valley) quail
Corvus corax	raven
Euphagus cyanocephalus	Brewers blackbird
Melanerpes formicivorus	acorn woodpecker
Mimus polyglottos	Northern mockingbird
Phainopepla nitens	phainopepla
Spermophilus beecheyi	Beechey ground squirrel
Sylvilagus auduboni	desert cottontail
Urocyon cinereoargentus	gray fox
Zenaida macroura	mourning dove

APPENDIX B

Amphibian Survey Data Forms and Memos of Results

Amphibian Habitat Site Assessment Data Sheet

Target Species: Arroyo Toad (*Bufo californica*)

Date of Site Assessment: 3/30/06

Site Assessment Biologists: Brody / Ainsworth / Jackson (Impact Sciences)

Site Location: LA County, City of Santa Clarita, upstream of Sand Canyon Rd, along Santa Clara R.
Lat: 34.425352 Long: -118.414315
(County, General location name, UTM Coordinates or Lat./Long. or T-R-S).

Project Name: Oak Springs at Santa Clarita

Brief description of proposed action:

Construction of an access road to proposed development**.**

Present Conditions:

Weather (on day of site assessment): 75 deg F, partly cloudy, light wind. Two days after heavy rains.

Current Land Use: Nearby low density residential, Large gage or well tower in creek, 20 foot train levy at edge of floodplain.

1) Is this site within the current or historic range of target species? Yes

2) Are there known records of the target species within the vicinity of the site? General vicinity. Nearest record approximately 3 miles upstream.

USFWS designated "Critical Habitat" exists approximately 2.5 miles upstream and approx 8 miles downstream.

GENERAL AQUATIC HABITAT CHARACTERIZATION
(if multiple ponds or streams are within the proposed action area, fill out one data sheet for each)

POND: Not Applicable

Size: Maximum depth:

Vegetation: emergent, overhanging, dominant species:

Substrate:

Perennial, Intermittent, or Ephemeral? If intermittent, date it goes dry:

Amphibian Habitat Site Assessment Data Sheet

Target Species: Arroyo Toad (*Bufo californica*)

STREAM:

Bank full width: 20-30 feet
Depth at bank full: approx 3 feet
Stream gradient: Low to moderate, 1-3 %

Are there pools? Not within primary channel. Numerous small ephemeral ponds located adjacent to the active channel.

Size of stream pools: Ranging from 5-20 sq. ft
Maximum depth of stream pools: 1 foot, but most were less than 6 inches.

Characterize non-pool habitat: run, riffle, glide, other:

Riffle-Run sequence.

Vegetation: emergent, overhanging, dominant species:

Area scoured annually; currently scattered low-growing mulefat. Channel supports patches of watercress, *Veronica* sp., and tule/cattail. Sparse willow, cottonwood, and coast live oak stands along outer banks.

Substrate:

Primary channel consists of sand and gravel (some large cobble and boulders). Peripheral pools silty/muddy.

Bank description:

A heterogeneous mixture of boulders and large cobble, interspersed with sandy, silty, and/or gravelly sections.

Perennial, Intermittent, or Ephemeral ? If intermittent, date it goes dry:

Main channel is seasonal and fast flowing when water is present. Outside of rainy season, flows go underground and channel is dry in project vicinity.

Other aquatic habitat characteristics, species observations, drawings, or comments:

Some off channel ephemeral pooling likely suitable for western toad (*Bufo boreas*) and Pacific chorus frog (*Hyla regilla*).

Upland habitat beyond outer banks supported scattered seasonal rainpools. Spadefoot and western toad presence confirmed during night survey (April 3, 2006).

Further Remarks/Comments:

The characteristics of the river within the project boundaries are not consistent with known occupied habitats. Current is too strong for breeding pools when water present, and surface flows only present during rainy season. The majority of adjacent terrace habitat supports more rock and boulders than typically occur in occupied areas. Little loose sand for burrowing in upper terraces. Over-wintering habitat also very patchy and atypical of occupied areas.

Following discussion with Chris Dellith of Ventura FWS office, protocol surveys would not be expected to yeild positive results. However, prior to construction activities, a cursory pre-construction survey is recommended.

Attachments:

1. Field notes and other supporting documents
2. Site photographs
3. Maps with important habitat types, important features, and species location/s

Appendix D.
California Red-legged Frog Habitat Site Assessment Data Sheet

Site Assessment reviewed by _____ _____ _____
(FWS Field Office) (date) (biologist)

Date of Site Assessment: 03/30/2006
(mm/dd/yyyy)

Site Assessment Biologists: BRODY R.C. AINSWORTH, GREG
(Last name) (first name) (Last name) (first name)

JACKSON, MEIGHAN
(Last name) (first name) (Last name) (first name)

Site Location: UPSTREAM OF SANDCYN, ALONG SANTA CLARA RIVER
L.A. COUNTY, CITY OF SANTA CLARITA, CAT: 34.425352, LONG: -118.414315
(County, General location name, UTM Coordinates or Lat./Long. or T-R-S).

****ATTACH A MAP** (include habitat types, important features, and species locations)**

Proposed project name: OAK SPRINGS at SANTA CLARITA
Brief description of proposed action:

CONSTRUCTION OF AN ACCESS ROAD TO PROPOSED DEVELOPMENT.

1) Is this site within the current or historic range of the CRF (circle one)? (YES) NO

2) Are there known records of CRF within 1.6 km (1 mi) of the site (circle one)? YES (NO)
If yes, attach a list of all known CRF records with a map showing all locations.

GENERAL AQUATIC HABITAT CHARACTERIZATION

(if multiple ponds or streams are within the proposed action area, fill out one data sheet for each)

POND: NOT APPLICABLE -
Size: Maximum depth:

Vegetation: emergent, overhanging, dominant species: _____
_____

Substrate: _____
_____

Perennial or Ephemeral *(circle one)*. If ephemeral, date it goes dry: _____

Appendix D.

California Red-legged Frog Habitat Site Assessment Data Sheet

STREAM:

Bank full width: 20-30 feet

Depth at bank full: Approx 3 feet

Stream gradient: low-moderate 1-3%

Are there pools (circle one)? (YES) NO not within primary channel. Numerous, small, ephemeral pools located adjacent to active channel

If yes,

Size of stream pools: From 5-20 sq. feet

Maximum depth of stream pools: 1 foot, most less than 6"

Characterize non-pool habitat: run, riffle, glide, other: Riffle-Run sequence

Vegetation: emergent, overhanging, dominant species: Area scared annually, Currently scattered low-growing mulefat. Channel supports patches of watercress, veronica sp., & some tule/cattail. Sparse willow/cottonwood

Substrate: coast live oak buffer.

Primary channel: sand/gravel (large boulders), Peripheral pools: silty/muddy

Bank description:

A heterogenous mixture of boulders and large cobble, interspersed with sandy/silty and/or gravelly sections

Perennial or Ephemeral *(circle one)*. If ephemeral, date it goes dry: Intermittent, locals report dry by summer.

Other aquatic habitat characteristics, species observations, drawings, or comments:

- Main channel is seasonal and fast flowing when water is present. Outside of rainy season, flows go underground and channel is dry in Project vicinity.
- Some off channel ephemeral pooling likely suitable for western toad (Bufo boreas) and Pacific chorus frog (Hyla regilla)
- upland habitat beyond outer banks supports scattered seasonal pools. Spadefoot and western toad presence confirmed during night survey (April 3, 2006)

Necessary Attachments:

1. All field notes and other supporting documents
2. Site photographs
3. Maps with important habitat features and species location

Western Spadefoot Toad Survey Form

Project: Oak Springs at Santa Clarita

Location: Map Attached **Date**: 4/3/2006

Air Temperature (°C): approx 15 **Observer(s):** Brody, D. Crawford, M. Jackson

Water Temperature (°C): approx 7 **Visit #:** 1

Wind Speed (mph): none **Start Time**: 8:30 pm

Cloud Cover (%): 80 **End Time**: 10:00 pm

Survey Method: Following light rains that day, we walked many of the dirt roads on both sides of the RR tracks (within the project boundary) with flashlights looking for eye-shine, and searching pools for egg masses and tadpoles.

Western Spadefoot Toad Observations

Obs. #	Time	#	Size Class	Comments
1	9:00 pm	1	A	In the middle of the road near along west side of railroad tracks.
3	9:30 pm	1	A	In the middle of the road on dirt trail east of grassy field on east side of railroad tracks.

Size Class: A=Adult, J=Juvenile, T=Tadpole, E=Egg Mass

Other Amphibian Observations

Obs. #	Species	Time	#	Size Class	Comments
2	Western Toad	9:15 pm	2	A	In tire rut pool along west side of railroad tracks.

Size Class: A=Adult, J=Juvenile, T=Tadpole, E=Egg Mass

Potential Threats to Western Spadefoot Toad: Main breeding habitat is in pools on dirt roads. Any vehicle traffic and/or development along these roads and the surrounding habitat could have a negative effect on the local population.

Photo Log Site:_____ Toads:_____

Western Spadefoot Toad Survey Form (continued)

See attached map and photos

Habitat Description: The uplands are a disturbed alluvial fan-sage scrub community, with few grassland openings in the coastal sage scrub, and some oak woodland. Riparian vegetation is sparse along the Santa Clara River and non-existent along Oak Springs Creek. Past recreational vehicle use has left the area crisscrossed with many dirt roads with associated ruts that are acting as suitable spadefoot breeding sites.

Habitat: Natural 1 2 (3) 4 5 Altered	**Type:** Lake River Woodland Meadow/ Wetl. ~~Ditch~~ Pond Stream Grassland Spring	**Drainage:** Permanent ~~Seasonal~~
Watershed: ~~Natural~~ Grazed Logged Urban Agriculture Other	**Substrate:** (Silt) Sand (<2mm) Pebble (2-75 mm) Cobble (75-300mm) Boulder (>300mm) Bedrock	
Site Length: 20 m	**Aver. Width:** 3 m	**Aver. Depth:** 0.2 m
Max Depth: 0.3 m/ft	**Water Flow:** (0) <1 fps 1-5 fps 5-10 fps >10 fps	
Water Turbidity: Clear 1 2 3 (4) 5 Turbid	**Mid-day Shade:** **n/a** %	**Emergent Vegetation:** none %
Floating Vegetation: **none** %		
Distance to Mapped Trail: 0 m/ft	**Distance to Public dirt road:** 400 m	**Distance to Public Paved Road:** 800 m
Fishing Tackle: Yes ~~No~~	**Fish Present:** Yes ~~No~~	**Species and Approx. Number:** See above table
Predominant Vegetation: Sage scrub		

Comments:

Since western spadefoot has been identified on the project site, the measures provided below should be implemented:

(A) Under the direct supervision of the qualified biologist, western spadefoot toad habitat shall be created within suitable natural sites within the Oak Springs property boundary area, outside of the proposed development envelope. The amount of occupied breeding habitat to be impacted by the Oak Springs project shall be replaced at a ratio to be determined by CDFG. The actual relocation site design and location shall be approved by CDFG and consist of a shallow excavated pond(s) utilizing an artificial rubber pond liner as a base. The location shall be as far away as possible from any of the homes and roads to be built. The relocation pond(s) shall be designed such that it only supports standing water for several weeks following seasonal rains in order that aquatic predators (i.e., fish, bullfrogs, crayfish, etc.) cannot become established. The size and number of ponds shall be determined by CDFG. Terrestrial habitat surrounding the proposed relocation site shall be as similar in type, aspect,

and density to the location of the existing ponds as possible. No site preparation or construction activities shall be permitted in the vicinity of the currently occupied ponds until the design and construction of the pool habitat in preserved areas of the site has been completed and the relocation of all western spadefoot toad adult, tadpoles, and egg masses detected are moved to the created pool habitat to the satisfaction of the monitoring biologist and CDFG.

(B) Based on appropriate rainfall and temperatures, generally between the months of February and April, the biologist shall conduct a series of surveys in all appropriate habitats within the development envelope prior to the initiation of construction activities. Surveys will include evaluation of all previously documented occupied areas and a reconnaissance level survey of the remaining natural areas of the site. All western spadefoot adults, tadpoles, and egg masses encountered shall be collected and released in identified relocation pond(s) described above.

(C) The qualified biologist shall monitor the relocation site for a minimum period of five years, or as otherwise directed by CDFG. Specific monitoring requirements and success criteria shall be approved by CDFG. It is expected that minimum requirements will include annual monitoring during and immediately following peak breeding season such that surveys can be conducted for adults as well as for egg masses, larval and post larval toads. Further, survey data will be provided to CDFG by the monitoring biologist following each monitoring period and a written report summarizing the monitoring results will be provided to CDFG at the end of the monitoring effort. Success criteria for the monitoring program shall include verifiable evidence of toad reproduction at the relocation site.

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Tel. 805.437.1900 • Fax 805.437.1901

M E M O R A N D U M

TO: Steve Berwick **JOB NAME:** Oak Springs

FROM: R.C. Brody/Dave Crawford **DATE:** April 20, 2006

SUBJECT: Red-legged frog site assessment **JOB NO.:** 818.01

C O M M E N T S

On March 30, 2006 a site assessment was conducted at the Oak Springs project site to assess the potential for red-legged frog (*Rana aurora draytonii*) to occur at or near this location (see attached data sheet).

The characteristics of the river within the project boundaries are not consistent with known occupied habitats. Current is too strong for breeding pools when water is present, and surface flows are only present during the rainy season. The majority of riparian vegetation is too sparse, and what few pools are available are too shallow than what typically occur in occupied areas. The available over-wintering habitat is also very patchy and atypical of occupied areas.

Following a discussion with Chris Dellith of Ventura FWS office, protocol surveys would not be expected to yield positive results. However, prior to construction activities, a cursory pre-construction survey is recommended.

