

Heatherglen Planned Development, TTM 17604, CUP 15-006

Initial Study – Mitigated Negative Declaration

Appendix D – Updated Spring Botanical Survey

**2017 UPDATED SPRING BOTANICAL SURVEY
FOR GREENSPOT PARTNERS TT 17604,
CITY OF HIGHLAND, COUNTY OF SAN BERNARDINO, CA**

±60 Acres Surveyed

APNs 1210-211-18, -21, -23, 1210-281-01, -02, -03, and -04, TT 17604, City of Highland,
Section 2, Township 1 South, Range 3 West, USGS Redlands 7.5' Topographic Quadrangle

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Report Summary:

Site conditions remain relatively unchanged from the 2016 survey. The site supports a mixture of agricultural land, disturbed areas, and relatively undisturbed alluvial fan sage scrub. The 2016-2017 season produced good precipitation and botanical germination and growth was good. No sensitive botanical species were observed or were determined to have a moderate or high probability of occurring. Scalebroom is present within portions of historic drainages onsite. Trees present in the study area qualify as "heritage trees" as defined by the City of Highland municipal code and will require identification and mitigation. One sensitive wildlife species, San Diego black-tailed jackrabbit, was observed during this survey effort.

Surveys Conducted By: Guy Bruyey

Surveys Conducted On: April 6, 17, May 10, June 7, July 1, and August 26, 2017

Report Date: March 2018


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MANAGEMENT SUMMARY

L&L Environmental, Inc. conducted a biological survey on Greenspot Partners, Inc.'s ±60-acre project in the City of Highland, California. The purpose of this study was to examine the subject property and update site data regarding the presence/absence and current condition of biological resources onsite, focusing on vegetation and special status botanical species. L&L previously conducted a variety of biological surveys of the current study area in 2005, 2006, 2011, and 2014 and conducted updated surveys in a reduced size project area in 2015 and 2016.

Site conditions remain essentially unchanged from the 2016 survey. The subject property can be characterized as a mix of disturbed and native habitats. The western half of the site has been disturbed and is mostly converted for agricultural uses. It currently contains *Eucalyptus* groves, a jojoba plantation, and disked or disturbed areas. Several structures within the southwestern portion of the site that were present during previous surveys by L&L have been removed, but some cement foundations remain. The eastern half of the site is relatively undisturbed alluvial fan sage scrub. Land use varies adjacent to the survey area and includes anthropogenic disturbances, such as low and high-density residential areas, commercial strip malls, gravel pit mines, paved and unimproved roads, power lines, and off-road vehicle (ORV) activity.

No state or federally listed endangered or threatened botanical species were present or had high or moderate potential of occurring in the survey area following the surveys. No special status botanical species were observed during current or previous surveys.

The current survey identified San Diego black-tailed jackrabbit within the project area. Previous L&L surveys between 2005 and 2016 identified six (6) special status species within the current survey area: San Bernardino kangaroo rat (*Dipodomys merriami parvus*) (SBKR), Cooper's hawk (*Accipiter cooperii*), loggerhead shrike (*Lanius ludovicianus*), Lawrence's goldfinch (*Spinus lawrencei*), coastal whiptail (*Aspidoscelis tigris stejnegeri*), and San Diego black-tailed jackrabbit (*Lepus californicus bennettii*). The observed sensitive species (with the exception of SBKR) are all California Species of Concern (with no federal or state listing). All of these species were observed in previous biological surveys where specific recommendations associated with these species were made. Recommendations and/or mitigation for these species are not specifically addressed in this botanical survey report.

A 2006 heritage tree survey identified more than 100 heritage trees within the current study area. If impacts to this site are proposed, consultation with the City of Highland will be necessary to determine required mitigation and minimization measures.

Scalebroom (*Lepidospartum squamatum*) is present within portions of the historic drainages onsite. This plant is a highly evolved and persistent species capable of lifting concrete improvements placed above graded areas that contain remnants of the plant. L&L recommends both a focused survey for the location of the plant on the property and eradication of the plant from any areas planned for development prior to soil disturbance.

1.0) INTRODUCTION

The following report was written by L&L Environmental, Inc. for Greenspot Partners, Inc. It describes the results of a spring botanical survey conducted on a proposed development located within the City of Highland. The project site consists of APNs 1210-211-18, -21, -23, 1210-281-01, -02, -03, and -04 totaling ±60 acres.

Our assessment consisted of (1) a records search and literature review, conducted to determine what species of concern are in the project area and proximity to closest documented special status species and (2) field reconnaissance, intended to identify plants and animals on the property and presence/absence of habitat for species of concern. This report is intended to update and supplement existing data and reports.

1.1) Location

The subject property is generally located north of Interstate Highway 10 (I-10) (Figure 1). Specifically, the site is located east of Highway 210 and south of Greenspot Road in the City of Highland (Figure 2). The project site is situated within Section 2 of Township 1 South, Range 3 West of the USGS Redlands 7.5' series quadrangle map.

Portions of the southern boundary of the site are defined by the presence of a barbwire fence. The site is generally bounded as follows: to the west by disturbed open space and a mixture of low and high-density residential developments, Church Street, 5th Street, and Highway 30 beyond; to the east by mostly undisturbed open space with San Bernardino National Forest lands beyond; to the north by Greenspot Road and high-density residential developments, with Santa Ana Canyon Road, Baseline Road, and East Highland Reservoir beyond; and to the south by Abbey Way, a row of power lines, and the Santa Ana Wash basin, with the City of Redlands and I-10 beyond (Figure 3).



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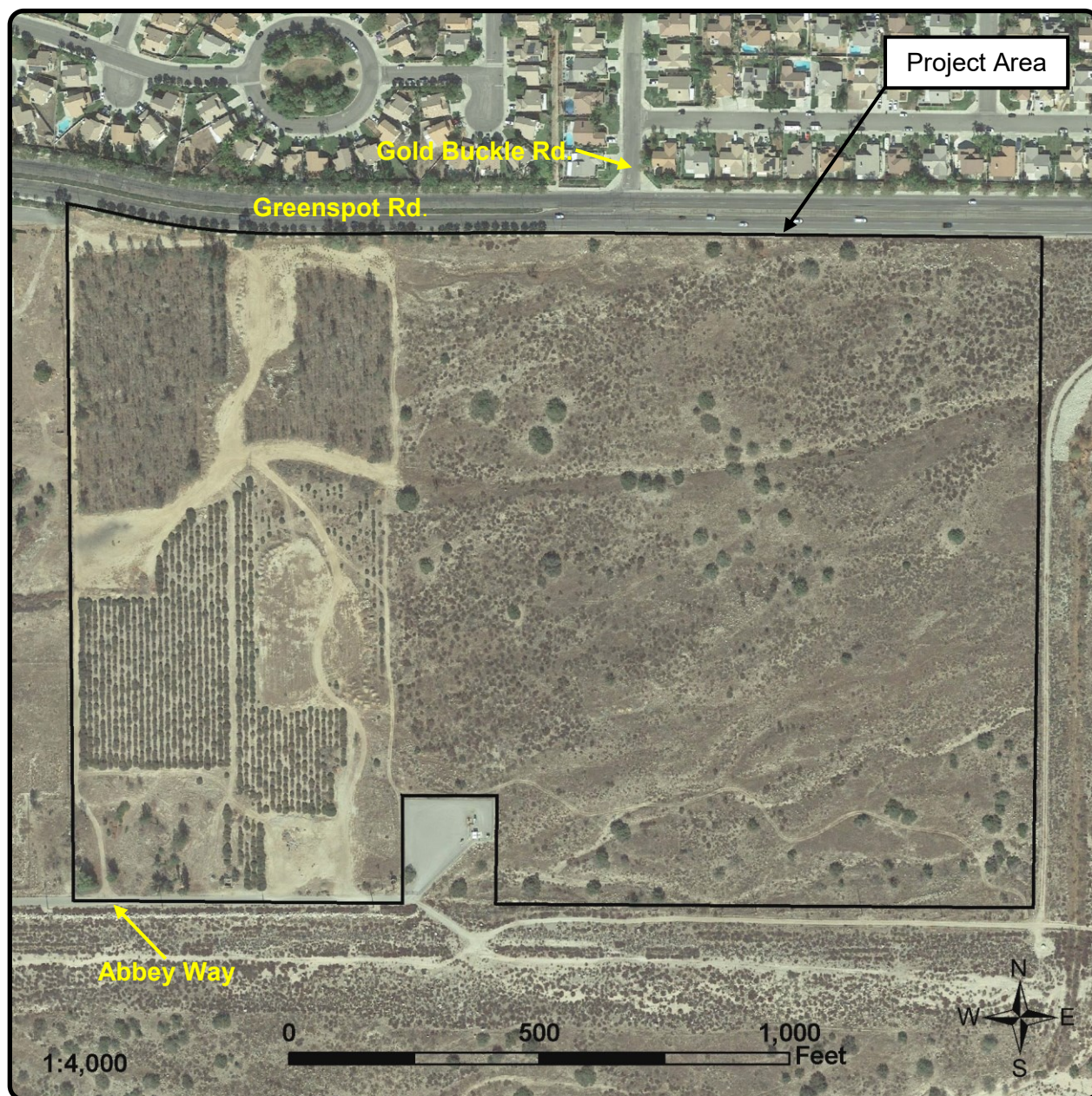
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Figure 1

Project Vicinity Map

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Figure 3

Aerial Photograph

(Photo obtained from Google Earth, October 2016)

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1.2) Vegetation and Setting

The western half of the site has been disturbed and is mostly converted for agricultural uses. The remnants of several structures that were present during previous surveys are located within the southwestern portion of the site in association with these disturbances. The eastern half of the survey area is relatively undisturbed alluvial fan sage scrub.