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Camarillo, California 93012
Tel. 805.437.1900 • Fax 805.437.1901

M E M O R A N D U M

TO: Steve Berwick **JOB NAME:** Oak Springs

FROM: R.C. Brody/Dave Crawford **DATE:** April 20, 2006

SUBJECT: Western Spadefoot Toad Night Survey **JOB NO.:** 818.01

C O M M E N T S

Survey Details are as Follows:

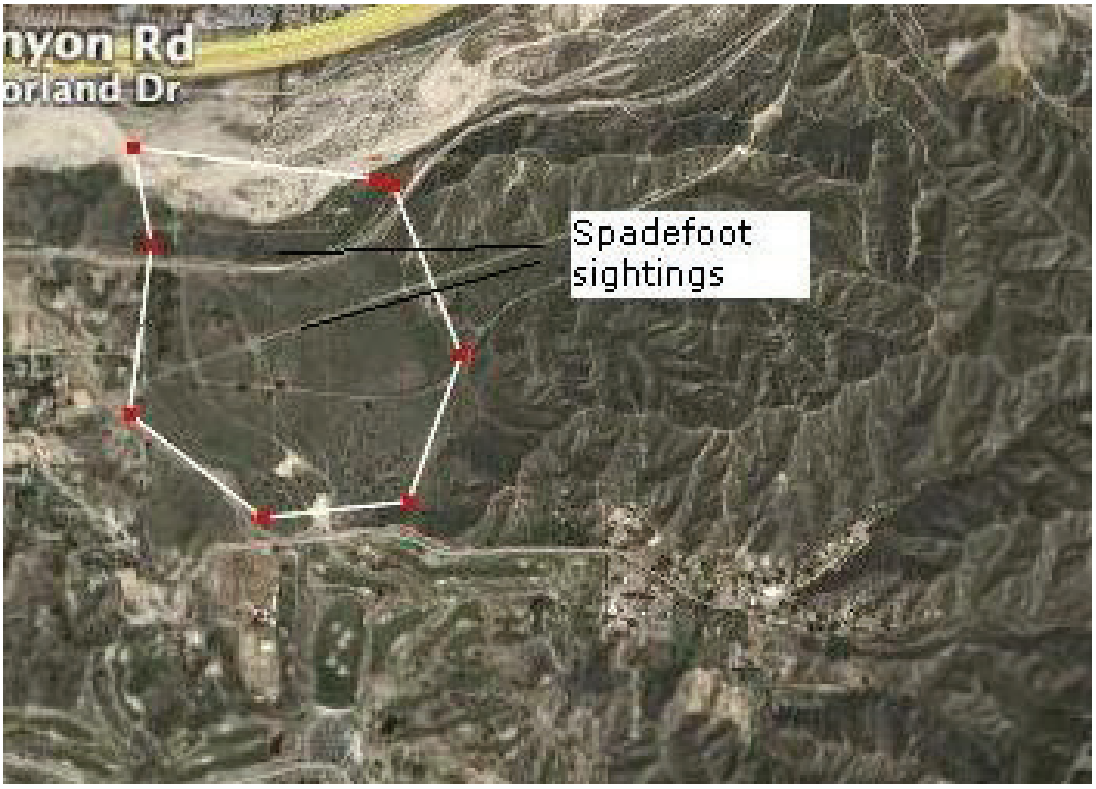
Survey Date: April 3, 2006
Survey Time: Approximately 8:30 – 10:00 pm
Weather: Approximately 60 degrees F, partly cloudy, no wind, following light rains that same day.

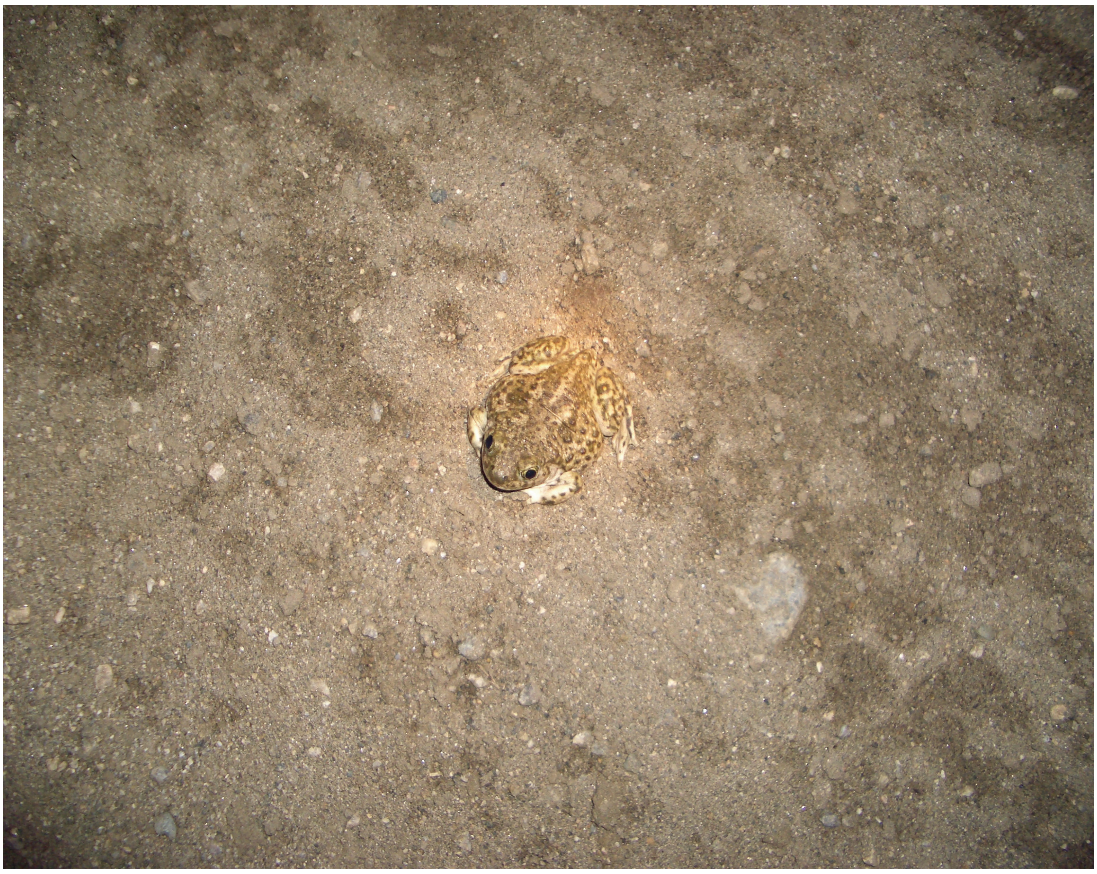
Surveyors: R.C. Brody, Dave Crawford, and Meighan Jackson

At the above described date and time a nighttime presence/absence survey for western spadefoot toad (*Spea hammondii*) was conducted.

Surveyors walked the dirt roads on both sides of the railroad tracks within the property boundaries. With the use of flashlights to promote eyeshine, two western spadefoot toads were positively identified (survey locations and photos provided below).

Various pools were inspected with no signs of tadpoles and/or spadefoot egg masses. Water in all pools was generally murky. Water depth in these standing, ephemeral pools was estimated to be approximately 4-8 inches deep and water temperature was estimated to be approximately 45-50 degrees F.


nyon Rd
orland Dr
Spadefoot
sightings



APPENDIX C

2006 Protocol Survey Results for Least Bell's Vireo and Southwestern Willow Flycatcher, and 2005 and 2006 Survey Results for California Gnatcatcher

ECOLOGICAL SCIENCES, inc.

September 5, 2006

Mr. Steve Berwick
Impact Sciences, Inc.
803 Camarillo Springs Road, Ste. A
Camarillo, CA 93012

Subject: ***Results of Protocol Surveys for the Least Bell's Vireo and Southwestern Willow Flycatcher, Oak Springs Project Site, City of Santa Clarita, Los Angeles County, California***

Dear Steve:

This report summarizes the methodology and findings of focused protocol surveys conducted to evaluate presence/absence of the least Bell's vireo (*Vireo bellii pusillus*) (LBVI) and Southwestern willow flycatcher (*Empidonax traillii extimus*) (SWFL) on a ±2-acre site. All findings and conclusions provided herein are based on a report prepared by Jim Greaves (2006), and all information provided herein is excerpt from that report. All surveys were conducted by Jim Greaves for Ecological Sciences, Inc. under the authority of state and federal permits issued to the surveyor.

Summary

There were no LBVI or SWFL detected during 9 surveys of the site in spring and summer 2006. There were 63 bird species identified (plus 2 others detected but unconfirmed to species) of which at least 18 bred on site in 2006; 30 species were detected on 5 or more survey dates. At least 13 other vertebrate species were detected on site. The proposed project will not likely impact any LBVI or SWFL.

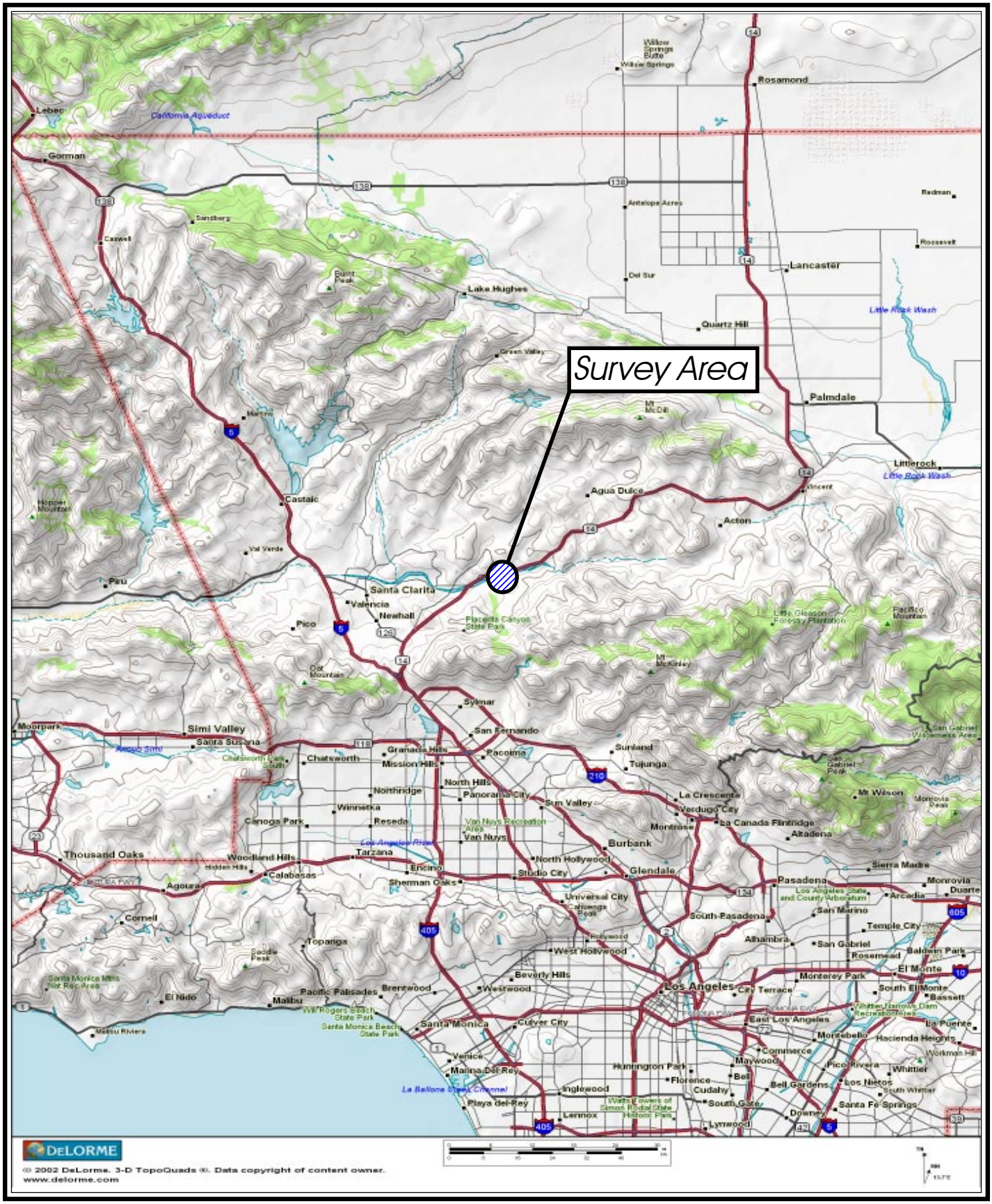
Introduction

LBVI and SWFL are each a subspecies of 2 more widely distributed species of neotropical migratory birds that come north to southern California to breed during the spring and summer (for SWFL, in several other Southwestern states as well). Their breeding habitats are generally similar, being associated with riparian vegetation found near standing or running water. However, the flycatcher requires water and more shade near its nest sites, while the vireo may nest from near water to shrubs in upland dry areas up to several hundred feet from water. Thus, while it may be fairly safe to stay close to watercourses while surveying for SWFL, it is important to survey riparian upland areas not typically considered riparian, in order to specifically determine presence or absence of LBVI.

In order to comply with State and Federal regulations regarding these two State and Federal endangered species, projects must not disturb the birds and must maintain construction buffers of 500 feet from active nests, or until the birds vacate an area. Thus, it is important to ascertain whether or not the species are present within at least 500 feet of a proposed or active construction zone. To do this, Protocols were developed to help project managers determine presence or absence of select species when USFWS or CDFG determine that they might be present, or have data to show actual or potential presence at a proposed construction site.

Survey Location

The project site is located in the City of Santa Clarita, approximately 30 miles northwest of downtown Los Angeles, in the County of Los Angeles. The project site is part of the Sand Canyon area of Santa Clarita.



ECOLOGICAL SCIENCES PC

September 2006

plate 1

Regional Site Location

Oak Springs Site

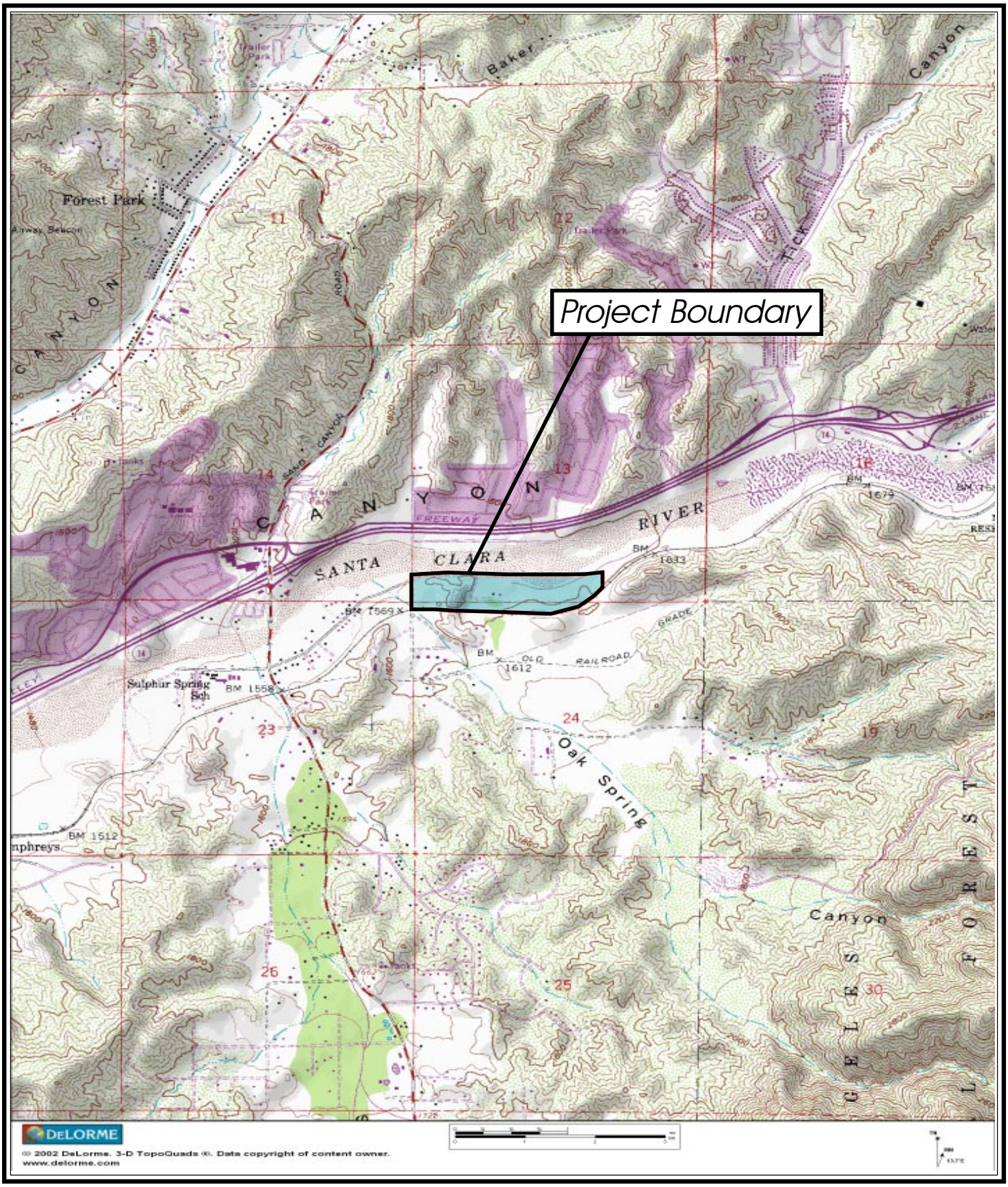


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plate 2

Site Vicinity

Oak Springs Site

The project site is bounded to the north by the Antelope Valley Freeway (14) and Santa Clara River; to the west by Sand Canyon Road; to the south by the Robinson Ranch Golf Courses; and to the east by undeveloped rolling hills. Specifically, the project site is at, and for a quarter mile east, of the intersection of Lost Canyon and Oak Spring Canyon roads, along the south edge of the Santa Clara River. ***Plates 1*** and ***2*** illustrate regional and site vicinity locations.

General Site Characteristics

Riparian willow-cottonwood and riparian scrub dominate the River's edge with riparian upland inter-grading into remnant oak woodland, alluvial fan scrub and chaparral vegetation that covers the remaining nearby parts of the project site.

Methods and Materials

Surveys are to be conducted in the morning hours as per the Protocols (near dawn to noon). Surveys are made by following roadways, paths, and criss-crossing the Santa Clara River bottom and upland areas where necessary, in this instance from near the intersection of Lost Springs Road and Oak Springs Road upstream about 1,200 linear feet (to near where the railroad comes back to near the river's edge) and from the railroad corridor to the middle of the river bottom. Recorded calls of the 2 species were played back during approximate 10-minute intervals, 5-20 seconds at a time, or as necessary to try to get any silent birds that might be present to respond. This is an effective method used to obtain data on presence, especially late in the morning; and, it is critical to confirming absence of a species, since the lack of a response is the best indicator and most reliable method for determining that a species is not present.

Survey protocols differ for the two species. For LBVI, at least 8 surveys are required between 10 April and 31 July; there must be a minimum of 10 days between survey dates, resulting in at least a 69-day period needed to complete the surveys. For SWFL, surveys are to be conducted in 3 survey periods during 15 May through 17 July, although the bird may be present earlier or later than these dates. In addition, for SWFL, the Protocol requires at least one survey per each of 3 survey periods (15-31 May; 01-21 June; and 22 June to 17 July), and for project-related surveys such as this one, 3 to 5 surveys must be made in the third period, or until the bird is detected, whichever is greater; at least 5 days must separate surveys.

Detections and information on breeding status of all species were recorded on data sheets for later analysis and report purposes.

Table 1. Survey dates, field times, weather conditions during 9 surveys of south side of Santa Clara River at Lost Canyon Road extension proposal across river from Oak Springs Road, Los Angeles County, California.

Date	Field Times	Weather Conditions		
		Temp	Wind	Cloud %
5-07	0950-1250	22-28C	2-4mph	0-0
5-18	0900-1245	23-31	1-5	0-0
5-31	0915-1200	22-35	0-3	0-0
6-09	0930-1230	22-28	1-5	90-0
6-21	0750-1010	25-ND	1-3	0-0
7-01	0930-1145	37-42	0-3	0-0
7-08	0915-1130	26-38	0-3	0-0
7-13	0930-1130	ND-37	1-2	0-0
7-23	0930-1200	90-90F	0-5	5-85

Results

There were no detections made of either LBVI or SWFL. Protocol-level surveys were made from 07 May through 23 July 2006 in approximately 15 acres each of riparian and riparian upland habitats, 8 surveys made for LBVI, and 5 surveys made for SWFL. The LBVI surveys were on 07, 18 and 31 May, 09 and 21 June, 01, 13 and 23 July, and the SWFL surveys were on 31 May (first survey period), 09 June (second survey period), and 01, 08 and 13 July (third survey period). A total of 24 field hours on 9 dates during a span of about 11 weeks was devoted to the surveys (Table 1). Weather was mostly moderate to hot, conditions typical for the area in summer. There were 63 bird species identified, and 13-plus non-avian vertebrate species detected (***Table 2***). Habitats in the survey area were a combination of desert and coastal sage scrub and trees (e.g., yerba santa, sagebrush, sages, live oaks), riparian shrubs and trees (e.g., Fremont cottonwood, willows, mulefat) and introduced forbs (e.g., mustard and grasses). All these are typical of sites where LBVI are known to breed, and riparian-specific and riparian oak woods are typical of where SWFL breed.

Conclusion

The riparian vegetation on site is marginal at best for both species, but typical for what LBVI could use, if it were present in 2006. Surface water did not persist long enough into the summer to make the area attractive to SWFL, which both requires more water than LBVI near nest sites, and nests later in the season when water may be less common, even in sites where vireos might breed earlier in the season. While many birds and other wildlife will be impacted by the proposed project, it is unlikely the project will impact any SWFL or LBVI.

ϕ

I hereby certify that the statements furnished above and in the attached exhibits present the data and information required for this biological survey, and that the facts, statements, and information presented herein are true and correct to the best of my knowledge and belief.

Ecological Sciences, Inc.

Scott D. Cameron
Principal Biologist

References

Greaves, Jim. 2006. Results of Protocol Surveys for Least Bell's Vireos and Southwestern Willow Flycatchers Lost Canyon Road Extension Project Site Along South Side of Santa Clara River, Los Angeles County, California, Conducted From 07 May to 23 July 2006

Table 2. Birds (64 species) and other vertebrates (12+ species) detected on 9 survey dates along south side of Santa Clara River at east end of Lost Canyon Road, Los Angeles County, California in 2006. Numbers of surveys on which each bird species was detected are in parentheses; breeding status follows each name (bold indicates confirmed nesting on site); other vertebrate species (13+) are residents and thus likely breeders on site.

Birds:

Acorn woodpecker (9) - resident; nests, young
American crow (5) - resident; breed in region
American goldfinch (1) - visitor; breed in region
American kestrel (7) - resident; young on site
Anna's hummingbird (7) - resident; probably breed
Ash-throated flycatcher (8) - visitor; may breed
Band-tailed pigeon (1) - resident; breed in region
Bewick's wren (9) - resident; young on site
Black phoebe (5) - resident; nest found on site
Black-chinned hummingbird (6) - visitor; 2 nests
Black-headed grosbeak (7) - visitor; probably breed
Black-throated gray warbler (1) – transient
Blue grosbeak (5) - visitor; probably breed
Brewer's blackbird (2) - resident; breed in region
Bullock's oriole (9) - visitor; carried nest material, young seen
Bushtit (9) - resident; nests and young on site
California quail (9) - resident; young on site
California thrasher (8) - resident; food carried, young
California towhee (7) - resident; probably breed on site
Cassin's vireo (1) - transient; may breed in region
Chipping sparrow (1) - transient; breed in region
Cliff swallow (3) - visitor; breed in region
Common raven (7) - resident; young, breed nearby
Common yellowthroat (1) - visitor; breed in region
English sparrow (2) - resident; breed everywhere
European starling (7) - resident; nests on site
Great egret (3) - resident/visitor; may breed in region
Great-horned owl (not seen) - resident; pellets found
House finch (9) - resident; nest with young found
Killdeer (6) - visitor; breeding behavior confirmed
Lawrence's goldfinch (6) - visitor; breed in region
Lazuli bunting (1) - visitor; breed in region
Lesser goldfinch (6) - visitor/resident; nest found
Loggerhead shrike (2) - visitor; breed in region
MacGillivray's warbler (1) – transient
Mallard (2) - resident/visitor; breed in region
Mourning dove (8) -resident; breed nearby
Nashville warbler (1) – transient
Northern mockingbird (5) - resident; breed nearby
Northern rough-winged swallow (2) - visitor; breed in region
Nuttall's woodpecker (6) - resident; probably breed on site
Oak titmouse (6) - resident; young on site
Orange-crowned warbler (1) - visitor; breed in region
Phainopepla (5) - visitor; breed in region
Red-shouldered hawk (1) - resident; breed in region

Table 2-continued

Red-tailed hawk (6) - resident; young nearby
Red-winged blackbird (3) - resident; breed in region
Rock pigeon (2) - resident; breed everywhere
Spotted towhee (8) - resident; young on site
Swainson's thrush (1) - visitor; breed in region
Tree swallow (1) - visitor; breed in region
Turkey vulture (2) - resident/visitor; flying over
Warbling vireo (1) - transient; breed in region
Western kingbird (9) -visitor; young on site
Western meadowlark (2) - resident; heard off site
Western scrub jay (9) - resident; young on site
White-breasted nuthatch (2) - visitor; breed in region
White-throated swift (1) - resident; breed in region
Wilson's warbler (2) - transient; may breed in region
Wrentit (7) - resident; young on site
Yellow warbler (2) - visitor; breed in region
Yellow-breasted chat (1) - visitor; breed in region
Yellow-rumped warbler (2) - winter visitor, transient
Hummingbird (2; Costa's) - visitor; may breed
Empidonax sp. (1) - transient; may breed in region

Other vertebrates:

Fishes – unidentified
Tree frog
Western toad
Coast horned lizard
California whiptail lizard
Western fence lizard
Side-blotched lizard
Common kingsnake
Coachwhip
Coyote
California ground squirrel
Woodrat
Lepus sp.

CALIFORNIA GNATCATCHER SURVEY FOR
ROBINSON RANCH RESIDENTIAL PROJECT – 2005
(PRT-TE839078-2)

INTRODUCTION

The project site is located in the eastern portion of the City of Santa Clarita in northern Los Angeles County southeast of the intersection of State Route 14 and Sand Canyon Avenue (Figure 1). The project site is comprised primarily of the alluvial outwash fan of Oak Spring in Oak Spring Canyon (Figure 2), but also includes small hillocks and is bordered on the southwest by steep canyon slopes. The northern-most portion of the project site occupies the south bank of the Santa Clara River and is separated from the remainder of the project site by an active rail line. The site ranges in elevation from approximately 1600 feet (488 m) on the northwest corner to approximately 1800 feet (549 m) above mean sea level in the southeast corner of the Robinson Ranch golf course.

The proposed project includes conversion of undeveloped chaparral and scrub to residential development and the northerly expansion of the Robinson Ranch golf course which currently adjoins the project site (Figure 3).

The project site falls wholly within the Final Critical Habitat Unit 13, Western Los Angeles County, established for the coastal California gnatcatcher (*Polioptila californica californica*) by the U.S. Fish and Wildlife Service, and thus, focused surveys were required. The work was conducted by biologist Spencer Langdon under Endangered Species Permit (PRT-TE839078-2). Results of those surveys are presented here.

EXISTING CONDITIONS

Site Description

In addition to the physical description of the project site given above, the project site shows evidence of human disturbance by the use of off-road vehicles. Dilapidated structures occur on the east edge of the project site, in association with motocross jumps, and show evidence of being used for firearm targeting and paintball warfare. Finally, earlier project surveys (EIR's) indicate that parts of the project site had previously been used for agriculture.

Vegetation

Three major natural vegetation communities are present on the project site; chaparral, alluvial fan scrub, and coast live oak woodland. Individual California walnut (*Juglans californica*) trees were found in association with coast live oak woodland and in moist areas of alluvial fan scrub. Non-native ruderal vegetation (consisting largely of agricultural species [oats, barley], mustards, Russian thistle, and other herbaceous types) occupies nearly 40% of the project site.