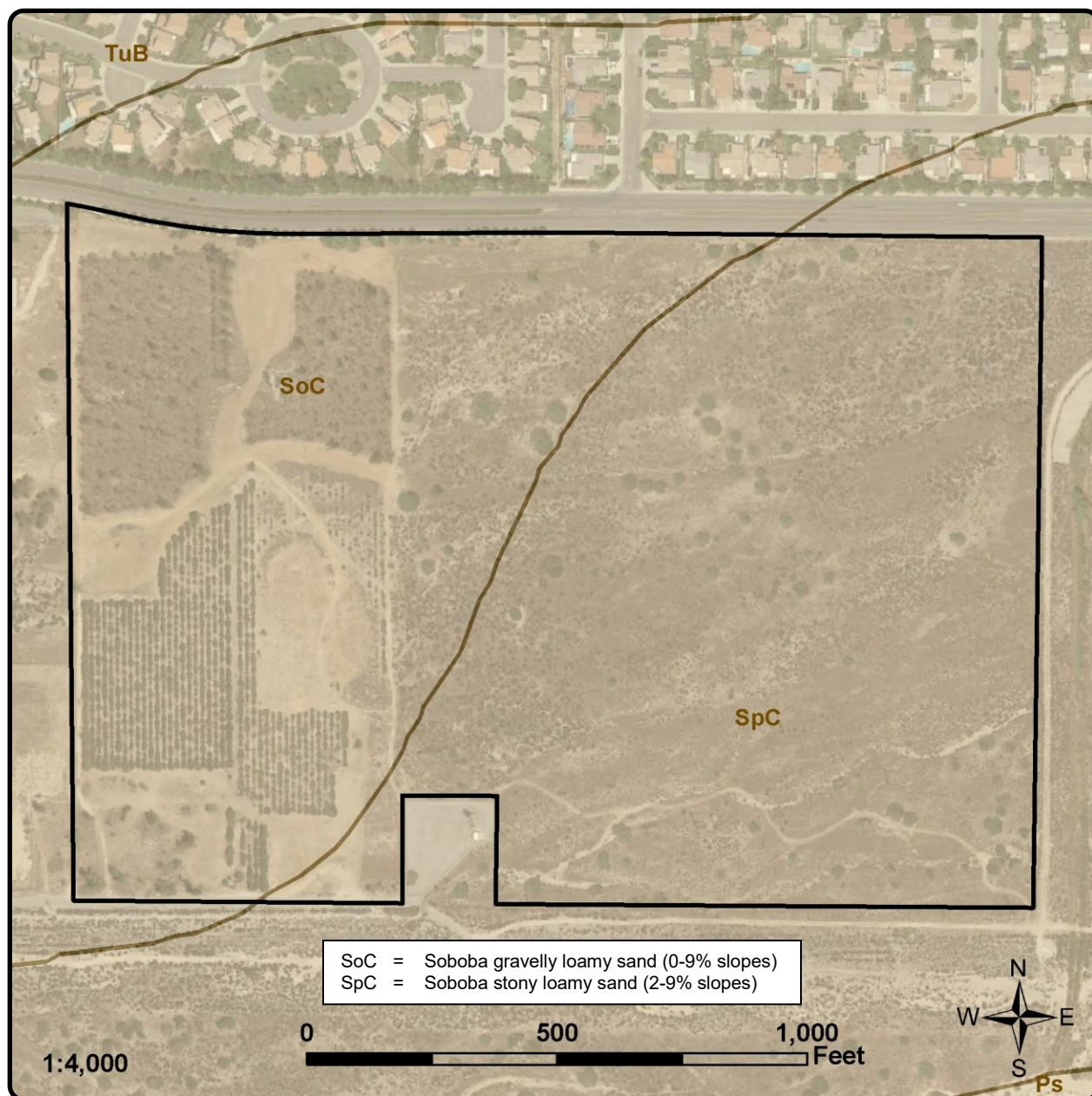
Land use varies adjacent to the survey area and includes anthropogenic disturbances, such as low and high-density residential areas, commercial strip malls, gravel pit mines, paved and unimproved roads, power lines, and off-road vehicle (ORV) activity. Redlands Municipal Airport is approximately 1.75 miles south of the subject property.

Three (3) USGS mapped ephemeral blueline stream areas are present on the subject property, trending from the northeast to the southwest away from the foothills of the San Bernardino Mountains. No evidence of water flow was observed within these mapped features. Most wetland indicator tree species were not found in association with the mapped blueline stream areas onsite, with the exception of western sycamore (*Platanus racemosa*). Mapped ephemeral blueline stream areas onsite can be characterized as being inhabited with common alluvial sage scrub perennial plants, including California buckwheat (*Eriogonum fasciculatum* var. *foliolosum*), California sagebrush (*Artemisia californica*), chaparral yucca (*Yucca whipplei*), yerba santa (*Eriodictyon* sp.), and various low-growing native annual plant species.

1.3) Soils and Topography

Soils on the project site (Figure 4) were mapped by the Soil Conservation Service (1971) as Soboba gravelly loamy sand (SoC) and Soboba stony loamy sand (SpC). Soils observed on the site are sandy-loamy to gravelly with and (mostly) without cryptobiotic crusts. Clay soils were not observed onsite.

Topographically, the site is primarily flat and contains low-relief rolling hills, shallow depressions, and open disturbed lands with a combined maximum vertical relief of roughly 32 feet between highest and lowest points on the property. Elevation onsite ranges from approximately 1,347 to 1,379 feet above mean sea level. Surrounding topographic features in the immediate project vicinity include mostly flat areas with low-relief rolling hills containing canyons and shallow drainages. Other areas south of the site (within the Santa Ana River Wash basin) and areas east and north of the site (within San Bernardino National Forest lands) contain significantly more topographic relief.



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Figure 4

Soils Map

(Photo obtained from Google Earth, 4-27-2014,
USDA Nat. Res. Cons. Serv. SSURGO Data)

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2.0) METHODS AND PERSONNEL

2.1) Literature Review

Pertinent literature was reviewed to identify local occurrences and habitat requirements of special status species and communities occurring in the region. Literature reviewed included CNDDDB (2016) and USFWS (2017) reports for the vicinity and reports from previous studies completed on the property.

Latin names of plants follow *The Jepson Manual* (Hickman 1993). Latin names of animals follow *A Field Guide to Western Reptiles and Amphibians* (Stebbins 1985) for reptiles and amphibians, *California Mammals* (Jameson and Peeters 1988) for mammals, American Ornithologists' Union (1983, 1989) and National Audubon Society, *The Sibley Guide to Birds* (2000) for birds, and *American Insects: A Handbook of the Insects of America North of Mexico* (Arnett 2000) for insects.

2.2) Focused Botanical Field Methods

L&L biologist Guy Bruyey visited the project area on April 6, 17, May 10, June 7, July 1 and August 26, 2017 to describe vegetation and habitat, evaluate probabilities that special status plants might occur onsite, and conduct a focused botanical survey. Temperature ranged from 63° to 88° F and wind speed ranged from 0-3 mph. A total of about 20 person-hours were spent on the site.

All habitat types on the site were visited on foot. The site was surveyed by conducting a series of transects across the subject property where possible, stopping periodically for observations and notations. The existing habitat map, from previous studies, was verified and field notes were completed at the time of the survey. All field surveys were conducted during daylight hours. Digital photographs were taken to record condition of the site during the present surveys.

Information on special status rare plant species in the project vicinity was gathered from several sources including California Native Plant Society (CNPS) Inventory of Rare and Endangered Plants of California (CNPS 2017), CNDDDB (CDFW 2017), and CalFlora (2017). Maps depicting all known sensitive plant species locations in the project vicinity were produced to aid in determining target species for survey.

Table 1. Survey times and conditions.

Date	Time	Weather	Wind	Biologist
4/06/17	0800-1200	Partly Cloudy, 69-81°F	0-3mph	Brueya
4/17/17	0800-1200	Cloudy, 69-77°F	1-2mph	Brueya
5/10/17	0900-1200	Marine/Cloudy, 63-69°F	0-1mph	Brueya
6/07/17	1000-1300	Partly Cloudy, 75-83°F	0-1mph	Brueya
7/01/17	0800-1100	Sunny / Clear, 75-87°F	0-3mph	Brueya
8/26/17	0800-1100	Sunny / Clear 74-88°F	0-1mph	Brueya

Plants of uncertain identity were collected and subsequently identified from keys, descriptions, and illustrations in Abrams (1923, 1944, 1951, 1960), Abrams and Ferris (1960), Hickman (1993), Munz (1974), and Parker (1999). These procedures provide a general assessment of habitat and vegetation on a site and act as a tool to determine probability of special status species occurring onsite. A species list is included in Appendix A.

L&L conducted a habitat assessment for the sensitive botanical species in Table 4 (Appendix A). The habitat assessment followed recommendations of the California Native Plant Society (CNPS 2001). The survey area's suitability to support identified species was determined using indicators that included presence of suitable habitat, moisture, and soil conditions.

A complete floristic study of the survey area, as required in a complete CEQA analysis, was conducted between April and August 2017 (Table 1). Focused plant surveys were conducted throughout the year (early, mid, and late season) to provide full coverage and to ensure surveys occurred during the typical blooming period for these species. The plant surveys followed protocols recommended in USFWS, CDFW (CDFG 2009), and CNPS (2001) guidelines for rare plant surveys. All plants encountered were identified to a level necessary to ensure detection of covered or special status species.

This methodology is consistent with recommendations by the California Native Plant Society (CNPS 2001) because it provides more than "reasonable coverage" of all habitat types and was "floristic in nature". Systematic field techniques in all habitats of the site (transects) were employed to ensure thorough coverage of potential impact areas sufficient to provide comprehensive reporting.

A floral inventory of all botanical species observed during the course of the surveys is included in Table 3, Appendix A.

Rainfall in southern California during the 2016-2017 season was above average, but had been below average during the previous five (5) seasons. Early winter precipitation resulted in a

relatively “productive” year for spring annual germination and subsequent identification. Drought conditions can take more than one year to recover from and not all seeds germinate every year. Surveys conducted over multiple years and at varying times throughout the year provide the most comprehensive data.

3.0) RESULTS

3.1) Literature Review Results

Certain plants and animals have been listed as threatened or endangered under state or federal Endangered Species Acts. Other species have not been formally listed but declining populations or habitat availability are reasons for concern with regard to their long-term viability. These species are included in lists compiled by resource management agencies or private conservation organizations. In this report the term “special status species” refers to all species included in one or more compendia or formal list of threatened or endangered species. The CNDDDB was examined to determine if sensitive species have been previously documented onsite.

Eight (8) previous reports for this site were completed by L&L and four (4) previous reports by Natural Resources Assessment, Inc. and ENVIRA were examined. These included surveys for burrowing owl and nesting raptor species in 2005 (L&L 2005), a focused survey in 2006 for trees classified as “heritage trees” by the City of Highland (L&L 2006a), a jurisdictional delineation in 2006 (L&L 2006b) and a reevaluation in 2015 (L&L 2015a), general biological and spring botanical surveys in 2011 (L&L 2011), updated general biological and focused botanical surveys for the Greenspot Partners site, separated into east and west (L&L 2014a, 2014b, and west only in 2015 and 2016), and focused surveys for San Bernardino kangaroo rat (SBKR) by Natural Resources Assessment, Inc. conducted in 2005, 2011 and by ENVIRA in 2016. Some previous surveys were not conducted over the entire project area.

Observed species included in Table 3 (Appendix A) are a cumulative list of all species observed during surveys by L&L. Sensitive species locations were recorded and GPS coordinates reported.

In 2005 no burrowing owls were identified using the site; however, where ground squirrel activity was present within the western half of the property suitable habitat was judged to be present and a preconstruction survey (valid for 30 days) was recommended to occur prior to site clearing and/or disturbance. Past nesting by raptors in the *Eucalyptus* trees present onsite was also identified and a preconstruction clearance survey for nesting raptors was recommended if disturbance or site clearing is to occur between February 1 and August 31.