Coastal California Gnatcatcher

The coastal California gnatcatcher, a small gray songbird, is a resident of scrub dominated plant communities from southern Ventura County southward through Los Angeles, Orange, Riverside, San Bernardino, and San Diego Counties, California into Baja California, Mexico, to approximately 30 degrees North latitude near El Rosario (Atwood 1980, 1990).

The coastal California gnatcatcher is strongly associated with sage scrub in its various successional stages. Characteristic plants of this community include California sagebrush

(*Artemisia californica*), various species of sage (*Salvia* sp.), California buckwheat (Eriogonum fasciculatum), lemonadeberry (*Rhus integrifolia*), California encelia (*Encelia californica*), and *Opuntia* spp. Ninety-nine percent of all gnatcatcher locality records occur at or below an elevation of 984 feet (Atwood 1990).

The coastal California gnatcatcher was listed by the USFWS as threatened in March of 1993. It occurs from approximately El Rosario in Baja California, Mexico to Palos Verdes, Los Angeles County, with a small, disjunct population in the Moorpark area of Ventura County. It is a resident and occurs almost exclusively in the coastal sage scrub plant community.

Although observed declines in numbers and distribution of the gnatcatcher has resulted from numerous factors, habitat destruction, fragmentation and adverse modification are the principal reasons for the gnatcatcher's current threatened status (USFWS 1993). The amount of coastal sage scrub available to gnatcatchers has continued to decrease during the period after the listing of the species. It is estimated that up to 90 percent of coastal sage scrub vegetation has been lost as a result of development and land conversion (Barbour and Major 1977), and coastal sage scrub is considered to be one of the most depleted habitat types in the United States (Kirkpatrick and Hutchinson 1977; Axelrod 1978; Klopatek et al. 1979, Westman 1987; O'Leary 1990).

The fragmentation of habitat may artificially increase populations in adjacent preserved habitat; however, these population surpluses may be lost in subsequent years due to crowding and lack of resources (Scott 1993).

A consequence of urbanization that is contributing to the loss, degradation, and fragmentation of coastal sage scrub is an increase in wildfires due to anthropogenic ignitions. High fire frequencies and the lag period associated with recovery of the vegetation may significantly reduce the viability of affected subpopulations of the gnatcatcher (USFWS 1991)

METHODS

To determine the status of the California gnatcatcher and the cactus wren at the proposed site focused presence/absence surveys were conducted. All potentially suitable gnatcatcher habitat in the project vicinity was surveyed three times. Surveys were conducted on: February 28, May 31, and July 10, 2003.

The methodology used in the surveys followed the guidelines of Mock *et al*. (1990), the Southern California Coastal Sage Scrub Scientific Review Panel (Brussard *et al*. 1992) and the USFWS monitoring protocol (USFWS 1997), as follows;

- Surveys were conducted during the morning hours and when the temperature exceeded 55°F.
- No more than 100 acres were surveyed by each biologist per day, and no surveys were conducted during windy (>15 miles per hour), rainy, or extremely hot (>95°F) conditions.
- Taped vocalizations of gnatcatchers were used to elicit a response from resident birds, if they were present.
- All located birds were observed long enough to determine their breeding status (whether paired or unpaired).
- Located birds were observed long enough to determine if they were banded.
- All data were recorded on standardized data sheets and male/pair locations were plotted on 200-scale topographic maps of the project site.

Results

No California gnatcatchers were detected during the focused surveys. Non-target species detected during the surveys are included as Appendix A.

California gnatcatcher survey results – 2005

Date	Site conditions	CAGN detected
2 May	Partly cloudy, 61 to 76 degrees F, wind light and variable to 4 mph	none
17 May	Clear, 64 to 77 degrees F, southerly winds to 5 mph	none
24 May	Partly cloudy, 60 to 85 degrees F, southerly winds to 5 mph	none
7 June	Clear, 66 to 80 degrees F, southerly winds to .5 mph	none
16 June	Clear, 63 to 76 degrees, southerly wind to 5 mph.	none
29 June	partly cloudy, 75 to 92 degrees F, southerly wind to 5 mph.	none

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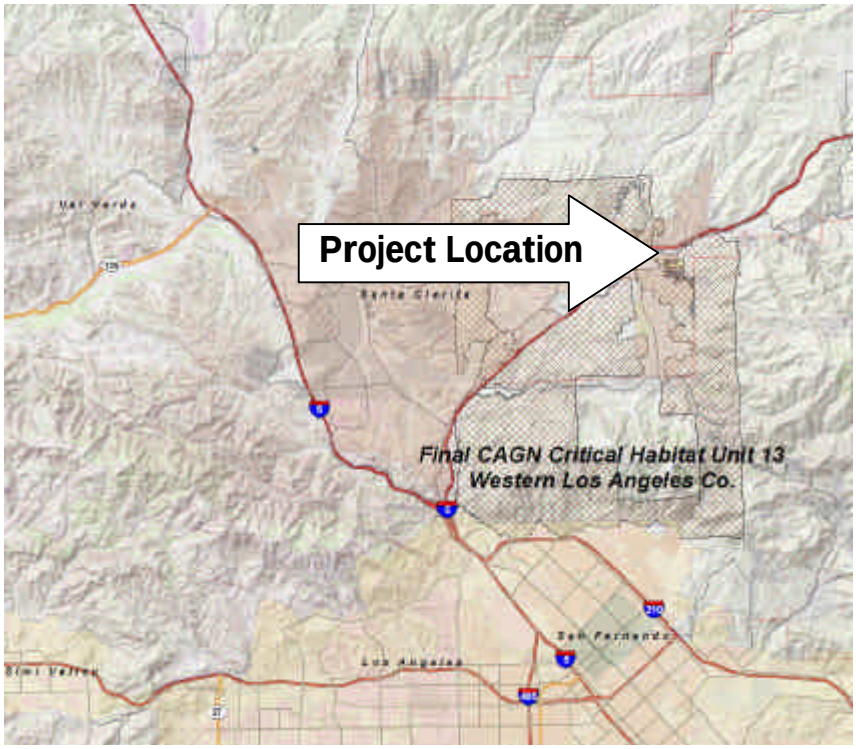

Figure 1. Regional Setting: Robinson Ranch Residential Project, Santa Clarita, CA

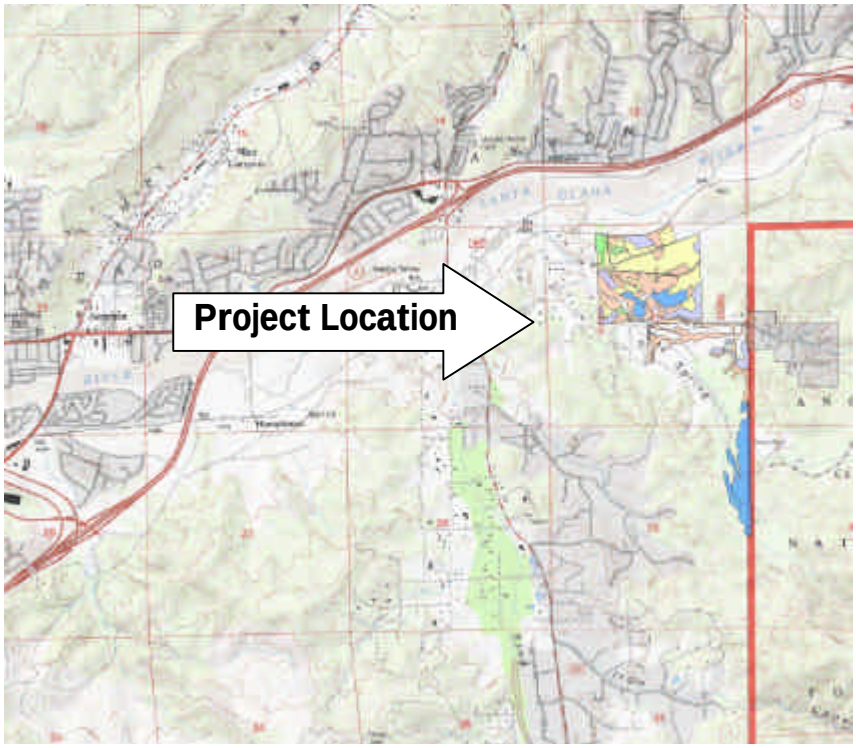

Figure 2. Project Location: Robinson Ranch Residential Project, Santa Clarita, CA

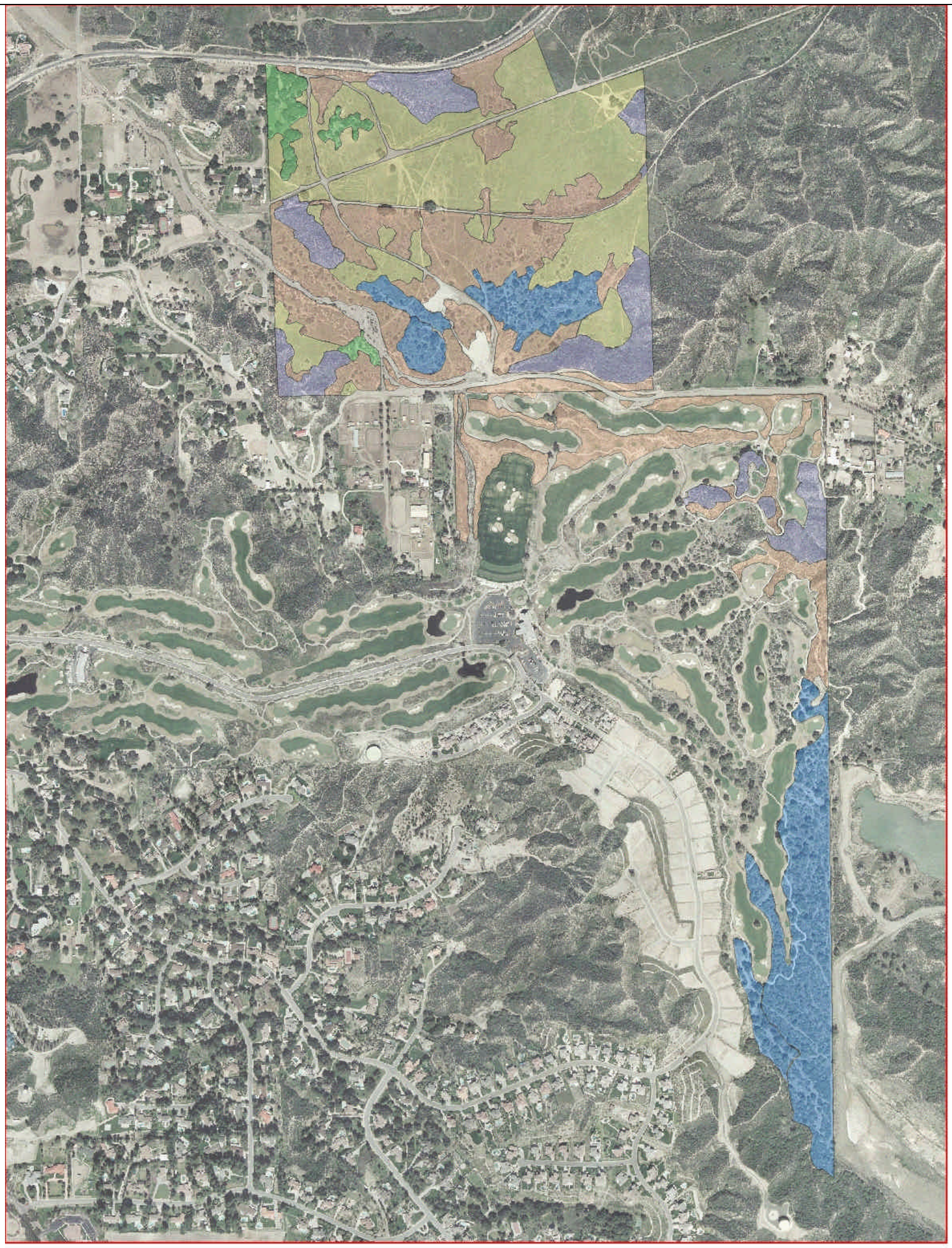

Figure 3. Robinson Ranch Residential Project: Vegetation Communities – No California gnatcatchers detected in potential habitat communities.

Appendix A: Table of wildlife species detected during California gnatcatcher surveys.

FAMILY/SPECIES NAME	**COMMON NAME**
AMPHIBIA	**AMPHIBIANS**
HYLIDAE	**TREEFROGS**
Hyla regilla	Pacific treefrog
REPTILIA	**REPTILES**
IGUANIDAE	**IGUANIDS**
Sceloporus occidentalis	western fence lizard
Uta stansburiana	side-blotched lizard
Phrynosoma coronatum blainvillei	San Diego horned lizard
TEIIDAE	**WHIPTAILS**
Cnemidophorus tigris multiscutatus	coastal western whiptail
Cnemidophorus hyperthrus beldingi	orange-throated whiptail
CATHARTIDAE	**AMERICAN VULTURES**
Cathartes aura	Turkey Vulture
ACCIPITRIDAE	**KITES, HAWKS, EAGLES & VULTURES**
Circus cyaneus	Northern Harrier
Buteo jamaicensis	Red-tailed Hawk
Buteo lineatus	Red-shouldered Hawk
FALCONIDAE	**FALCONS**
Falco sparverius	American Kestrel
PHASIANIDAE	**PHEASANTS, PARTRIDGES & QUAIL**
Callipepla californica	California Quail
COLUMBIDAE	**PIGEONS & DOVES**
Zenaida macroura	Mourning dove
CUCULIDAE	**CUCKOOS & ROADRUNNERS**
Geococcyx californianus	Greater Roadrunner
APODIDAE	**SWIFTS**
Aeronautes saxatalis	White-throated Swift
TROCHILIDAE	**HUMMINGBIRDS**
Calypte anna	Anna's Hummingbird
PICIDAE	**WOODPECKERS**
Melanerpes formicivorus	Acorn Woodpecker
Colaptes auratus	Northern Flicker
TYRANNIDAE	**TYRANT FLYCATCHERS**
Tyrannus verticalis	Western Kingbird
Myiarchus cinerascens	Ash-throated Flycatcher
Sayornis nigricans	Black Phoebe
Sayornis saya	Say's phoebe
PTILOGONATIDAE	**SILKY FLYCATCHES**
Phainopepla nitens	Phainopepla
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Hirundo rustica	Barn Swallow
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Corvus brachyrhynchos	American Crow
Corvus corax	Common Raven
Aphelocoma coerulescens	Western Scrub Jay
PARIDAE	**TITMICE**
Parus inornatus	Oak Titmouse
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Psaltriparus minimus	Common Bushtit
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Troglodytes aedon	House Wren
Thryomanes bewickii	Bewick's Wren
MUSCICAPIDAE	**THRUSHES, OLD WORLD WARBLERS, ETC.**
MIMIDAE	**MOCKINGBIRDS & THRASHERS**
Mimus polyglottos	Northern Mockingbird
Toxostoma redivivum	California Thrasher
PTILOGONATIDAE	**SILKY-FLYCATCHERS**
Phainopepla nitens	Phainopepla
STURNIDAE	**STARLINGS**
Sturnus vulgaris	European Starling
FAMILY: EMBERIZIDAE	**WOOD WARBLERS, SPARROWS, NEW WORLD FINCHES & BLACKBIRDS, ETC.**
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Melospiza melodia	Song Sparrow
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PROCYONIDAE	**RACOONS & COATIS**
Procyon lotor	racoon
Mustelidae	**Weasels, Skunks, Otters**
Mustela frenata	Long-tailed Weasel
Mephitis mephitis	Striped Skunk
CANIDAE	**DOGS, WOLVES, FOXES**
Canis familiaris	dog
Canis latrans	coyote
SCIURIDAE	**SQUIRRELS**
Citellus beecheyi	California ground squirrel
GEOMYIDAE	**POCKET GOPHERS**
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Neotoma lepida	desert woodrat
LEPORIDAE	**HARES, RABBITS**
Sylvilagus auduboni	desert cottontail
CERVIDAE	**DEER**
Odocoileus hemionus	mule deer

2006
CALIFORNIA GNATCATCHER
SURVEY REPORT

ROBINSON RANCH RESIDENTIAL PROJECT

SANTA CLARITA

prepared for:

Robinson Ranch Residential, LP
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Contact: Bruce Rothman

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Long Beach, CA 90804-2732

Contact: Spencer Langdon

15 July 2006

CALIFORNIA GNATCATCHER SURVEY FOR
ROBINSON RANCH RESIDENTIAL PROJECT – 2006
(PRT-TE839078-2)

INTRODUCTION

The project site is located in the eastern portion of the City of Santa Clarita in northern Los Angeles County southeast of the intersection of State Route 14 and Sand Canyon Avenue (Figure 1). The project site is comprised primarily of the alluvial outwash fan of Oak Spring in Oak Spring Canyon (Figure 2), but also includes small hillocks and is bordered on the southwest by steep canyon slopes. The northern-most portion of the project site occupies the south bank of the Santa Clara River and is separated from the remainder of the project site by an active rail line. The site ranges in elevation from approximately 1600 feet (488 m) on the northwest corner to approximately 1800 feet (549 m) above mean sea level in the southeast corner of the Robinson Ranch golf course.

The proposed project includes conversion of undeveloped chaparral and scrub to residential development and the northerly expansion of the Robinson Ranch golf course which currently adjoins the project site (Figure 3).

The project site falls wholly within the Final Critical Habitat Unit 13, Western Los Angeles County, established for the coastal California gnatcatcher (*Polioptila californica californica*) by the U.S. Fish and Wildlife Service, and thus, focused surveys were required. The work was conducted by biologist Spencer Langdon under Endangered Species Permit (PRT-TE839078-2). Results of those surveys are presented here.

Coastal California Gnatcatcher

The coastal California gnatcatcher, a small gray songbird, is a resident of scrub dominated plant communities from southern Ventura County southward through Los Angeles, Orange, Riverside, San Bernardino, and San Diego Counties, California into Baja California, Mexico, to approximately 30 degrees North latitude near El Rosario (Atwood 1980, 1990).

The coastal California gnatcatcher is strongly associated with sage scrub in its various successional stages. Characteristic plants of this community include California sagebrush (*Artemisia californica*), various species of sage (*Salvia* sp.), California buckwheat (Eriogonum fasciculatum), lemonadeberry (*Rhus integrifolia*), California encelia (*Encelia californica*), and *Opuntia* spp. Ninety-nine percent of all gnatcatcher locality records occur at or below an elevation of 984 feet (Atwood 1990).

The coastal California gnatcatcher was listed by the USFWS as threatened in March of 1993. It occurs from approximately El Rosario in Baja California, Mexico to Palos Verdes, Los Angeles County, with a small, disjunct population in the Moorpark area of Ventura County. It is a resident and occurs almost exclusively in the coastal sage scrub plant community.

Although observed declines in numbers and distribution of the gnatcatcher has resulted from numerous factors, habitat destruction, fragmentation and adverse modification are the principal reasons for the gnatcatcher's current threatened status (USFWS 1993). The amount of coastal sage scrub available to gnatcatchers has continued to decrease during the period after the listing of the species. It is estimated that up to 90 percent of coastal sage scrub vegetation has been lost as a result of development and land conversion (Barbour and Major 1977), and coastal sage scrub

is considered to be one of the most depleted habitat types in the United States (Kirkpatrick and Hutchinson 1977; Axelrod 1978; Klopatek et al. 1979, Westman 1987; O'Leary 1990).

The fragmentation of habitat may artificially increase populations in adjacent preserved habitat; however, these population surpluses may be lost in subsequent years due to crowding and lack of resources (Scott 1993).

A consequence of urbanization that is contributing to the loss, degradation, and fragmentation of coastal sage scrub is an increase in wildfires due to anthropogenic ignitions. High fire frequencies and the lag period associated with recovery of the vegetation may significantly reduce the viability of affected subpopulations of the gnatcatcher (USFWS 1991)

METHODS

To determine the status of the California gnatcatcher and the cactus wren at the proposed site focused presence/absence surveys were conducted. All potentially suitable gnatcatcher habitat in the project vicinity was surveyed three times.

The methodology used in the surveys followed the guidelines of Mock *et al*. (1990), the Southern California Coastal Sage Scrub Scientific Review Panel (Brussard *et al*. 1992) and the USFWS monitoring protocol (USFWS 1997), as follows;

- Surveys were conducted during the morning hours and when the temperature exceeded 55°F.
- No more than 100 acres were surveyed per biologist, per day, and no surveys were conducted during windy (>15 miles per hour), rainy, or extremely hot (>95°F) conditions.
- Taped vocalizations of gnatcatchers were used to elicit a response from resident birds, if they were present.
- All located birds were observed long enough to determine their breeding status (whether paired or unpaired).
- Located birds were observed long enough to determine if they were banded.
- All data were recorded on standardized data sheets and male/pair locations were plotted on 200-scale topographic maps of the project site.

Focused surveys were conducted on: 21, 28 April; 5, 14, 21 May; and 4 June 2006.

RESULTS

No California gnatcatchers were detected during the focused surveys.

California gnatcatcher survey results – 2006

Date	Site conditions	CAGN detected
21 April	Partly cloudy, 57 to 64 degrees F, wind light and variable to 7 mph	none
28 April	Mostly cloudy, 55 to 65 degrees F, wind light and variable to 5 mph	none
5 May	Partly cloudy, 55 to 65 degrees F, wind light and variable to 7 mph	none
14 May	Clear, 55 to 84 degrees F, wind light and variable to 5 mph	none
21 May	Clear, 57 to 70 degrees, wind light and variable to 5 mph	none
4 June	Partly cloudy, 65 to 95 degrees F, wind light and variable to 5 mph	none

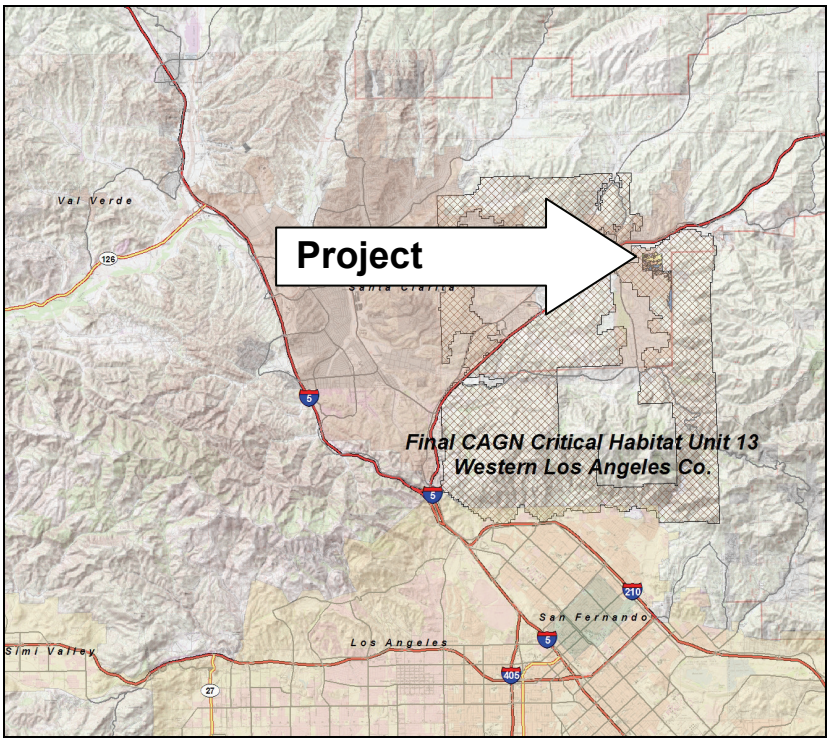
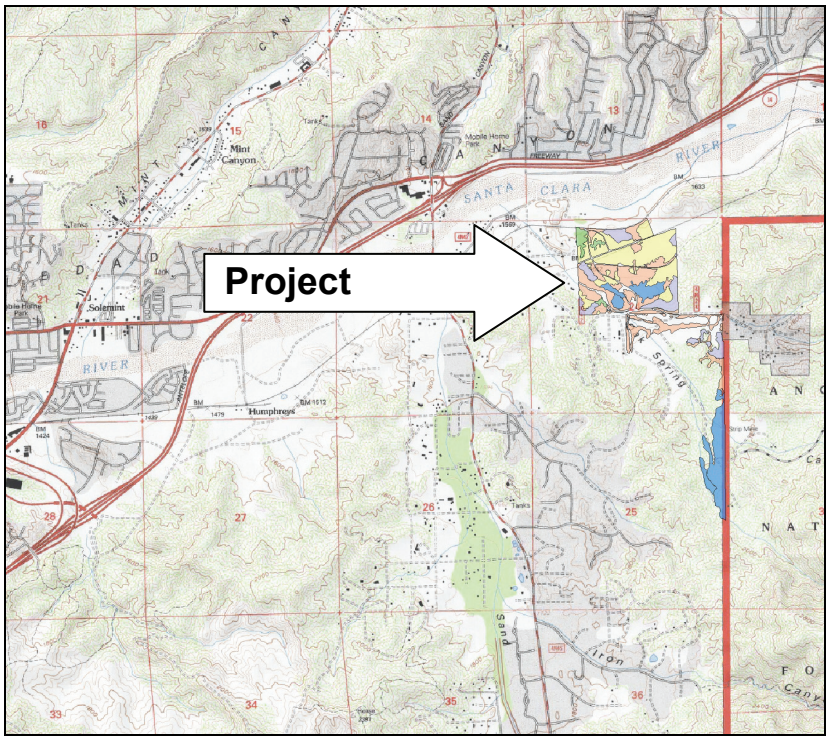


Figure 1. Regional Setting: Robinson Ranch Residential Project, Santa Clarita, CA



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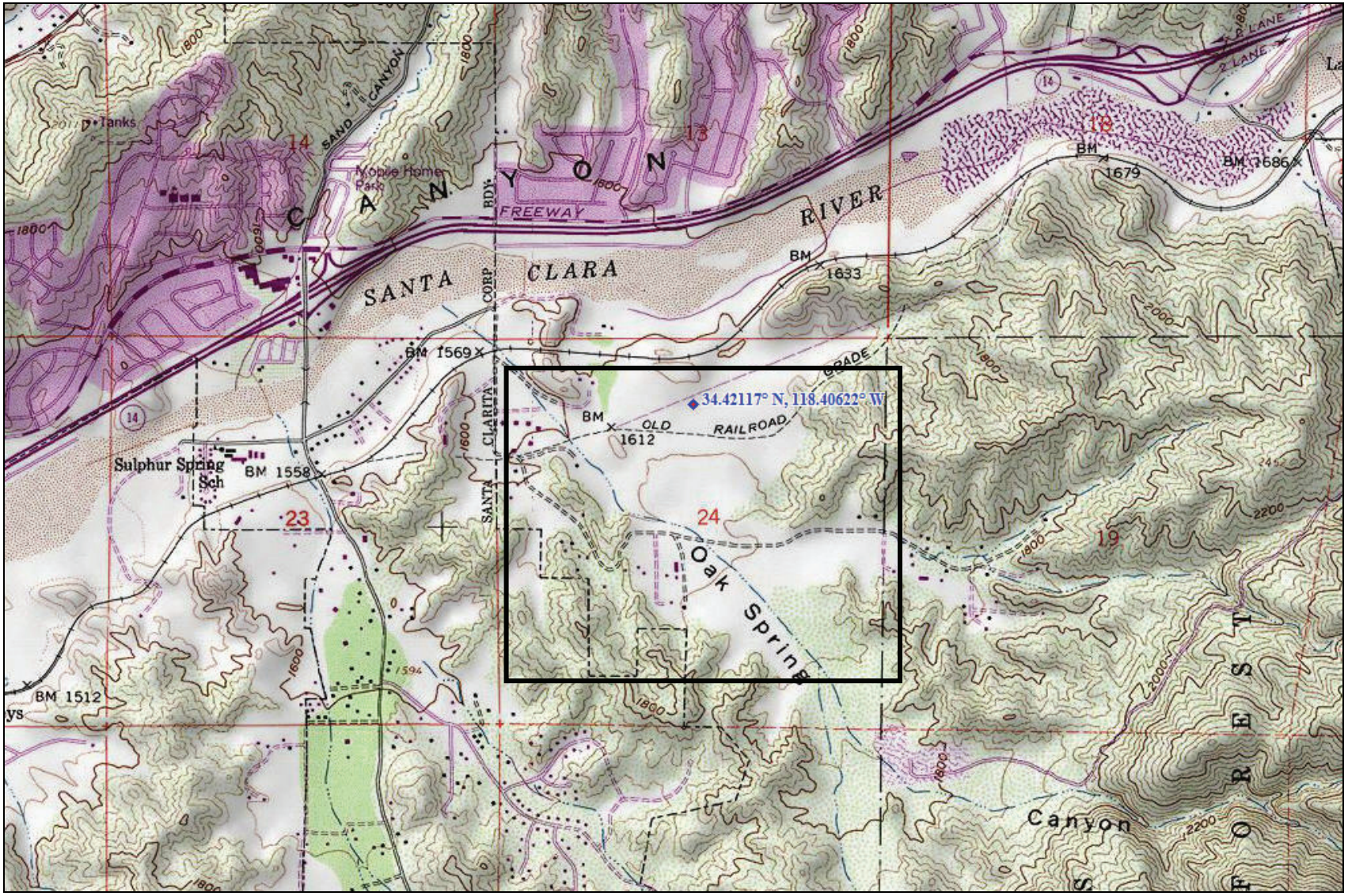

Figure 3. Vicinity Map: Robinson Ranch Residential Project, Geographic location shown in decimal degrees, NAD83:

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Appendix A: Table of wildlife species detected during California gnatcatcher surveys.