The 2006 survey for “heritage trees” identified 114 trees meeting City of Highland criteria within the current study area. The survey also identified scattered occurrence of scalebroom within

the site and a survey for full documentation of all locations to enable eradication prior to development was recommended.

The 2006 jurisdictional delineation and 2015 reevaluation found that there is presently no flow from the site and no jurisdictional features are present following the installation of flood control improvements on adjacent and upstream land to the east. As a result, all three (3) USGS mapped ephemeral blueline drainages that historically crossed the site have been cut-off from their upstream sources and no longer convey water onto and across the study area.

In 2011 two (2) special status wildlife species (loggerhead shrike and black-tailed jackrabbit, neither of which is listed by state or federal agencies) were observed onsite. No special status plant species were identified onsite.

Natural Resources Assessment, Inc. (NRAI) was contracted by L&L to conduct focused surveys for San Bernardino kangaroo rat (SBKR) in 2005, 2011, and 2016. The surveys identified SBKR onsite.

In addition to SBKR, the following special status wildlife species were identified onsite during trapping: northwestern San Diego pocket mouse (in 2005, 2011, and 2016) and Los Angeles pocket mouse in 2011. Density of SBKR occupying the area is considered to be “trace to low” and much of the potentially occupied habitat designated by NRAI in 2011 and 2016 is along and surrounding the loose sand of remnant drainages (NRAI 2011, 2016, and ENVIRA 2016). San Diego and Los Angeles pocket mouse species identified onsite are not listed by state or federal agencies, but are considered “California species of concern”.

3.2) Vegetation Series

Approximately two-thirds of the subject property (estimated at 66%) can be characterized as relatively undisturbed alluvial fan sage scrub inhabited by a mixture of non-native and mostly native plants (Figure 5). Areas within the western half of the site are more disturbed in association with past and ongoing human activities, such as cultivation of *Eucalyptus* and jojoba and the presence of several structures (now removed, but with remnant foundations). Other disturbances observed on the western portion of the site include introduction of invasive non-native plant species, previously cleared and/or recently disked areas, debris piling, and pedestrian and ORV activity. Based on the results of this study, most of the site supports a diverse group of native low-growing annuals and other herbs away from these disturbances. Vegetative cover ranges from approximately 0 to 99 percent, depending on location within the site.



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Figure 5

Habitat Map

(Photo obtained from Google Earth, October 2016)

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Table 2. Habitat onsite.

Habitat	Acres
Alluvial Fan Sage Scrub	38.6
Active Agricultural (jojoba)	5.1
Eucalyptus Groves	5.6
Disturbed/Non-Native Semi-natural Stands/Ornamental	9.4
Total	58.7

3.2.1) *Eriogonum fasciculatum* – (*Lepidospartum squamatum*) alluvial fan (32.070.01), *Artemisia californica* – *Lepidospartum squamatum* (32.010.09) Alliances; Previously Identified as Alluvial Fan Sage Scrub (Holland Element Code 32720)

Alluvial fan sage scrub (AFSS) contains mostly drought-deciduous shrubs with soft leaves and occurs in association with washes and gently sloping alluvial fans. Areas containing AFSS are usually subject to periodic flooding and mature phases of this vegetation community can contain significant cover of larger perennials. Scalebroom (*Lepidospartum squamatum*) is typically an indicator plant species of this vegetation community and is present (uncommonly) within alluvial scrub areas of the site in association with other large plants, including California buckwheat (*Eriogonum fasciculatum* var. *foliolosum*), California sagebrush (*Artemisia californica*), yerba santa (*Eriodictyon* sp.), and chaparral yucca (*Yucca whipplei*). Other larger shrubs less commonly observed within these areas include chamise (*Adenostoma fasciculatum*), spiny redberry (*Rhamnus crocea*), holly-leaved cherry (*Prunus illicifolia*), blue elderberry (*Sambucus mexicana*), and sugar bush (*Rhus ovata*). This vegetation community is present throughout the east half of the current study area away from disturbances within the western portion of the site. Alluvial fan sage scrub is state listed “very threatened” sensitive habitat.

Other shrubs, such as white sage (*Salvia apiana*), brittlebush (*Encelia farinosa*), sweetbush (*Bebbia juncea*), coast cholla (*Opuntia parryi*), interior bush lupine (*Lupinus excubitus*), sand washed butterweed (*Senecio flaccidus*), Thurber’s buckwheat (*Eriogonum thurberi*), jimsonweed (*Datura wrightii*), chia (*Salvia columbariae*), California croton (*Croton californicus*), and telegraph weed (*Heterotheca grandiflora*), are present. Small patches of tamarisk (*Tamarix* sp.) were observed on portions of the site within historic drainage areas.

Native plants commonly found within this community on the subject property include (but are not limited to) deerweed (*Lotus scoparius*), phacelia (*Phacelia* sp.), morning glory (*Calystegia macrostegia*), lanceleaf dudleya (*Dudleya lanceolata*), wild hyacinth (*Dichelostemma*

capitatum), and horseweed (*Conyza canadensis*). Less disturbed areas (especially in areas containing a cryptobiotic surface crust or in areas away from dense non-native grass cover) were inhabited with dot-seed plantain (*Plantago erecta*), sun cups (*Cammissonia* sp.), purple clarkia (*Clarkia purpurea*), forget me not (*Cryptantha* sp.), popcorn flower (*Plagiobothrys* sp.), purple nightshade (*Solanum xanti*), yellow pincushion (*Chaenactis glabruiscula*), sapphire woolstar (*Eriastrum sapphirinum*), silver puffs (*Uropappus lindleyi*), and other low-growing herbs. Fiddleneck (*Amsinckia menziesii* var. *intermedia*) was observed sporadically throughout disturbed and undisturbed portions of the site.

3.2.2) *Juniperus californica* – *Eriogonum fasciculatum* – *Artemisia californica* Alliance (89.100.00); Previously Identified as Peninsular (Cismontane) Juniper Woodland and Scrub (Holland Element Code 72400)

This plant community is characterized by the presence of California juniper (*Juniperus californica*) within cismontane sage scrub areas. Peninsular juniper woodland and scrub (PJW) is typically found above 2,500 feet AMSL. This community is most often associated with the eastern slopes of the peninsular ranges and is found in association with other desert edge plants, including pinyon pine (*Pinus monophylla* and/or *P. quadrifolia*), chamise, yucca (*Yucca* sp.), and ceanothus (*Ceanothus* sp.) However, PJW has been documented to occur in other low-lying areas of southwestern San Bernardino County and western Riverside County.

On the subject property, PJW occurs in low-density patches and is found in association with undisturbed portions of the site, mostly within relatively undisturbed AFSS vegetated areas. Many herbaceous annuals are also present.

3.2.3) *Eucalyptus (globulus, camaldulensis)* (Eucalyptus groves) Semi-natural Stands (79.100.00); Previously Identified as Non-Native *Eucalyptus* Woodland (Holland Element Code 11300 or 11000)

Eucalyptus trees, native to Australia, are commonly found in southern California and have been widely utilized as shade trees in the area since the 1850s. Two (2) separate *Eucalyptus* groves are present within the northwestern corner of the subject property. A diverse shrub understory is not present at this location. Mostly weedy low-growing annuals and grasses were observed in association with these groves. During a previous assessment (in June 2005) the trees were being watered by drip irrigation and appeared healthy overall. Surveys since 2006 appear to indicate the trees are no longer irrigated and are declining in health.

3.2.4) Disturbed / *Bromus rubens* (42.024.01) / *Bromus diandrus* – *Avena* spp. (42.026.22)
Semi-natural Stands; Previously Identified as Ruderal Habitat (Holland Element Code 11300)

Disturbed habitat includes areas that contain mostly non-native plant species, including ornamentals and ruderal exotics. Disturbed areas within the western portion of the site that are not currently inhabited by *Eucalyptus*, jojoba, or other ornamental plants are now largely ruderal. Mostly non-native weedy species have invaded these areas, including short-pod mustard (*Hirschfeldia incana*), red-stemmed filaree (*Erodium cicutarium*), long-beaked storksbill (*Erodium botrys*), tumble pigweed (*Amaranthus albus*), prickly lettuce (*Lactuca serriola*), and Russian thistle (*Salsola tragus*). Very dense non-native grasses, including red brome (*Bromus madritensis* ssp. *rubens*), ripgut (*Bromus diandrus*), cheatgrass (*Bromus tectorum*), fescue (*Vulpia* sp.), and oats (*Avena* sp.), were observed in disturbed and undisturbed areas choking out low-growing plant species.

Other plant species less commonly observed within disturbed areas of the subject property include calabazilla (*Cucurbita foetidissima*), tocalote (*Centaurea melitensis*), annual bur weed (*Ambrosia acanthicarpa*), puncture vine (*Tribulus terrestris*), vinegar weed (*Trichostemma lanceolatum*), and cheeseweed (*Malva parviflora*).

3.2.5) Ornamental (Holland Element Code None or 11000)

Remnants of non-native ornamental landscaping are present within the southwestern portion of the site in association with remaining signs of residences along Abbey Way. Trees such as gum tree, pine (*Pinus* sp.), Peruvian pepper tree (*Schinus molle*), and olive (*Olea europea*) were observed. A single Fremont's cottonwood (*Populus fremontii*) is also present. A single Peruvian pepper tree was also identified within the southeastern portion of the site and is surrounded by native peninsular juniper woodland.

3.2.6) Agriculture (Holland Element Code 18300)

Several rows of cultivated jojoba (*Simmondsia chinensis*) plants are present within the southwestern portion of the site, south of the *Eucalyptus* groves.

3.3) Plant Species

Annual plant growth was good in 2016. A total of 145 plant species were observed during the 2017 botanical investigation and previous L&L biological surveys in 2005, 2006, 2011, 2014, 2015 and 2016. Species abundance increased, flowering increased and six new species were

identified. Despite the increased precipitation and designation of the year as “relatively productive” for botanical species and spring germination, due to the previous five or six years of consecutive drought in the region, some annual plants may have remained relatively scarce.

Table 4 (Appendix A) includes all sensitive species identified in the CNDDDB (2017) occurring within the project quadrangle or eight (8) adjacent quadrangles. The table details each species habitat, range, and sensitivity rating and L&L’s probability determination for the species occurring in the survey area.

No special status plant species were identified within the survey area during past or current surveys conducted by L&L. Following multiple years of surveys and at least one season with significant rainfall, L&L updated the sensitive species probabilities to reflect the lack of detection and a reduced probability of occurrence for some species. Only one species is still identified as having a low-moderate potential to occur onsite within native habitat: Parry’s spineflower (*Chorizanthe parryi* var. *parryi*). The species was not reduced to low or absent due to the presence of suitable habitat, consecutive seasons of drought, close proximity of recorded locations, very small size of the plant and high density of grassy plants within portions of the survey area. For these reasons potential for the species to occur could not be entirely ruled out.

3.3.1) Heritage Trees

The City of Highland regulates impacts to trees that qualify as “heritage trees”. A heritage tree count and survey was conducted by L&L in 2006 and identified 114 trees meeting the City of Highland criteria within the survey area, the majority of which were California juniper or western sycamore (*Platanus racemosa*). Other species present include blue elderberry, holly-leaved cherry, sugar bush, *Eucalyptus*, tamarisk, tobacco tree (*Nicotiana glauca*), pine sp., olive, and Peruvian pepper.

3.4) Wildlife Species

A total of 60 wildlife species were detected or observed by L&L during the 2005, 2006, 2011, 2014, 2015 and 2016 biological surveys in the survey area (Table 3 in Appendix A). Wildlife species observed during surveys were recorded. One sensitive wildlife species was observed incidentally during this botanical survey, black-tailed jackrabbit (*Lepus californicus*, herein referred to as BTJA) (Table 5). The California Department of Fish and Game considers BTJA a Special Species of Concern to California. BTJA has been observed during previous surveys of the site.

4.0) REFERENCES

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APPENDIX A

Table 3. List of plant (N=145) and wildlife (N=60) species identified on the full Greenspot Partners site. This list includes plant species detected during previous studies on the site by L&L in 2005, 2006, 2011, and 2014 through 2017. Not all plants included on this list were observed during the present study. Plants were identified using keys, descriptions, and illustrations in Abrams (1923-1960), Hickman (1993), Munz (1974), and Parker (1999). Plant taxonomy and nomenclature generally follows Hickman. A single asterisk (*) indicates non-native plant taxa.

<u>Scientific Name</u>	Plants (N=145)	<u>Common Name</u>
Amaranthaceae		Pigweed Family
<i>Amaranthus albus</i>		Tumble Pigweed
Anacardiaceae		Sumac Family
<i>Rhus ovata</i>		Sugar Bush
<i>Schinus molle</i>		Peruvian Pepper*
<i>Schinus teribenthifolius</i>		Brazilian Pepper*
Asteraceae		Sunflower Family
<i>Ambrosia acanthicarpa</i>		Annual Bur-Sage
<i>Ambrosia psilostachya</i>		Western Ragweed
<i>Artemesia californica</i>		California Sagebrush
<i>Baccharis salicifolia</i>		Mulefat
<i>Bebbia juncea</i>		Sweetbush
<i>Carduus pycnocephalus</i>		Italian Thistle*
<i>Centaurea melitensis</i>		Tocalote*
<i>Chaenactis artemisiifolia</i>		White Pincushion
<i>Chaenactis glabriuscula</i>		Yellow Pincushion
<i>Cirsium</i> sp.		Thistle
<i>Conyza boniariensis</i>		Flax-leaved Fleabane
<i>Conyza canadensis</i>		Horseweed
<i>Deinandra fasciculata</i>		Slender Tarweed
<i>Encelia farinosa</i>		Brittlebush
<i>Ericameria</i> sp.		Goldenbush
<i>Erigeron foliosus</i>		Fleabane Aster
<i>Filago californica</i>		California Filago
<i>Gazinia</i> sp.		Gazinia*
<i>Gnaphalium luteo-album</i>		Everlasting Cudweed
<i>Gutierrezia</i> sp.		Matchweed
<i>Helianthus annuus</i>		Annual Sunflower
<i>Heterotheca grandiflora</i>		Telegraph Weed
<i>Lactuca serriola</i>		Prickly-lettuce*
<i>Lasthenia californica</i>		Goldfields
<i>Lepidospartum squamatum</i>		Scalebroom
<i>Matricaria discoidea</i> (previously <i>Chamomilla suaveolens</i>)		Pineapple Weed*
<i>Senecio flaccidus</i>		Sand Washed Butterweed
<i>Senecio vulgaris</i>		Common Groundsel*

Scientific Name

Plants (continued)

Common Name

Asteraceae (cont.)

Sonchus oleraceus
Sonchus asper
Stephanomeria virgata
Taraxacum officinale
Uropappus lindleyi
Xanthium strumarium

Sunflower Family

Sow-thistle*
 Prickly Sow-thistle*
 Twiggy Wreath Plant
 Common Dandelion*
 Silver Puffs
 Cocklebur

Boraginaceae

Amsinckia menziesii var. *intermedia*
Cryptantha sp.
Heliotropium curassavicum
Pectocarya linearis
Plagiobothrys sp.

Borage Family

Fiddleneck
 Unidentified Forget-Me-Not
 Wild Heliotrope
 Slender Pectocarya
 Popcorn Flower

Brassicaceae

Brassica nigra
Hirschfeldia incana
Lepidium species
Lobularia maritime
Raphinus sativus
Sisymbrium altissimum
Sisymbrium irio

Mustard Family

Black Mustard*
 Short-pod Mustard*
 Unidentified Peppergrass
 Sweet Alyssum*
 Wild Radish*
 Tumble Mustard*
 London Rocket*

Cactaceae

Cylindropuntia californica var. *parkeri*
 (previously *Opuntia parryi*)
Opuntia sp.

Cactus Family

Valley Cholla

 Beavertail Cactus

Caprifoliaceae

Sambucus mexicana

Honeysuckle Family

Blue Elderberry

Chenopodiaceae

Salsola tragus
Chenopodium album

Goosefoot Family

Russian Thistle
 Lamb's Quarters*

Convolvulaceae

Calystegia macrostegia

Mourning-Glory Family

Morning Glory

Crassulaceae

Crassula connata
Dudleya lanceolata

Stonecrop Family

Pygmy Stonecrop
 Lanceleaf Dudleya

Cucurbitaceae

Cucurbita foetidissima
Cucurbita palmata
Marah macrocarpus

Gourd Family

Calabazilla
 Coyote Gourd
 Wild-cucumber

Scientific Name

Plants (continued)

Common Name

Cupressaceae

Juniperus californica

Cypress Family

California Juniper

Cyperaceae

Cyperus eragostis

Sedge Family

Tall Umbrella Nutsedge

Euphorbiaceae

Chamaesyce albomarginata

Croton californicus

Eremocarpus setigerus

Euphorbia sp.

Ricinus communis

Spurge Family

Rattlesnake Weed

California Croton

Doveweed

Ground Spurge*

Castor Bean*

Fabaceae

Acmispon glaber (previously *Lotus scoparius*)

Albizia lophantha

Lotus species

Lupinus bicolor

Lupinus excubitus

Medicago polymorpha

Melilotus alba

Melilotus indica

Pea Family

Deerweed

Plume Acacia*

Unidentified Lotus

Dove Lupine

Interior Bush Lupine

Burclover*

White Sweetclover*

Sourclover*

Geraniaceae

Erodium cicutarium

Erodium botrys

Geranium Family

Red-stemmed Filaree*

Long-beaked Storksbill*

Hydrophyllaceae

Eriodictyon sp. (*crassifolium*?)

Phacelia sp. (*distans*?)

Waterleaf Family

Yerba Santa

Distant Phacelia

Lamiaceae

Marrubium vulgare

Salvia apiana

Salvia columbariae

Trichostemma lanceolatum

Mint Family

Horehound*

White Sage

Chia

Vinegar Weed

Liliaceae

Dichelostemma capitatum

Yucca whipplei

Lily Family

Wild Hyacinth

Chaparral Yucca

Lythraceae

Lagerstroemia sp.

Loosestrife Family

Crepe Myrtle*

Malvaceae

Malva parviflora

Mallow Family

Cheeseweed*

Myrtaceae

Eucalyptus sp.

Myrtle Family

Gum Tree*

Scientific Name

Plants (continued)

Common Name

Nyctaginaceae

Mirabilis californica

Four O'Clock Family

Wishbone Bush

Oleaceae

Fraxinus species

Olea europea

Olive Family

Ash*

Olive*

Onagraceae

Cammissonia californica

Cammissonia sp. 2

Cammissonia sp. 3

Clarkia purpurea ssp. *quadrivulnera*

Oenothera elata ssp. *hookeri*

Epilobium ciliatum var. *ciliatum*

Evening Primrose Family

Mustard Evening Primrose

Evening Primrose or Sun Cups

Evening Primrose or Sun Cups

Purple Clarkia

Hooker's Evening Primrose

Green Willowherb

Oxalidaceae

Oxalis corniculata

Oxalis Family

Creeping Wood-sorrel*

Pinaceae

Pinus sp.

Pine Family

Pine*

Plantaginaceae

Plantago erecta

Plantain Family

Dot-seed Plantain

Plantanaceae

Platanus racemosa

Sycamore Family

Western Sycamore

Poaceae

Avena barbata

Avena species

Bromus diandrus

Bromus madritensis ssp. *rubens*

Bromus tectorum

Cynodon dactylon

Digitaria sanguinalis

Lamarckia aurea

Leptochloa univerva

Poa annua

Polypogon monspiliensis

Schismus barbatus

Vulpia sp.

Grass Family

Slender Wild Oat*

Oat*

Ripgut Brome*

Foxtail Chess*

Cheatgrass*

Bermuda Grass*

Large Crabgrass*

Goldentop*

Spangletop*

Annual Bluegrass*

Rabbit's Foot Grass

Mediterranean Grass

Fescue*

Polemoniaceae

Eriastrum sapphirinum

Phlox Family

Sapphire Woolstar

Scientific Name

Plants (continued)

Common Name

Polygonaceae

Eriogonum fasciculatum var. *foliolosum*
Eriogonum sp.
Eriogonum thurberi
Polygonum aviculare
Rumex crispus

Buckwheat Family

California Buckwheat
Unidentified Buckwheat
Thurber's Buckwheat
Knotweed*
Curly Dock*

Portulacaceae

Portulaca oleracea

Purslane Family

Common Purslane*

Primulaceae

Anagallis arvensis

Primrose Family

Scarlet Pimpernel*

Rhamnaceae

Ceanothus crassifolius
Ceanothus sp.
Rhamnus crocea

Buckthorn Family

Hoaryleaf Ceanothus
Lilac
Spiny Redberry

Rosaceae

Adenostoma fasciculatum
Heteromeles arbutifolia
Prunus illicifolia

Rose Family

Chamise
Toyon
Holly-leaved Cherry

Salicaceae

Populus fremontii
Salix sp.

Willow Family

Western Cottonwood
Willow

Scrophulariaceae

Mimulus guttatus
Veronica anagallis-aquatica

Figwort Family

Seep Monkeyflower
Water Speedwell*

Simaroubaceae

Ailanthus altissima

Ailanthus Family

Tree of Heaven *

Simmondsiaceae

Simmondsia chinensis

Jojoba Family

Jojoba*

Solanaceae

Datura wrightii
Nicotiana glauca
Nicotiana quadrivalvis
Solanum xanti

Nightshade Family

Western Jimsonweed
Tobacco Tree*
Indian Tobacco
Purple Nightshade

Tamaricaceae

Tamarix sp.