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LEPORIDAE	**HARES, RABBITS**
Sylvilagus auduboni	desert cottontail
CERVIDAE	**DEER**
Odocoileus hemionus	mule deer

APPENDIX D

Jurisdictional Delineation Report

Jurisdictional Delineation:
Waters of the United States and Streambeds

Oak Springs Project
Tentative Tract 063022
City of Santa Clarita, Los Angeles County, California

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July 2006

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Waters of the United States and Streambeds

Oak Springs Project – Tentative Tract 063022
City of Santa Clarita, Los Angeles County, California

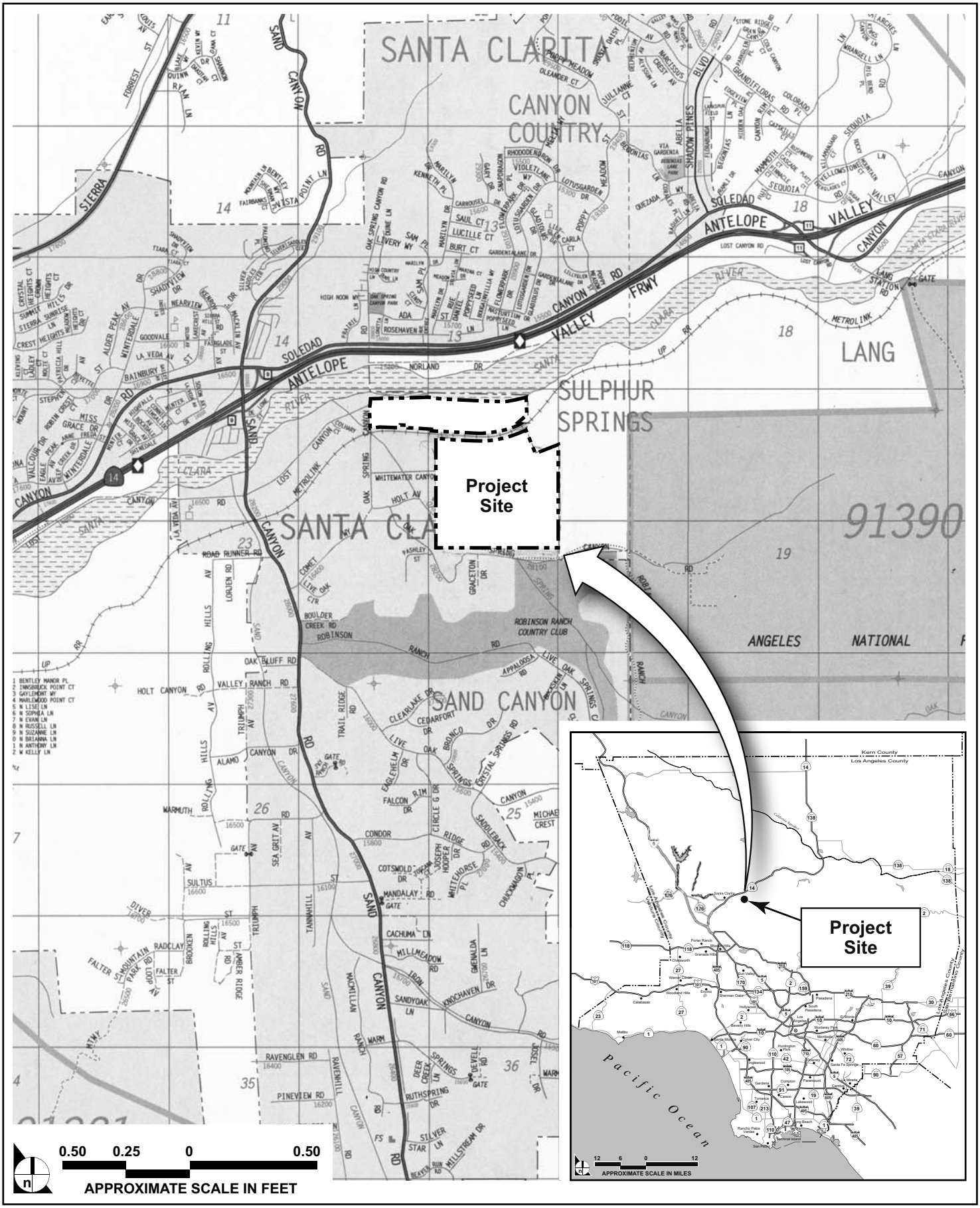
INTRODUCTION

*This jurisdictional delineation report documents the findings of field investigations by Impact Sciences, Inc., while delineating the extent of "waters of the United States," under federal jurisdiction and "streambeds" under California Department of Fish and Game's (CDFG) jurisdiction on Oak Springs Canyon, contained within the project site boundaries. The streams are adjacent to properties being considered for development in Santa Clarita, California (**Figure 1, Regional Location**). The site contains approximately 1,945 linear feet of Oak Creek Canyon streambed (tributary to the Santa Clara River), and approximately 3,600 linear feet of Santa Clara River streambed.*

This report also contains information on potential off-site jurisdictional resources that may be impacted by road construction/improvements to the planned project site.

*While conducting the delineation, Impact Sciences investigated ordinary high water marks (OHWM), stream banks, and riparian and hydrophytic vegetation. Figures detailing the findings are included throughout this report. Data sheets are included in **Appendix A**.*

This jurisdictional delineation is prepared to assist in the land use planning for the properties adjacent to the stream and for use by regulatory agencies in reviewing the project's jurisdictional status and permitting requirements.



SOURCE: Thomas Brothers – 2006, Impact Sciences, Inc. – May 2006

FIGURE **1**

Regional Location

818-001•05/06

REGULATORY FRAMEWORK/REGULATORY AGENCIES

U.S. Army Corps of Engineers (ACOE)

Federal regulations of "waters of the United States" stem from Section 10 of the Federal Rivers and Harbors Act of 1899, enacted to regulate activities within navigable waters. In 1972, the Federal Clean Water Act was passed and regulates discharges into "waters of the United States." Section 404 of this Act regulates activities including fills placed into waters of the United States.

"Waters of the United States" are defined in 33 CFR 328.3:

> *"(a) Waters of the United States means*
>
> *(1) All waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;*
>
> *(2) All interstate waters including interstate wetlands;*
>
> *(3) All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, potholes, wet meadows, playa lakes, or natural ponds, the use, degradation or destruction of which could affect interstate or foreign commerce including any such waters;*
>
> *(i) Which are or could be used by interstate or foreign travelers for recreational or other purposes; or*
>
> *(ii) From which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or*
>
> *(iii) Which are used or could be used for industrial purpose by industries in interstate commerce;*
>
> *(4) All impoundments of waters otherwise defined as waters of the United States under the definition;*
>
> *(5) Tributaries of waters identified in paragraphs (a) (1) through (4) of this section;*
>
> *(6) The territorial seas;*
>
> *(7) Wetlands adjacent to waters (other than waters that are themselves wetlands) identified in paragraphs (a)(1) through (6) of this section."*

ACOE jurisdiction in non-tidal waters typically extends to the OHWM. The OHWM for intermittent streams, for example, can be determined by:

> *"…the fluctuations of water as indicated by physical characteristics such as clear, natural lines 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."* (33 CFR 328.3(e))

Most impacts to areas delineated as "waters of the United States," if determined to be jurisdictional by the ACOE, require approval under the authority of the Clean Water Act and its implementing regulations.

Section 404 Permits

The deposition of fill to an area delineated as "waters of the United States," including wetlands, and determined to be under the ACOE jurisdiction, requires a permit or other approval by ACOE Regulatory Branch. Fill is broadly defined to include most materials (e.g., rock, soil, pilings, concrete, wood, some incidental fallback of soil from earth-moving equipment, and in some cases additional water) that can be discharged into a water or wetland.

Most Section 404 permits require mitigation for reducing overall impacts to overall wetlands, including Waters of the United States and their functions.

California Department of Fish and Game (CDFG)

The State of California regulates water resources under Sections 1600–1605 of the Fish and Game Code of California.

> *"It is unlawful for any person to 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 that activity."*

CDFG considers most natural drainages to be streambeds unless it can be demonstrated otherwise. Streams are defined in the California Code of Regulations Title 14, Chapter 1, Section 1.72 as follows:

> *"A stream is a body of water that follows at least periodically or intermittently through a bed or channel having banks and that support fish or other aquatic life. This includes watercourses having surface or subsurface flow that supports or has supported riparian vegetation."*

CDFG jurisdiction includes ephemeral, intermittent, and perennial watercourses, and is often extended to the limit of riparian habitats that are located contiguous to the water resource and that function as part of the watercourse system. Section 2785(e) of the Fish and Game Code of California states:

> *"Riparian habitat means lands which contain habitat which grows close to and which depends on soil moisture from a nearby freshwater source."*

Streambed Alteration Agreements

Any project that impacts CDFG jurisdictional areas, including fills, vegetation removal, or bridging, requires a Section 1602 Streambed Alteration Agreement from CDFG. Much of the same information (i.e.,

project description, potential impacts, mitigation measures, etc.) necessary to apply for ACOE Section 404 permits is required for the Streambed Alteration Agreement application.

Regional Water Quality Control Board (RWQCB)

Section 401 of the Federal Clean Water Act authorizes the State of California to certify federal permits and licenses. The state's implementing regulations to conduct certifications are codified under the California Code of Regulations Title 23 Waters, Sections 3830–3869. Projects qualifying for an ACOE Section 404 permit must submit materials for review to the appropriate RWQCB and request a Section 401 certification.

Section 401 Certification

The Section 401 Certification requires that certain federal permits, including ACOE Section 404 permits, must be certified that they meet the state's water quality standards. An application must be submitted to the RWQCB for approval. Much of the same information (project description, potential impacts, and mitigation measures) necessary to apply for ACOE Section 404 and CDFG Section 1602 permits is required for the Section 401 Certification.

Methodology

In order to evaluate the extent of ACOE and CDFG jurisdiction on the Oak Springs project site, a literature search and jurisdictional delineation was conducted by Impact Sciences. All available literature describing biological, soil, and hydrologic resources within the vicinity of the site, relevant to the jurisdictional determination was examined prior to the field study. The literature examined for this report includes:

- Soil Survey Antelope Valley Area, California, (U.S. Department of Agriculture, 1970);
- The Jepson Manual: Higher Plants of California; and
- National List of Plant Species that Occur in California, Region 10 – California.

From December 2005 to April 2006, Impact Sciences biologists conducted delineations, related this potential project, using visual observations of the OHWM and shoreline banks to determine the extent of ACOE and CDFG jurisdiction. Fine silt deposition and wetted banks, indicating recently active channels, were used to help identify the OHWM. Due to the nature of the braided streambeds, the OHWM was difficult to ascertain. But coarser sediments were found deposited on the upper terraces helping define a different flow regime (**Appendix B, Site Photos**). Due to the lack of riparian vegetation, the CDFG jurisdictional boundary was defined almost exclusively as the top of the established (or recently eroded)

bank. The ACOE and CDFG boundaries intersected when stream banks were vertical due to recent erosion (**Figure 2, Oak Springs Jurisdictional Waters and Streambeds**).

The portion of Oak Springs Canyon creek delineated as off-site resources was completely levied and channelized. The ACOE OHWM appeared to extend to the levies but may have historically been wider. CDFG banks were evident as historic terraces beyond the levies (**Appendix B, Site Photos**).

Data were gathered at various sample points documenting hydrology, vegetation, and soils. The Data Sheets are summarized below under **Site Description** and its sub-headings, and the completed data sheets are located in **Appendix A**, following the body of this report.

Global Positional System (GPS) Mapping

The jurisdictional boundaries were traversed and recorded using resource grade (sub-meter) Trimble GPS units. Once the GPS data were collected, mapping onto 2-foot-resolution aerial images and area calculations were accomplished using ArcView/GIS.

SITE DESCRIPTION

The Oak Springs site (TTM 063022) encompasses approximately 187 acres proposed for development. It is located adjacent and to the north of the Robinson Ranch Golf Course and extends northward into the Santa Clara River. The site is located south of The Antelope Valley Freeway (Highway 14) and 0.75 mile east of Sand Canyon Road on the eastern side of the City of Santa Clarita, California. The site includes most of the northwestern quarter of Section 24, T4N, R15W (**Figure 1**). Primary access to this property for purposes of jurisdictional delineation was via the Robinson Ranch Golf Course or travel to the east end of Lost Canyon Road. The project site is bordered along the west by low-density housing and equestrian ranches, along the north by the Santa Clara River, on the east by open space (low-lying hills), and along the south by the Golf Course. The site is proposed for residential development associated with the golf course.

The proposed project boundary contains portions of the Santa Clara River and Oak Springs Canyon. The Oak Springs Canyon portion is a braided ephemeral wash with two on-site tributaries flowing into the channel via culverts. The Oak Springs Canyon stream is tributary to the Santa Clara River, with the confluence on the neighboring parcel. The portion of the Santa Clara River within the project boundary has intermittent flows through a low-relief, braided, sand and gravel channel, with sparse riparian vegetation.

0 250 500 Feet

Source: GIS and GPS by ISI, 2006
Aerial by Airphoto USA, 2003.
Project Number 818.001

This delineation map was prepared by Impact Sciences, Inc. using regulatory agency's approved methodologies. This map is being submitted to those agencies for concurrence. Until this concurrence is received, this map should be considered a draft and should not be relied on for purposes such as engineering or impact analysis.

Oak Springs Canyon
- ACOE Waters of The U.S. (0.63 Acres)
- CDFG Streambeds (3.82 Acres)

Santa Clara River
- ACOE "Wetlands" (0.01 Acres)
- ACOE Waters of The U. S. (5.29 Acres)
- CDFG Streambeds (14.97 Acres)

- Culvert
- Boundary

Total:
ACOE "Wetland" (0.01 Acres)
ACOE Waters of The U.S. (5.92 Acres)
CDFG Streambeds (18.79 Acres)

Figure 2:
Oak Springs Jurisdictional Waters, Wetlands, and Streambeds

Much of the ephemeral wash near the golf coarse and parts of the Santa Clara River channel and floodplain, have been significantly disturbed through grading, filling, and levying activities. The uplands are a disturbed alluvial fan-sage sage scrub community, with few grassland openings in the coastal sage scrub. With little to no riparian vegetation, the upland vegetation stops at the edge of the eroded banks of this wash.

In addition to the steam corridor, there exists a small swale-like depressional feature near the train embankment along its south side.

Site photographs are included in **Appendix B**.

Topography

The site is a relatively flat floodplain/alluvial plain setting with gentle to level topography (0 to 5 percent) found over nearly the entire property and immediately adjacent the property. The Oak Springs Canyon floodplain opens to the northeast and is surrounded on three sides in the near distance by the rapidly ascending Angeles National Forest, in the San Gabriel Mountains, which Oak Springs Canyon descends from. A large man-made embankment for the Southern Pacific Railroad runs through the center of the project site.

Hydrology

The project site lies within the Oak Springs Canyon/Santa Clara River watershed. The Oak Springs Canyon stream has a watershed area, upstream of the project site, of approximately 5.2 square miles and drains a primarily undeveloped area of the Angeles National Forest. The mainstem of the Oak Springs Canyon stream flows through the neighboring golf course before entering the project site through three 36-inch culverts located under Oak Springs Canyon Road. The dominant water sources for the site are runoff from the mountains to the south and southeast, and irrigation runoff from the golf course. The Oak Springs Canyon floodplain, much of which comprises the project site, turns generally northwest and is tributary to the Santa Clara River. Two other small streams are tributary to the project site, having watersheds of approximately 33 and 40 acres, and are primarily contained within the golf course. These tributaries enter the project site through 10-inch culverts under Oak Springs Canyon Road. All three streams are likely to be ephemeral streams, although the Oak Springs Canyon stream has the potential to be intermittent, especially with flows through the sands and gravels, and additional golf course irrigation runoff. These streams flow into an alluvial braided steam complex composed of deep sands and gravels, where waters infiltrate into the substrate under most conditions.

These streams, including the portion of the Santa Clara River that is within the property boundary, flow through a floodplain-like alluvial braided steam complex composed of deep sand, where waters infiltrate

into the substrate under most conditions. The point at which the last water infiltrates into the substrate would be dependent on the amount of water present. In years with considerable rainfall the flows are greater and extend further to the Santa Clara River from Oak Springs, and flow through the property most of the winter and spring in the Santa Clara River.

The site contains a small, isolated depressional feature on the northern part of the property with a nearby but isolated culvert that transmits flows under the railroad embankment. It is unclear if there is a hydrologic connection between the depression and the culvert, and it is unclear the source of flow to this swale (**Figure 2**).

Soils

The reach of the Oak Springs Canyon stream and the Santa Clara River flowing through the property was a mix primarily composed of alluvial sand (with some depositional layers of fine silts) with some gravel and medium- to large-size cobble.

Six local soil types, and one miscellaneous soil category, are found within the property boundary, as identified by the Soil Conservation Society (1970). These include:

- Hanford sandy loam (HcC), 2 to 9 percent slopes, is found alongside the lower reach of Oak Springs Canyon Creek and over much of the nearby upland terrace. This soil type is found on alluvial fans. Hanford soils are well drained to somewhat excessively drained, runoff is slow to medium, and erosion hazard is slight to moderate;

- Metz sandy loam (MfA), 0 to 2 percent slopes, is found within lower reach of Oak Springs Canyon Creek. This soil type is found on alluvial fans. Metz soils are somewhat excessively drained, runoff is slow, and the erosion hazard is slight. This soil type is classified as hydric, according to the Natural Resources Conservation Service;

- Metz loam (MgB), 2 to 5 percent slopes, is found over the upland terrace south of the railroad embankment. This soil type is found on alluvial fans. Metz soils are somewhat excessively drained, runoff is slow, and the erosion hazard is slight;

- Oak Glen gravelly sandy loam (OcC), 2 to 9 percent slopes, is found over the entire southern portion of the property, including the upper reach of Oak Springs Canyon Creek as it enters the property. This soil type forms on long smooth alluvial fans. Oak Glenn soils are well drained, runoff is slow to medium, and the erosion hazard is slight to moderate;

- Riverwash (Rg), a miscellaneous soil type, consists of sandy material in the beds of intermittent streams. During each flood, fresh deposits of alluvium are laid down and removed as a result of streambank erosion. This is the primary soil type of the bed portion of the Santa Clara River found onsite.

- Sandy alluvial land (Sa) is mostly on flooded plains along the Santa Clara River and its larger tributaries. It consists of unconsolidated alluvium that generally is stratified and ranges from sand to loamy sand in texture. The soil material has recently been deposited by streams. Flooding is frequent, and during each flood resorting of the material occurs. Protection from flooding is needed. Onsite, this soil type is found in a small patch on the upland terrace adjacent to the Santa Clara River, including one small backwater area supporting wetland vegetation.

- Saugus loam (ScF2), 30 to 50 percent slope, eroded. Saugus soils are upland soils and are well drained with moderate permeability, rapid runoff, and the hazard of erosion is high. Small patches are found on few upland terraces near of Oak Springs Canyon Creek as it traverses the property, and another patch is found near the railroad embankment at the location of the depressional swale-like feature. One other location includes oak riparian buffer along a steeply banked portion of the Santa Clara River.

MfA, Rg, and Sa are soils soil found on-site that are classified as hydric, according to the Natural Resources Conservation Service. The only locations within the property where these soils are found are in, or immediately adjacent to the on-site streambeds.

Upland Plant Communities

Upland vegetation along the Oak Springs Canyon stream and the Santa Clara River is described as a disturbed sage-scrub community.

The upland sage-scrub community consisted of approximately 20 percent cover of *Artemisia* sp. and 20 percent cover of *Salvia* sp. Large openings of grasslands (non-native) compose much of the remaining upland areas. In addition, mature oak trees (*Quercus* sp.) make up approximately 5 to 10 percent of the property. Many of these oak trees are in close proximity of, but do not intersect, the Oak Springs Canyon stream channel. These oak trees are not considered riparian and do not depend on water from the stream channel.

Riparian and Wetland Vegetation

Coast live oak trees comprise the majority of the riparian buffer along a portion of the Santa Clara River. Due to the bank topography, and dependence on stream hydrology, these oaks are generally considered jurisdictional by the CDFG. The remainder of the riparian buffer along the Santa Clara River, within the property boundary, is made up of sparse stands of mulefat (*Baccharis salicifolia*) and cottonwood (*Populus fremontii*) averaging 5 to 10 feet in width. Within the CDFG banks was emergent growth of mulefat after winter scouring events and thick in-channel growth of watercress (*Nasturtium officinale*). One small ACOE wetland (**Table 1, Jurisdictional Waters and Streambeds – Oak Springs at Santa Clarita**) had a mature stand of cattails (*Typha latifolia*) and tule (*Schenoplectus* sp). The channel leading to the wetland comprised of a mature riparian stand of willow, cottonwood, and mulefat.

The only riparian vegetation along Oak Springs Canyon creek are two mature California black walnuts (*Juglans californica*) located on the bank of the stream channel. The streambed itself had little vegetation due to recent high-flow scouring events. What vegetation existed within the stream channel was primarily remnant sage-scrub amounting to less than 10 percent streambed cover. There were no dominant hydrophytic plants to aid in the jurisdictional description.

At the offsite location near the confluence of Oak Springs Canyon creek and the Santa Clara River there existed one mature cottonwood and a small multi-trunk stand of mature California black walnut.

SUMMARY OF FINDINGS

Within the property boundaries, total area for "waters of the United States" and Wetlands, under jurisdiction of the ACOE and Streambeds under the jurisdiction of the CDFG, are detailed in **Table 1**.

This delineation takes into account the recent high flows where "waters" were mapped using the OHWM almost exclusively, except where recent erosion created a vertical bank; in this case the top of this erosional features were used for both ACOE and CDFG limits of jurisdiction. Streambeds under the jurisdiction of the CDFG were mapped from top-of-bank to top-of-bank, or where riparian vegetation was present, to the outside of the riparian canopy (**Figure 2**).

Areas were not calculated for off-site "waters" and Streambeds delineated and shown in **Figure 2.** This was delineated for potential streambed crossing areas by access roads, and therefore is not included in the below area calculations, which are totals of on-site jurisdictional resources only.

Table 1
Jurisdictional Waters and Streambeds – Oak Springs at Santa Clarita

Drainage	ACOE area (acres)	CDFG area (acres)
Oak Springs Canyon	0.63	3.82
Santa Clara River	5.29	14.97
Total*	**5.92**	**18.79**
Santa Clara River Wetland	0.01	--

* Approximate totals. CDFG acreage is inclusive of ACOE jurisdictional area and Oak Springs Canyon CDFG area includes the small depressional feature along the south side of the railroad embankment (approximately 0.07 acre).

This jurisdictional delineation was conducted in accordance with the regulatory definition of "waters of the United States" and "Wetlands," including the Regulatory Guidance Letter 2005-5 regarding ordinary high water mark identification, and the criteria of the Fish and Game Code. Data sheets taken during the delineation are located in **Appendix A**.

REFERENCES

California Department of Fish and Game. 2005, as amended. *Fish and Game Code of California*.

U.S. Government Printing Office. July 2000. *Code of Federal Regulations*, Vol. 33 Part 200 to End.

Hickman, James C. 1993. *The Jepson Manual: Higher Plants of California.* University of California Press, Berkeley, CA.

Reed, P. B., Jr. 1988a. "National List of Plant Species That Occur In Wetlands: National Summary." *Biological Report 88 (24).* U.S. Fish and Wildlife Service.

Soil Conservation Service. 1970. *Soil Survey, Antelope Valley Area, California.* U.S. Department of Agriculture. Washington, D.C.

U.S. Army Corps of Engineers. 2005. Regulatory Guidance Letter 5-05. Dated 7 December 2005

APPENDIX A
Stream Data Forms

STREAM DATA FORM	GPS Data taken: ☒Yes; ☐No
Project / Site: Oak Springs at Santa Clarita (813.01)	Sample Plot # Trib to ACOE wetland
Owner/Developer: Robinson Ranch	Field Date: 07/11/20065
Normal Circumstances? No, levied	Lat./Long.:
Tributary to Wetland within Santa Clara River	County: Los Angeles
Adjacent land use: Open space along SR 14	State: California

VEGETATION:			**Buffer Community Type:**		
Riparian Tree Species,	**% Cover**	**Mature?**	**Riparian/Hydrophytic Herb. Species**	**% Cover**	**X=Native**
☒ Populus fremontii	20	Yes			☐
☒ Salix sp.	30	Yes	*Sage Scrub*	20-40	☒
☐ Platanus racemosa					☐
☐ Acer negundo					☐
☐ Oaks, Specify					☐
☒ Other					☐
Riparian Sapling / Shrub Species					☐
Mulefat	30	Yes			☐
					☐

Comments: This is a mature, vegetated, intermittent channel within the banks of the Santa Clara River flowing through an alluvial fan-scrub community toward the active channel.

SOILS	Mapped Series: Riverwash (Rg)		Hydric Soils List: ☒ Yes ☐ No
Profile Description			
Depth:	Matrix Color	Mottle Abundance and Contrast	Texture/structure/concretions
0-4″			
4-8″			
8-12″			
12-16			
Boulders ☐ Bedrock ☐	″Gravel or Cobble ☒	Sand or Sandy loam ☒	Muck, Silt Clay or Loam ☐
Comments:			

HYDROLOGY Source of Water: Spring/Seep ☒; Urban/Agricultural Runoff ☐; Can't Determine ☐; Other ☒			
Maximum Depth of inundation: in.			Surface Runoff
Depth to Water Standing in Pit: >16 in.	☐ Permanent flows	☒ Intermittent flows	☐ Temporary flows
Depth to Saturated Soil: >16 in.	☐ Steep Gradient	☐ Moderate Gradient	☐ Low Gradient
	Indicators:		
Channel Banks or OHWM present: ☒ Yes ☐ No	☒ Buffer width; Ave. Width 6 Ft.	☐ Ditched	
	☒ Buffer Continuous for length	☒ Graded (levied)	
Groundwater Recharge? Yes☐; No☒			
Comments:			

STREAM CHARACTERISTICS	
Stream Width Average: ACOE 4 Feet, CDFG mapped	Recent Erosion Evident ☐Yes; ☒ No
Stream Length (field or map calculation: Feet	
Watershed Area: Approx. Square Miles	
Comments: Within CDFG larger area.	
Determined By: R.C. Brody	Impact Sciences, Inc.