Tamarisk Family

Tamarisk*

Typhaceae

Typha sp.

Cattail Family

Unidentified Cattail

Scientific Name

Plants (continued)

Common Name

Urticaceae

Urtica urens

Nettle Family

Dwarf Nettle*

Viscaceae

Phorodendron sp.

Phorodendron sp.

Mistletoe Family

Unidentified Mistletoe (Juniper)

Unid. Mistletoe (Sycamore)

Zygophyllaceae

Tribulus terrestris

Caltrop Family

Puncture Vine*

Birds (N=48)

Accipitridae

Accipiter cooperii

Buteo jamaicensis

Buteo lineatus

Hawk Family

Cooper's Hawk

Red-tail Hawk

Red-shouldered Hawk

Aegithalidae

Psaltriparus minimus

Long-tailed Tit Family

Bushtit

Apodidae

Aeronautes saxatalis

Swift Family

White-Throated Swift

Ardeidae

Ardea herodias wardi

Heron Family

Great Blue Heron

Bombycillidae

Phainopepla nitens

Waxwing Family

Phainopepla

Cardinalidae

Pheuclicus melanocephalus

Cardinal Family

Black-headed Grosbeak

Cathartidae

Cathartes aura

Vulture Family

Turkey Vulture

Charadriidae

Charadrius vociferus

Plover Family

Killdeer

Columbidae

Columba livia

Columba fasciata

Zenaida macroura

Pigeon Family

Rock Dove (Feral Pigeon)

Band-tailed Pigeon

Mourning Dove

Corvidae

Aphelocoma californica

Corvus brachyrhynchos

Corvus corax clarionensis

Jay and Crow Family

Western Scrub Jay

American Crow

Common Raven

Scientific Name

Birds (continued)

Common Name

Cuculidae

Geococcyx californianus

Cuckoo Family

Greater Roadrunner

Emberizidae

Melospiza melodia

Pipilo crissalis

Pipilo maculatus

Zonotrichia leucophrys

Emberizine Sparrow Family

Song Sparrow

California Towhee

Spotted Towhee

White-crowned Sparrow

Falconidae

Falco sparverius

Falcon Family

American Kestrel

Icteridae

Euphagus cyanocephalus

Icterus bullockii

Icterid Family

Brewer's Blackbird

Bullock's Oriole

Fringillidae

Carduelis lawrencei

Carduelis psaltria

Carpodacus mexicanus

Finch Family

Lawrence's Goldfinch

Lesser Goldfinch

House Finch

Laniidae

Lanius ludovicianus

Shrike Family

Loggerhead Shrike

Mimidae

Mimus polyglottos polyglottos

Toxostoma redivivum redivivum

Mockingbird Family

Northern Mockingbird

California Thrasher

Odontophoridae

Callipepla californica californica

Quail Family

California Quail

Parulidae

Dendroica coronata

Wood Warbler Family

Yellow-rumped Warbler

Passeridae

Passer domesticus

Old World Sparrow Family

House Sparrow

Picidae

Colaptes auratus

Melanerpes formicivorus

Picoides nuttallii

Woodpecker Family

Northern Flicker

Acorn Woodpecker

Nuttall's Woodpecker

Sturnidae

Sturnus vulgaris

Starling Family

European Starling

Trochilidae

Calypte anna

Calypte costae

Hummingbird Family

Anna's Hummingbird

Costa's Hummingbird

Scientific Name

Birds (continued)

Common Name

Troglodytidae

Thryomanes bewickii
Troglodytes aedon

Wren Family

Bewick's Wren
House Wren

Turdidae

Sialia currucoides
Sialia mexicana

Thrush Family

Mountain Bluebird
Western Bluebird

Tyrannidae

Myiarchus cinerascens
Sayornis nigricans
Sayornis saya
Tyrannus verticalis

Tyrant Flycatchers

Ash-throated Flycatcher
Black Phoebe
Say's Phoebe
Western Kingbird

Mammals (N=7)

Canidae

Canis latrans
Canis domesticus

Dog, Fox & Coyote Family

Coyote
Domestic Dog

Geomyidae

Thomomys bottae

Pocket Gopher Family

Botta's Pocket Gopher

Heteromyidae

Dipodomys merriami parvus

Kangaroo Rat Family

San Bern. Kangaroo Rat (sign)

Leporidae

Lepus californicus
Sylvilagus audubonii

Rabbit Family

Black-tailed Jackrabbit
Desert Cottontail

Sciuridae

Spermophilus beecheyi

Squirrel Family

California Ground Squirrel

Reptiles & Amphibians (N=5)

Colubridae

Pituophis catenifer

Colubrid Snake Family

Gopher Snake

Iguanidae

Sceloporus occidentalis
Sceloporus orcutti
Uta stansburiana

Iguanid Family

Western Fence Lizard
Granite Spiny Lizard
Side-blotched Lizard

Teiidae

Cnemidophorus tigris

Teiid Lizard Family

Coastal Western Whiptail

* Excludes invertebrates

Table 4. Sensitive plant species probability table.

Special Status Species	Habitat and Distribution	Flower season	Status Designation	Occurrence Probability
Plants (41)				
<i>Allium howellii</i> var. <i>clokeyi</i> Mt. Pinos onion	Great Basin scrub, pinyon and juniper woodland, meadows, and seeps (edges). 1385-1800 m.	April - June	Fed: None Calif: S2 CNPS: 1B.3 USFS: S	Absent (elev. range)
<i>Arenaria paludicola</i> Marsh sandwort	Mainly in wetlands & freshwater marshes in a Mediterranean climate, 0-1476 ft. Can grow in saturated acidic bog soils & sandy soils with a high organic content. Occur in WA as well as San Fran, Santa Cruz, San Luis Obispo, & San Bern Cos. in Cal.	May - August	Fed: END Calif: END CNPS: 1B.1	Absent
<i>Astragalus hornii</i> var. <i>hornii</i> Horn's milk-vetch	Sandy flats, Meadows & seeps, playas. Along lake margins, alkali sites 60-850 m. San Joaquin Valley, South Coast, Western Transverse Ranges, W edge of the Mojave Desert.	May - Oct	Fed: None Calif: S1 CNPS: 1B.1	Absent
<i>Berberis nevinii</i> Nevin's barberry	Coastal sage scrub, chaparral, oak woodland, riparian scrub on sandy or gravelly soils usually below 2700 ft.; scattered localities in LA, San Bern, Riv, & San Diego Cos.	Mar - June (can ID all yr.)	Fed: END Calif: END CNPS: 1B.1	Absent
<i>Brodiaea filifolia</i> Thread-leaved Brodiaea	Grasslands, vernal pools /alkali sink in inland valleys; often on upland heavy clay soils nearer coast; scattered in S CA foothills & valleys (LA Co. to S Bern. & San Diego Cos.), below ±2500 ft. elev.	May - June	Fed: THR Calif: END CNPS: 1B.1	Absent
<i>Calochortus palmeri</i> var. <i>palmeri</i> Palmer's mariposa-lily	Usually in wetlands, in meadows, chaparral, riparian & pine forest. Elevational range 1000-2390 m In the San Jacinto Mts., Tehachapi Mt, Transvers Ranges.	April - July	Fed: None Calif: S2 CNPS: 1B.2 USFS: S	Absent (elev. range)
<i>Calochortus plummerae</i> Plummer's mariposa-lily	Chaparral, coastal scrub, pine forest, valley & foothill grassland, 100-1700 m elev.; widespread but uncommon throughout S CA mtns., foothills, & valleys.	May - July	Fed: None Calif: S4 CNPS: 4.2 USFS: S	Low-Absent (Survey results)
<i>Carex comosa</i> Bristly sedge	Marshes & swamps, lake margins, valley & foothill grassland, coastal prairie, wet places -5-1005 m.	May - Sept	Fed: None Calif: S2 CNPS: 2B.1	Absent

Special Status Species	Habitat and Distribution	Flower season	Status Designation	Occurrence Probability
<i>Castilleja lasiorhyncha</i> San Bernardino Mountain's owl's-clover	Montane Meadows, Pebble Pvm Plain, moist edges of springs/ seeps on clay soil in San Bern. Mnts. Wet meadows, openings in coniferous forest. Soil at Cuyamaca Lake historic pop Holland stony fine sandy loam, loamy alluvial land. Distrib. in San Diego & Riv. Co. between Tahquitz & Little Tahquitz Val in the San Jacinto Mnts; San Bern. Co. near Big Bear Lake & Lake Arrowhead Elev range 1300-2390 m.	May - August	Fed: None Calif: S2? CNPS: 1B.2 USFS: S	Absent (elev. range)
<i>Centromadia pungens</i> ssp. <i>laevis</i> Smooth tarplant	Seasonally wet low elev. Grassland, also fallow fields, drainage ditches; primarily in SW Riv. Co. but a few sites in interior valleys of LA, San Bern., San Diego Cos. Elevational range from 0-640 m.	April - Sept	Fed: None Calif: S2 CNPS: 1B.1	Absent
<i>Chloropyron maritimum</i> ssp. <i>maritimum</i> Salt marsh bird's-beak	Coastal salt marsh & coastal dunes. Limited to the higher zones of the salt marsh habitat. Below 100 ft. elevation	May - Oct	Fed: END Calif: END CNPS: 1B.2	Absent
<i>Chorizanthe parryi</i> var. <i>parryi</i> Parry's spineflower	LA, San Bernardino, & Riverside Cos.; sandy places in alluvial washes, coastal or desert scrublands, valley & foothill grasslands, 1000-4000 ft. elev.	April - June	Fed: None Calif: S2 CNPS: 1B.1 USFS: S	Low-Moderate (survey results, small, heavy grasses)
<i>Chorizanthe xanti</i> var. <i>leucotheca</i> White-bracted spineflower	Sandy or gravelly soil, desert shrubland, pinyon-juniper woodland, 300-1200 m elev.; E San Bernardino & N San Jacinto Mts.	April - June	Fed: None Calif: S3 CNPS: 1B.2 USFS: S	Absent
<i>Cuscuta obtusiflora</i> var. <i>glandulosa</i> Peruvian dodder	Freshwater marshes & swamps. 15-280 m.	July - Oct	Fed: None Calif: SH CNPS: 2B.2	Absent
<i>Dodecahema leptoceras</i> Slender-horned spineflower	Open, sandy alluvial benches in valleys & canyons. Shrubland & cismontane woodland; San Fernando Valley, Santa Ana River Valley, W Riverside Co. Range 650-2500 ft. El.	April - June	Fed: END Calif: END CNPS: 1B.1	Low (suit habitat, adjacent records, survey results)
<i>Eriastrum densifolium</i> ssp. <i>sanctorum</i> Santa Ana River woollystar	Shrubland, alluvial fans & plains; endemic to Santa Ana River watershed, Orange Co. to San Bern. Co.	May - Sept	Fed: END Calif: END CNPS: 1B.1	Low (pot. Habitat, adj. records, survey results)
<i>Fimbristylis thermalis</i> Hot springs Fimbristylis	Found in fresh water wetlands, freshwater marsh, Mineralized sands of springs, meadows, & alkaline seeps. El. range 360-4400 ft.	July - Sept	Fed: None Calif: S1S2 CNPS: 2B.2	Absent

Special Status Species	Habitat and Distribution	Flower season	Status Designation	Occurrence Probability
<i>Galium californicum</i> ssp. <i>primum</i> Alvin meadow bedstraw	Chaparral, lower montane coniferous forest. Granitic, sandy soils. Grows in shade of trees & shrubs at the lower edge of the pine forest (pine/chaparral ecotone) 1350-1700 m.	May - July	Fed: None Calif: S1 CNPS: 1B.2 USFS: S	Absent
<i>Helianthus nuttallii</i> ssp. <i>parishii</i> Los Angeles sunflower	Coastal fresh water marshes & swamps below 5500 ft. elev. Distributed in SW Calif. PRESUMED EXTINCT. Last seen in 1937.	Aug - Oct	Fed: None Calif: SH CNPS: 1A	Absent
<i>Heuchera parishii</i> Parish's alumroot	Rocky areas, Alpine boulder, & rock field, lower & upper montane & subalpine coniferous forest in the San Bernardino Mountains. Elevation 1500–3800 m.	June - August	Fed: None Calif: S3 CNPS: 1B.3 USFS: S	Absent (elev. range)
<i>Horkelia cuneata</i> ssp. <i>puberula</i> Mesa Horkelia	Perennial herb found in chaparral, cismontane woodland & coastal scrub on sandy or gravelly soils. Elevational range 229-2296 ft.	Feb - July (Sept rare)	Fed: None Calif: S1 CNPS: 1B.1 USFS: S	Low
<i>Ivesia argyrocoma</i> var. <i>argyrocoma</i> Silver-haired Ivesia	Meadows, pebble plains, upper montane coniferous forest. In pebble plains and meadows with other rare plants. 1460-2960 m.	June - August	Fed: None Calif: S2 CNPS: 1B.2 USFS: S	Absent (elev. range)
<i>Lepidium virginicum</i> var. <i>robinsonii</i> Robinson's pepper-grass	Shrublands (chaparral & coastal sage scrub). 1-885 m elev. Los Angeles Co., inland to Riverside & San Bernardino Cos, & S to Baja Calif.	Jan - July	Fed: None Calif: S3 CNPS: 4.3	Low
<i>Lilium parryi</i> Lemon lily	Meadows, seeps, & streambanks. 1220-2745 m elev. in the mountains of S Calif. & SE Arizona.	July - August	Fed: None Calif: S3 CNPS: 1B.2 USFS: S	Absent (elev. range)
<i>Lycium parishii</i> Parish's desert-thorn	Arid slopes & sand flats, below ±3300 ft. elev. W low desert (Riv. & San Diego Cos.) & interior valleys (Riv Co.); disjunct to Ariz & Sonora (Mexico). Historic locations in San Bernardino Valley now extinct.	Mar - April	Fed: None Calif: S1 CNPS: 2B.3	Absent
<i>Malacothamnus parishii</i> Parish's bush-mallow	Chaparral, coastal sage scrub. In a wash. 305-455 m. (Presumed extinct – 1 occ. from 1985 “around San Bernardino”).	?	Fed: None Calif: SX CNPS: 1A	Absent
<i>Monardella macrantha</i> ssp. <i>hallii</i> Hall's Monardella	Montane forests valley & foothill grassland & mixed chaparral. 730-2195 m elev. San Bern. & San Gabriel Mts., Peninsular Ranges (Riverside & San Diego Cos.)	June - Oct	Fed: None Calif: S3 CNPS: 1B.3 USFS: S	Absent (elev. range)
<i>Monardella pringlei</i> Pringle's Monardella	Coastal scrub. Sandy hills 300-400 m.	May - June	Fed: None Calif: SX CNPS: 1A	Absent

Special Status Species	Habitat and Distribution	Flower season	Status Designation	Occurrence Probability
<i>Nasturtium gambelii</i> Gambel's water cress	Montane streams, marshes, & lake margins, 16-1083 ft. Historically on south central & southern coast of CA. Three populations known in Ca from San Luis Obispo & Santa Barbara Cos. One Record from each S. San Bernardino, LA & Orange Cos. from the early 1900 from collections locations vague & believed developed.	May - August	Fed: END Calif: THR CNPS: 1B.1	Absent
<i>Perideridia parishii</i> ssp. <i>parishii</i> Parish's yampah	Lower montane coniferous forest, meadows, upper montane coniferous forest. Damp meadows or along streambeds-prefers an open pine canopy. 1465-3000 m.	June - August	Fed: None Calif: S2 CNPS: 2B.2	Absent (elev. range)
<i>Ribes divaricatum</i> var. <i>parishii</i> Parish's gooseberry	Riparian woodland. On the banks of creeks in damp land, meadows, or swamps. Willow swales in riparian habitats 65-100 m.	Feb - April	Fed: None Calif: SX CNPS: 1A	Absent
<i>Schoenus nigricans</i> Black bog-rush	Marsh & swamps often alkaline. 150-2000 m.	Aug - Sept	Fed: None Calif: S2 CNPS: 2B.2 USFS: S	Absent
<i>Sidalcea hickmanii</i> ssp. <i>parishii</i> Parish's checkerbloom	Chaparral, cismontane woodland, lower montane coniferous forest. Disturbed burned or cleared areas on dry, rocky slopes, in fuel breaks & fire roads along the mountain summits. 1095-2135 m.	June - August	Fed: None Calif: S1 CNPS: 1B.2 USFS: S	Absent
<i>Sidalcea malviflora</i> ssp. <i>dolosa</i> Bear Valley checkerbloom	Meadows and seeps, riparian woodland, lower montane coniferous forest, upper montane coniferous forest. Known from wet areas within forested habitats. Affected by hydrological changes. 1575-2590 m.	May - August	Fed: None Calif: S2 CNPS: 1B.2 USFS: S	Absent (elev. range)
<i>Sidalcea neomexicana</i> Salt Spring checkerbloom	Coastal scrub, desert scrub (Alkaline playas); SW Calif., Baja Calif., SW US, mainland Mexico.	Mar - June	Fed: None Calif: S2 CNPS: 2B.2 USFS: S	Absent
<i>Sidalcea pedata</i> Bird-foot checkerbloom	Meadows and seeps, pebble plains. Vernal mesic sites in meadows or pebble plains. 1840-2305 m.	May - August	Fed: END Calif: END CNPS: 1B.1	Absent (elev. range)
<i>Sphenopholis obtusata</i> Prairie wedge grass	Mesic soils, meadows, seeps, cismontane woodland. 980-6560 ft. elev. NE South Coast (Santa Ana River), San Bernardino Mountains, south-central Peninsular Ranges (Cuyamaca Mtns), White & Inyo Mountains.	April - July	Fed: None Calif: S2 CNPS: 2B.2	Absent
<i>Streptanthus bernardinus</i> Laguna Mountains jewelflower	Moist canyons. 180-300 m elev. Desert slopes of San Jacinto Mts., San Diego area, Arizona, tropical Mexico.	May - Aug	Fed: None Calif: S3S4 CNPS: 4.3	Absent

Special Status Species	Habitat and Distribution	Flower season	Status Designation	Occurrence Probability
<i>Streptanthus campestris</i> Southern jewelflower	Chaparral or lower montane coniferous forest. Elev. 670-2500 m. San Bernardino, Riverside, & San Diego Cos.	May - July	Fed: None Calif: S3 CNPS: 1B.3 USFS: S	Absent (elev. range)
<i>Symphytotrichum defoliatum</i> San Bernardino aster	Chaparral, lower montane coniferous forest, & pinyon-juniper woodlands in rocky areas. Elev. 900-2300 m.	July - Nov	Fed: None Calif: S2 CNPS: 1B.2 USFS: S	Absent
<i>Thelypteris puberula</i> var. <i>sonorensis</i> Sonoran maiden fern	Meadows, seeps/streambanks between ±150-1800 ft. elev. Coastal foothills of Santa Monica, San Gabr., San Bern. Mts., desert foothills of San Jacinto Mts. to AZ & Baja CA.	Jan - Sept	Fed: None Calif: S2 CNPS: 2B.2 USFS: S	Absent

Special Status Habitat	Habitat Type	Status Designation	Present or Absent
Canyon Live Oak Ravine Forest	Riparian forest.	Fed: None Calif: None NDDDB: S3.3	Absent
Riversidian Alluvial Fan Sage Scrub	Coastal scrub.	Fed: None Calif: None NDDDB: S1.1	Occurs
Southern Coast Live Oak Riparian Forest	Riparian forest.	Fed: None Calif: None NDDDB: S4	Absent
Southern Cottonwood Willow Riparian Forest	Riparian forest.	Fed: None Calif: None NDDDB: S3.2	Absent
Southern Mixed Riparian Forest	Riparian forest.	Fed: None Calif: None NDDDB: S2.1	Absent
Southern Riparian Forest	Riparian forest.	Fed: None Calif: None NDDDB: S4	Absent
Southern Riparian Scrub	Riparian scrub.	Fed: None Calif: None NDDDB: S3.2	Absent
Southern Sycamore Alder Riparian Woodland	Riparian woodland.	Fed: None Calif: None NDDDB: S4	Absent
Southern Willow Scrub	Riparian scrub.	Fed: None Calif: None NDDDB: S2.1	Absent

Status designations and occurrence probabilities are defined in the Key.

Federal designations: (federal Endangered Species Act, U. S. Fish and Wildlife Service):

- END: Federally listed, endangered.
- THR: Federally listed, threatened.
- C1: Category I candidate. Sufficient data are available to support federal listing, but not listed at this time (equivalent to "candidate" (USDI Fish and Wildlife Service 1996).
- Former C2: Formerly a Category 2 candidate species. Threat and/or distribution data are not sufficient to support federal listing at this time. No longer recognized by FWS.
- C3a: Extinct.
- C3b: Taxonomically invalid.
- C3c: Too widespread and/or not threatened. No longer considered a federal candidate for listing.
- FSC: Federal Species of Concern

State designations: (California Endangered Species Act, California Dept. of Fish and Game)

- END: State listed, endangered.
- THR: State listed, threatened.
- RARE: State listed as rare. (Listed "Rare" animals have been re-designated as Threatened, but Rare plants have retained the Rare designation.)
- SSC: Species of Special Concern (DFG).