WETLAND DETERMINATION DATA FORM	1987 ACOE WETLANDS DELINEATION MANUAL
Project Site: Oak Springs at Santa Clarita (813.01)	Sample Plot #: SCR off-channel wetland
Applicant: Robinson Ranch	Field Date: 7/11/06
Normal Circumstances?: Yes	Section:
Atypical Situation?:	County: LA
Problem Area?:	State: California

VEGETATION:			Buffer Community Type:		
Tree Species,	**Ind Status**	**% Cover**	**Hydrophytic Herb/Grass/Forb. Spp.**	**Ind Status**	**% Cover**
☐ Populus fremontii					
☐ Salix sp.			*Typha latifolia & Bulrush*	OBL	90
☐ Platanus racemosa					
☐ Acer negundo					
☐ Oaks, Specify					
☐ Other					
Sapling / Shrub Species	**Ind Status**	**% Cover**	**Woody Vive Species**		
Willow Herb	FACW	5			
Mulefat	FACW	5			
Percent of Dominant Species Classified as OBL, FACW, or FAC: near 100%					
Comments: Small wetland backwater (Cattail, tule, watercress, nettle 80-90% cover). Buffer is an alluvial fan-scrub community.					

SOILS	Mapped Series: Riverwash (Rg)		Hydric Soils List: ☒ Yes ☐ No
Profile Description			
Depth:	Matrix Color	Mottle Abundance and Contrast	Texture/structure/concretions
0-4 in			Sand
4-8 in			Sand
8-12 in	10 yr 2/1		Sand
12-16 in	10 yr 2/1		Sand
Comments: Not enough structure to dig pits			

HYDROLOGY			
Depth of inundation: in.	Primary Indicators: Check if present: Algal mat		
Depth to Water Standing in Pit: in.	☐ Inundated	☒ Sediment Deposits	☐ Water Marks
Depth to Saturated Soil: <12 in.	☐ Saturated	☐ Drift Lines	☐ Drainage Patterns
Inundated at hoof prints	Secondary Indicators:		
Channel Banks or OHWM present: ☒ Yes ☐ No	☐ Oxidized Root Channels	☐ Water-Stained Leaves	
	☐ Local Soil Survey Data	☒ FAC-Neutral Test	
Comments: Saturated through June, moist sand within a few inches of the surface.			

DETERMINATION:	
Hydrophytic Vegetation Criterion Met: ☒ Yes ☐ No	Sample Point Determination:
Hydric Soils Criterion Met: ☒ Yes ☐ No (by 2 indicators)	☐ Wetland ☐ Non-Wetland
Hydrology Criterion Met: ☐ Yes ☐ No	☐ Waters of the United States
	☐ Waters of the State ☐ Streambeds/Riparian Corridors
Comments: This is a small, often flooded, area with a near monotypic stand of cattail, just off the active channel of the Santa Clara River at confluence of a vegetated tributary. Hydric soils were found mapped and near 100 % hydrophytes as a secondary indicator.	
Determined By: R. C. Brody – Regulatory Specialist	Impact Sciences, Inc.

STREAM DATA FORM	GPS Data taken: ☒Yes; ☐No
Project / Site: Oak Springs at Santa Clarita (813.01)	Sample Plot # South Bank of Santa Clara River
Owner/Developer:	Field Date: March 27, 2006
Normal Circumstances? No, grading, fill, and levied	Lat./Long.:
Tributary to Pacific Ocean	County: Los Angeles, City of Santa Clarita
Adjacent land use: Equestrian, LD Residential	State: California

VEGETATION:			**Buffer Community Type:**		
Riparian Tree Species,	**% Cover**	**Mature?**	**Riparian/Hydrophytic Herb. Species**	**% Cover**	**X=Native**
☒ Populus fremontii	sparse	Y	*Salvia sp.*	20	☒
☒ Salix sp.	sparse	Y	*Artemisia sp.*	20	☒
☐ Platanus racemosa			*Arundo donax*	1	☐
☐ Acer negundo			*Quercus sp.*	5-10	☒
☒ Oaks, Specify (*Q. agrifolia*)		Y	Non-native grassland	20	☐
☒ Other		Y			☐
Riparian Sapling / Shrub Species					☐
Mulefat	sparse	Y			☐
					☐
Comments: Small intermittent and ephemeral channels meandering through a large, braided arroyo.					

SOILS	Mapped Series: Riverwash (Rg),		Hydric Soils List: ☒ Yes ☐ No
Profile Description			
Depth:	Matrix Color	Mottle Abundance and Contrast	Texture/structure/concretions
0-4″			
4-8″			
8-12″			
12-16			
Boulders ☐ Bedrock ☐	″Gravel or Cobble ☒	Sand or Sandy loam ☒	Muck, Silt Clay or Loam ☐
Comments:			

HYDROLOGY Source of Water: Spring/Seep ☐; Urban/Agricultural Runoff ☐; Can't Determine ☐; Other ☒			
Maximum Depth of inundation: 0 in.	Surface and sub surface flow from rainfall		
Depth to Water Standing in Pit: in.	☐ Permanent flows	☒ Intermittent flows	☐ Temporary flows
Depth to Saturated Soil: in.	☐ Steep Gradient	☐ Moderate Gradient	☒ Low Gradient
	Indicators: Flowing at time of delineation (locals report dry in summer)		
Channel Banks or OHWM present: ☒ Yes ☐ No	☐ Avg. Buffer width; 10-15Ft.	☒ Ditched	
	☐ Buffer Continuous for length	☒ Graded	
Groundwater Recharge? Yes☒; No☐		Levied	
Comments: Wetted channels (recent flow) was used to help identify the OHWM.			

STREAM CHARACTERISTICS	
Stream Width Average: 8-15 Feet (active channel)	Recent Erosion Evident ☒Yes; ☐ No
Stream Length (field or map calculation): Feet	
Watershed Area: Approx. Square Miles	
Comments: Braided channel varying in width. Stream width greatly dependent on whether locals have levied and/or channelized the stream.	
Determined By: R.C. Brody – Regulatory Specialist	Impact Sciences, Inc.

STREAM DATA FORM	GPS Data taken: ☒Yes; ☐No
Project / Site: Oak Springs at Santa Clarita (813.01)	Sample Plot #
Owner/Developer:	Field Date: 12/16/2005
Normal Circumstances? No, grading, fill, and levied	Lat./Long.:
Tributary to Santa Clara River	County: Los Angeles
Adjacent land use: S:Golf, N&E: Open Space, W: LD Res	State: California

VEGETATION:			**Buffer Community Type:**		
Riparian Tree Species,	**% Cover**	**Mature?**	**Riparian/Hydrophytic Herb. Species**	**% Cover**	**X=Native**
☐ Populus fremontii			*Salvia sp.*	20	☒
☐ Salix sp.			*Artemisia sp.*	20	☒
☐ Platanus racemosa					☐
☐ Acer negundo			*Quercus sp.*	5-10	☒
☐ Oaks, Specify					☐
☒ Other Juglans californica	2 trees	Yes			☐
Riparian Sapling / Shrub Species					☐
					☐
					☐

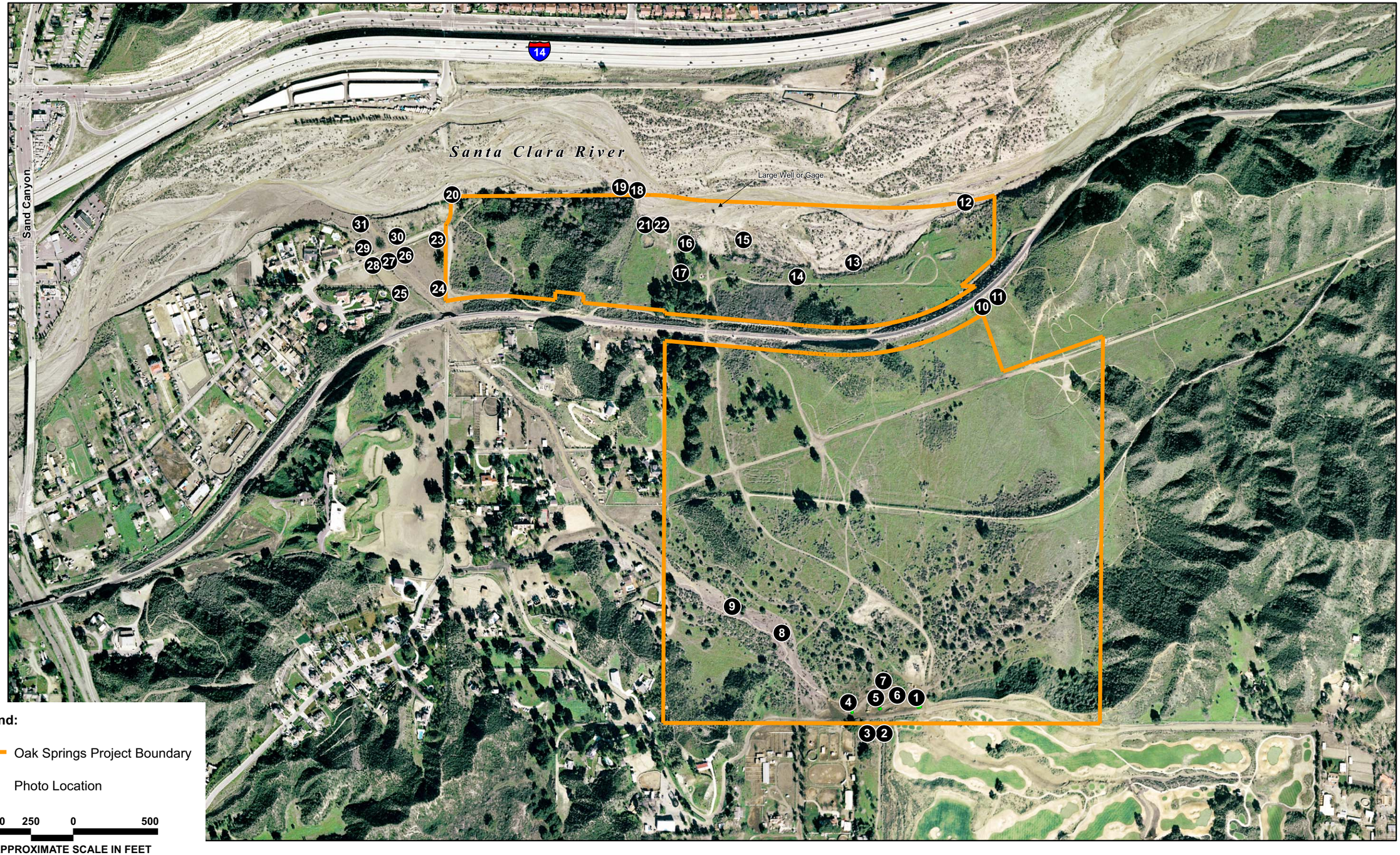
Comments: This is an ephemeral arroyo/wash meandering through an alluvial fan-scrub community. Two tributaries join the channel through culverts; one from a riparian corridor and one running off a dirt road.

SOILS	Mapped Series: Metz sandy loam (MfA)	Hydric Soils List: ☒ Yes ☐ No	
Profile Description			
Depth:	Matrix Color	Mottle Abundance and Contrast	Texture/structure/concretions
0-4″			
4-8″			
8-12″			
12-16			
Boulders ☐ Bedrock ☐	″Gravel or Cobble ☒	Sand or Sandy loam ☒	Muck, Silt Clay or Loam ☐
Comments: Fine silt deposition was used to help identify the OHWM.			

HYDROLOGY Source of Water: Spring/Seep ☒; Urban/Agricultural Runoff ☐; Can't Determine ☐; Other ☒			
Maximum Depth of inundation: in.			
Depth to Water Standing in Pit: >16 in.	☐ Permanent flows	☐ Intermittent flows	☐ Temporary flows
Depth to Saturated Soil: >16 in.	☐ Steep Gradient	☐ Moderate Gradient	☐ Low Gradient
	Indicators:		
Channel Banks or OHWM present: ☒ Yes ☐ No	☐ Buffer width; Ave. Width Ft.	☐ Ditched	
	☐ Buffer Continuous for length	☒ Graded (and levied)	
Groundwater Recharge? Yes☒; No☐			
Comments: Runoff from Angeles National Forest and nearby golf course. Fine silt deposition was used to help identify the OHWM. OHWM was difficult to ascertain, but coarser sediments found were deposited on upper terraces helping define different flow regimes.			

STREAM CHARACTERISTICS	
Stream Width Average: 20-60 Feet CDFG,	Recent Erosion Evident ☒Yes; ☐ No
Stream Length (field or map calculation: Feet	
Watershed Area: Approx. Square Miles	
Comments: Braided channel varying in width. Stream width greatly dependent on whether locals have levied and/or channelized the stream.	
Determined By: R. C. Brody/Barrett Holland	Impact Sciences, Inc.

APPENDIX B
Site Photographs



SOURCE: AirPhoto USA – 2003, Impact Sciences, Inc. – July 2006

APPENDIX **B**

Site Photograph Locations

818-001•07/06

Photo 1 – Looking West

Photo 2 – Looking North

Photo 3 – Looking North

Photo 4 – Looking South

Photo 5 – Looking South

Photo 6 – Looking West

Photo 7 – Looking West

Photo 8 – Looking Northwest

Photo 9 – Looking Northwest

Photo 10 – Looking South

Photo 11 – Looking North

SOURCE: Impact Sciences, Inc. – April 2006

APPENDIX **B**

On-Site Photographs – Oak Springs Canyon

Photo 12 – Looking West

Photo 13 – Upper ACOE

Photo 14 – Looking North

Photo 15 – Looking West, First Terrace

Photo 16 – Upland Buffer

Photo 17 – Upland Buffer

Photo 18 – Looking East

Photo 19 – West

Photo 20 – Looking East

Photo 21 – Wetland

Photo 22 – Wetland Tributary

SOURCE: Impact Sciences, Inc. – July 2006

Photo 23 – Looking East

Photo 24 – Looking East

Photo 25 – Looking West

Photo 26 – Looking West

Photo 27 – Looking East

Photo 28 – Looking East

Photo 29 – Looking West

Photo 30 – Looking West

Photo 31 – Looking East

SOURCE: Impact Sciences, Inc. – July 2006