CDF&G Natural Diversity Data Base Designations: Applied to special status plants and sensitive plant communities; where correct category is uncertain, CDF&G uses two categories or question marks.

- S1: Fewer than 6 occurrences or fewer than 1000 individuals or less than 2000 acres.
- S1.1: Very threatened.
- S1.2: Threatened.
- S1.3: No current threats known.
- S2: 6-20 occurrences or 1000-3000 individuals or 2000-10,000 acres (decimal suffixes same as above).
- S3: 21-100 occurrences or 3000-10,000 individuals or 10,000-50,000 acres (decimal suffixes same as above).
- S4: Apparently secure in California; this rank is clearly lower than S3 but factors exist to cause some concern (i.e., there is some threat or somewhat narrow habitat). No threat rank.
- S5: Demonstrably secure or ineradicable in California. No threat rank.
- SH: All sites are historical. The element has not been seen for at least 20 years, but suitable habitat still exists.
- SX: All sites are extirpated. This element is extinct in the wild.

California Native Plant Society (CNPS) designations: (Note: According to CNPS (Skinner and Pavlik 1994), plants on Lists 1B and 2 meet definitions for listing as threatened or endangered under Section 1901, Chapter 10 of the California Fish and Game Code. This interpretation is inconsistent with other definitions; see text.)

- List 1A: Plants presumed extinct in California.
- List 1B: Plants rare and endangered in California and throughout their range.
- List 2: Plants rare, threatened, or endangered in California but more common elsewhere in their range.
- List 3: Plants about which we need more information; a review list.

List 4: Plants of limited distribution; a watch list.

USFS designations:

S: Sensitive.

Definitions of occurrence probability:

Occurs: Observed onsite during surveys described here or recorded onsite by other qualified biologists.

High: Observed in similar habitat in region by qualified biologists or often occurs in habitat similar to that onsite and within the known range of the species.

Moderate: Reported sightings in surrounding region or site and is within the known range of the species and often occurs in habitat similar to that onsite.

Low: Site is within the known range of the species but habitat onsite is rarely used by the species.

Absent: A focused study failed to detect the species, no suitable habitat is present, or the site is well outside known geographic or elevational ranges.

Unknown: No focused surveys have been performed in the region and the species' distribution and habitat are poorly known.

Table 5. Location of special status species identified during the current and previous surveys.

Taxon	Number	Date	GPS Location	Elevation (ft.)
BTJA	1	2017	N 34.106921 W 117.168205	1349'
BTJA	1	2017	N 34.106413 W 117.162218	1381'
BTJA	1	2016	N 34.106733, W -117.167173	1355'
CW	1	2015	N 34.106402, W -117.164833	1362'
BTJA	1	2014	N 34.10844, W -117.16383	1385'
BTJA	1	2014	N 34.10697, W -117.16275	1393'
LOSH	1	2011	N 34.10780, W -117.16442	1370
BTJA	1	2011	N 34.10612, W -117.16109	1391
BTJA	1	2011	N 34.10712, W -117.16592	1364
CH	1	2005	N 34.109427, W -117.166382	1368

Black-tailed Jackrabbit (BTJA)

Cooper's hawk (CH)

Loggerhead shrike (LOSH)

Coastal whiptail (CW)

Table 6. Climatic Data.

San Bernardino, CA (wunderground.com) Highland – KCAHIGH8			
Month Year	High	Low	Precipitation
September 2016	114	51	0.01
October 2016	106	52	0.97
November 2016	98	44	1.37
December 2016	78	35	4.75
January 2017	76	37	7.50
February 2017	79	36	3.16
March 2017	90	38	0.17
April 2017	96	47	0.00
May 2017	101	45	0.33
June 2017	111	57	0.00
July 2017	113	60	0.00
August 2017	113	63	0.55
Total 2016-2017 Season			18.81

APPENDIX B

Site Photographs

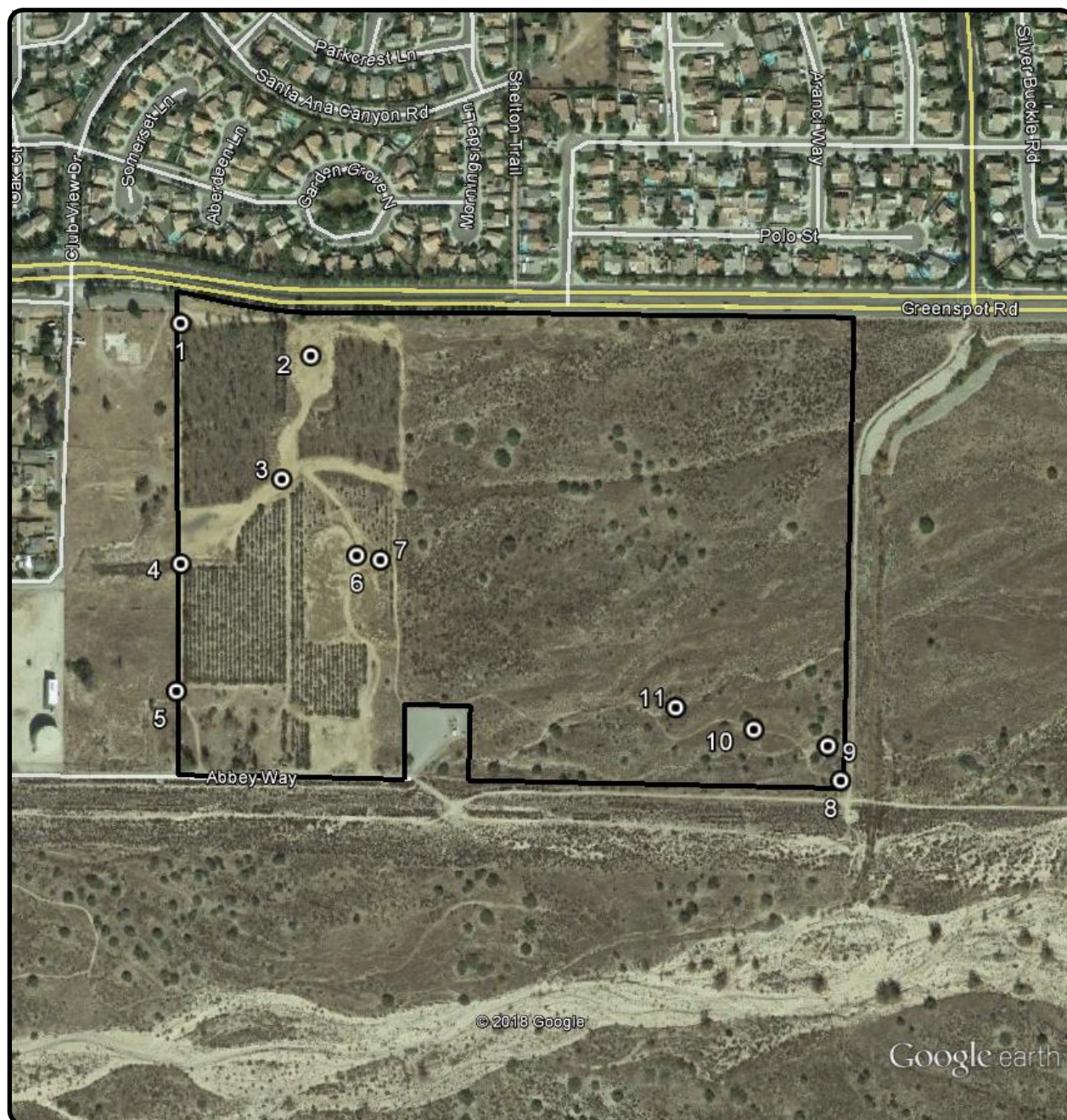




Photo 1a: (549) NW corner facing south.



Photo 1b: (550) NW corner facing east.



Photo 2: (539) N. central area of the disturbed western third facing south.



Photo 3: (551) Central area of the disturbed western third facing north-northwest. Dying Eucalyptus groves



Photo 4a: (548) W. center boundary facing north. West boundary & disturbed area.

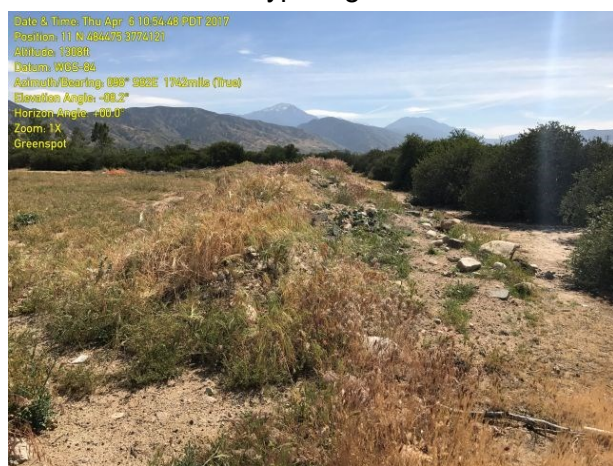


Photo 4b: (547) W. center boundary facing east. Jojoba groves & disturbed area.



Photo 5: (545) W boundary near southern boundary facing north. Jojoba groves & access road.



Photo 6: (543) Central area of the disturbed western third facing west.

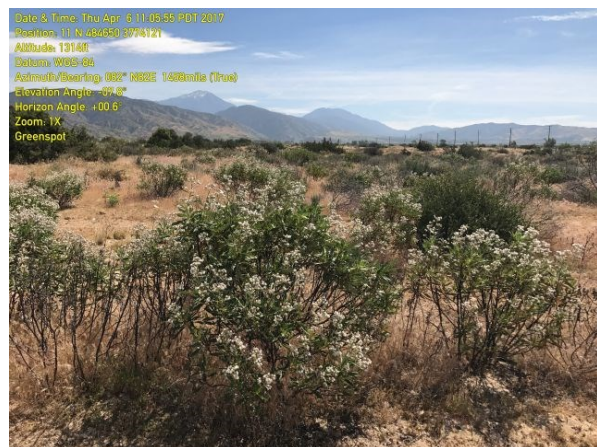


Photo 7a: (556) E central boundary of the disturbed area facing east into the AFSS.

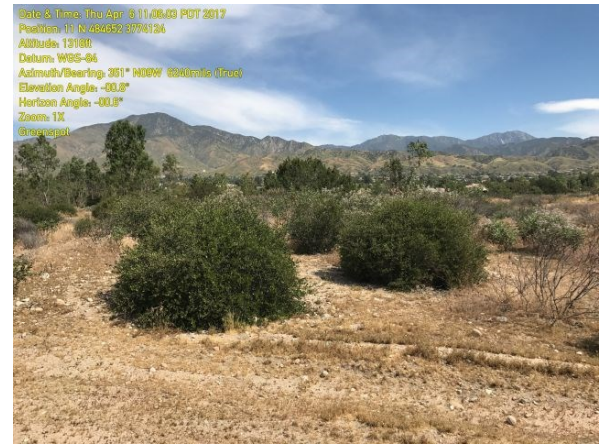


Photo 7b: (557) E central boundary of the disturbed area facing north. Jojoba groves & access road.



Photo 8: (560) SE corner facing NW.



Photo 9: (572) Just north of the SE corner facing north.



Photo 10: (564) Near the SE corner facing NW.

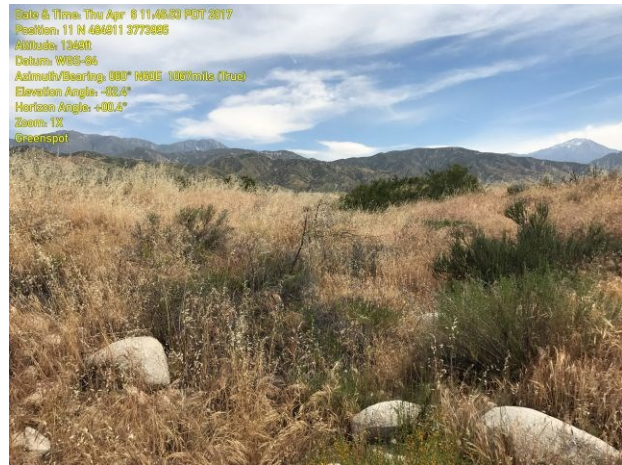


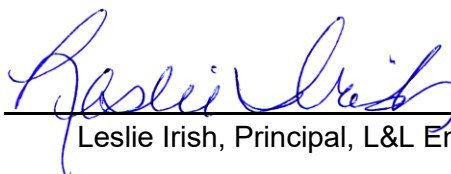
Photo 11: (571) Near the SE corner facing NE.

Certification

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

DATE: March 6, 2018

SIGNED: _____



Leslie Irish, Principal, L&L Environmental, Inc.
909-335-9897

1) Fieldwork Performed By:

Guy Bruyea

Name

2) Fieldwork Performed By:

Name

3) Fieldwork Performed By:

Name

4) Fieldwork Performed By:

Name

5) Fieldwork Performed By:

Name

6) Fieldwork Performed By:

Name

Check here ☐ if adding any additional names / signatures below or on other side of page.

APPENDIX C

Regulatory Environment

Federal Endangered Species Act

The U. S. Fish and Wildlife Service (USFWS), under the auspices of the federal Endangered Species Act (FESA) of 1973 (as amended), manages and protects species listed as endangered or threatened. An endangered species is defined as a species “in danger of extinction throughout all or a significant portion of its range” while a threatened species is defined as “likely to become endangered in the foreseeable future.”

“Take” of listed species is prohibited under Section 9 (a)(1)(B) of the FESA. The term “take” is defined as follows in Section 3 (18) of the FESA: “harass, harm, pursue, hunt, shoot, wound, trap, kill, capture or collect or to engage in any such conduct.” Harm is further defined as significant habitat alteration that results in death or injury to listed species by significantly impairing behavior patterns such as breeding, feeding, or sheltering. The USFWS can issue a permit for “take” of listed species incidental to otherwise lawful activities. Procedures for obtaining a permit for incidental take are identified under Section 7 of FESA for federal properties or where federal actions are involved, and are identified under Section 10 of FESA for non-federal actions.

Jurisdictional Determination of Wetlands, “Waters of the U.S.”

Three agencies generally regulate activities within streams, wetlands, and riparian areas in California: (1) the Army Corps of Engineers (ACOE) regulates activities under section 404 of the federal Clean Water Act; (2) the Regional Water Quality Control Board (RWQCB) regulates activities under section 401 of the federal Clean Water Act (CWA); and (3) the California Department of Fish and Wildlife (CDFW) regulates activities within wetlands under Fish and Game Code Sections 1600-1616.

United States Clean Water Act, Section 404

The ACOE has jurisdiction over “Wetlands” and “Waters of the United States” under Section 404 of the Clean Water Act (CWA). Permitting is required for activities that will result in discharge of dredge or fill material into “Waters of the United States” or adjacent wetlands and associated habitat. By definition these include all waterways, streams, intermittent streams, and their tributaries that could be used for interstate commerce. The term “interstate commerce”

has been broadly interpreted to include use by migratory waterfowl and out-of-state tourism. In non-tidal waters jurisdictional limits extend to the ordinary high water mark (OHWM), which is defined as that line on the shore established by fluctuations of water and indicated by physical characteristics such as clear natural line impression on the bank, shelving, changes in the character of soil, and destruction of the surrounding area. The upstream limit of ACOE jurisdiction is that point on the stream where the OHWM is no longer perceptible. Since flow patterns vary drastically from event to event alluvial fans do not always exhibit an OHWM or other evidences of repeated water flow. That portion of an alluvial fan that experiences sheet flow is not generally regulated as Waters of the United States; however, an inter-braided streambed, evidenced by an OHWM, is within ACOE jurisdiction. Vernal pools and other types of wetlands are also regulated by the ACOE as “Waters of the United States”.

United States Clean Water Act, Section 401

The RWQCB has jurisdiction over similar “Wetlands” and “Waters of the United States” under Section 401 of the CWA and the Porter-Cologne Water Quality Control Act under the California Water Code. Permitting is required for activities that will result in a discharge of soils, nutrients, chemicals, detrital materials, or other pollutants into “Waters of the United States” or adjacent wetlands that will affect water quality of those bodies and the area watershed.

California Department of Fish and Game Code, Section 1600

The CDFW, through provisions of the CDFG Code (Sections 1600-1616), is empowered to issue agreements (“Streambed Alteration Agreement”) for projects that will adversely affect wildlife habitat associated with any river, stream, or lake edges. Streams and rivers are defined by the presence of a channel bed, banks, and intermittent flow. CDFW regulates wetland areas only to the extent that those wetlands are part of a river, stream, or lake as defined by CDFW.

Determining limits of a wetland is not typically done in obtaining CDFW Agreements because the intent of the 1600 program is to safeguard riparian associated wildlife habitat. Riparian habitat includes willows (*Salix* sp.), mulefat (*Baccharis salicifolia*), and other vegetation typically associated with the banks of a stream or lake shoreline. In most situations wetlands associated with a stream or lake will fall within the limits of riparian habitat. Thus, the limits of CDFW jurisdiction based on riparian habitat will automatically include any wetland areas and may include additional areas that do not meet ACOE criteria for soils and/or hydrology (e.g., where riparian woodland canopy extends beyond the banks of a stream away from frequently saturated soils).

California Department of Fish and Wildlife

California Endangered Species Act

California Endangered Species Act (CESA) definitions of endangered and threatened species parallel those defined in the FESA. The CESA defines an endangered species as “. . . a native species or subspecies of a bird, mammal, fish, amphibian, reptile or plant which is in serious danger of becoming extinct throughout all, or a significant portion, of its range due to one or more causes including loss of habitat, change in habitat, over exploitation, predation, competition or disease.” Endangered species are in serious danger of becoming extinct and threatened species are likely to become endangered species in the foreseeable future (according to Sections 2062 and 2067, respectively, of the California Fish and Game Code). Candidate species are those under formal review by the CDFW for listing as endangered or threatened (Section 2067). Prior to being considered for protected status the CDFW designates a species as being of special concern. Species of special concern are those for which the CDFW has information indicating decline.

California Department of Fish and Game Code, Section 1600

This section allows the CDFW to issue agreements (“Streambed Alteration Agreement”) for projects that will adversely affect wildlife habitat associated with any river, stream, or lake edges. A detailed discussion of Section 1600 under the Fish and Game Code can be found in section 2.2.3 above.

California Natural Diversity Database

The California Natural Diversity Database (CNDDB) is a database that ranks overall condition of sensitive species and vegetation communities on global (throughout its range) and state (within California) levels. Additionally, subspecies and varieties are assigned a ranking for global condition as well. Ranking is numerical ranging from 1 to 5, with 1 indicating very few remaining individuals or little remaining habitat and 5 indicating a demonstrably secure to ineradicable population condition. State ranks may also include a threat assessment ranging from 1 (very threatened) to 3 (no current threats known).

California Native Plant Society

The California Native Plant Society (CNPS) has cataloged California's rare and endangered plants into lists according to population distributions and viability. These lists are numbered and

indicate the following: (1A) presumed extinct in California; (1B) rare, threatened, or endangered throughout their range; (2) rare, threatened, or endangered in California, but more common in other states; (3) more information is needed to establish rarity; and (4) plants of limited distribution in California (i.e., naturally rare in the wild) but whose populations do not appear to be susceptible to threat.

California Environmental Quality Act

The California Environmental Quality Act (CEQA) requires identification of environmental effects from discretionary projects. Significant effects are to be mitigated by avoidance, minimization, rectification, or compensation whenever possible.

Effects to all state and federal listed species are considered significant under CEQA. In addition to formally listed species, CEQA Section 15380(d) considers effects to species that are demonstrably endangered or rare as important or significant. These definitions can include state designated species of special concern, federal candidate and proposed species, CNDDDB tracked species, and California Native Plant Society 1B and 2 plants.

Appendix G of the CEQA Guidelines specifically addresses biological resources and encompasses a broad range of resources to be considered.

Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) of 1918 (16 USC 703-711) is an international treaty that makes it unlawful to take, possess, buy, sell, purchase, or barter any migratory bird listed in 50 CFR Part 10, including feathers or other parts, nests, eggs, or products, except as allowed by implementing regulations (50 CFR 21). A list of currently protected birds is available at: fws.gov/birds/management/managed-species/migratory-bird-treaty-act-protected-species.php Sections 3503, 3503.5, and 3800 of the CDFG Code prohibit the take, possession, or destruction of birds, their nests, or eggs. The MBTA requires that project-related disturbance at active nesting territories be reduced or eliminated during critical phases of the nesting cycle (February 1 through August 31). Disturbance that causes nest abandonment and/or loss of reproductive effort (e.g., killing or abandonment of eggs or young) or loss of habitat upon which the birds depend could be considered “take” and constitute a violation of the MBTA.

City of Highland Municipal Code

Section 16.64.040 of the municipal code deals with preservation of heritage trees and specifies required conditions and permits necessary for removal of heritage trees. Section 16.06.080 defines heritage trees:

“Heritage tree” shall mean any live tree, shrub, or plant which meets at least one of the following criteria:

1. All woody plants in excess of 15 feet in height and having a single trunk circumference of 24 inches or more, as measured four and one-half feet above ground level; or
2. Multitrunk trees having a total circumference of 30 inches or more, as measured four and one-half feet from ground level; or
3. A stand of trees, the nature of which makes each dependent upon the others for survival; or
4. Any other tree as may be deemed historically or culturally significant by the community development director or designee because of size, condition, location, or aesthetic qualities.