Biological Resources Letter Report for the Rancho Sierra Property, APN 404-430-45 County of San Diego, California

[County Project # PDS2015-TM-5601; Log No. PDS2015-ER-15-14-004]

Prepared for:

The County of San Diego
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Revised 28 December 2016
Revised 8 September 2015
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21 May 2014
Job Number 1698.21D

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SUMMARY

The Rancho Sierra property, also known as Assessor's Parcel Number 404-430-45, is a currently undeveloped piece of land west of South Grade Road in Alpine within the County of San Diego. The proposed development entails subdivision of the property into ten residential lots. This Biological Technical Report is being prepared as supporting documentation to aid in the California Environmental Quality Act (CEQA) review process.

The property is currently occupied by four habitat types: Coastal Sage - Chaparral Scrub, Open Engelmann Oak Woodland, Urban/Developed Land, and Disturbed Habitat. Coastal Sage - Chaparral Scrub and Open Engelmann Oak Woodland habitat impacts will have to be mitigated as they are Tier II and Tier I habitats, respectively. Another potential biological impact is to nesting birds which will either be mitigated through breeding season avoidance or a nesting bird survey with specific nest avoidance measures.

1.0 INTRODUCTION, PROJECT DESCRIPTION, LOCATION, AND SETTING

The Rancho Sierra property is specifically located south of Interstate 8 and west of South Grade Road (see Figure 1). The property is an 11.7-acre parcel (Assessor's Parcel Number 404-430-45) that is completely surrounded by development (see Figure 2). The proposed project entails the subdivision of the property into ten residential lots (see Figure 3). Access to the lots will be via an extension of the private Rancho Sierra Road cul-de-sac.

With the current subdivision design, the entire property is anticipated to be impacted, and off-site road improvements are proposed for the extension of Rancho Sierra Road. On-site and off-site impacts to native habitats include 0.58-acre of Open Engelmann Oak Woodland (Tier I), and 9.46-acres of Coastal Sage - Chaparral Scrub (Tier II). Additional species specific impacts include the loss of 0.2-acre of *potential* Hermes Copper habitat (Coastal Sage - Chaparral Scrub). Per the County's Biological Mitigation Ordinance (BMO), the mitigation ratio for Tier I impacts will be 2:1, and the mitigation ratio for Tier II impacts will be 1.5:1. Per the County's 4th revision to the Report Format and Content Requirements for Biological Resources document (2010), *potential* Hermes Copper habitat will be mitigated at a 1:1 ratio. As such, the habitat and species specific mitigation requirements are 1.2-acres of Tier I, 14.2-acres of Tier II, and 0.2-acre of *potential* Hermes Copper habitat. However, back in February of 2002, 0.25-acre of Tier I credit was purchased at the McGinty Mountain Mitigation Site for proposed impacts to Oaks due to the Rancho Sierra Road Extension Grading Permit L-14147 (Log No. 01-14-038, TPM 18771). In comparing aerial photos from before and after the road extension, it appears as though the Oaks that were proposed to be impacted were actually avoided and/or they were trimmed and survived. As such, this ¼-acre of Tier I mitigation should be subtracted from the current mitigation requirements. Applying this 0.25-acre of mitigation credit already purchased for Tier I, the new Tier I requirement is only 0.95-acre.

The 11.7-acre property was visited sixteen times during the spring and summer of 2014 and once during the spring of 2015. The purpose of the 2014 visits were to conduct a general biological survey, to conduct a federal protocol Quino Checkerspot Butterfly survey, and to conduct a protocol Hermes Copper Butterfly survey. Please see the attached Quino Checkerspot Butterfly report in Appendix A and the attached Hermes Copper Butterfly report in Appendix B for methodology, dates and results. General biological surveys were conducted from 1305 to 1405 hours on 24 April 2014, from 1255 to 1340 hours on 4 May 2014, and from 0840 to 0910 hours on 10 May 2014. The purpose of these three visits was to conduct the general biological survey to gather data for preparation of this biological report. The purpose of the 2015 site visit was to conduct a spring survey for plants. Vegetative communities were mapped in 2014 and reconfirmed in 2015 (see Figure 3), plant species were identified in 2014 and 2015 (see Table 1), and all wildlife utilizing the property were noted (see Table 2). Incidental wildlife observations were also noted during focused surveys and have been included in Table 2.

2.0 REGIONAL CONTEXT

In California, there is a state-wide effort known as the Natural Community Conservation Planning (NCCP) program established to preserve ecosystems, while at the same time allowing for planned development. Locally, there are several jurisdictions that have established plans as part of the NCCP program. The County of San Diego is a participant in the local Multiple Species Conservation Program (MSCP) with an approved Subarea Plan in "south county" and two other subarea plans in north and east county that are not yet approved. The proposed subdivision project on Rancho Sierra in Alpine is located within the approved MSCP.

The MSCP was approved in 1997. Documents and maps associated with the MSCP can be found at the County's website [http://www.sdcounty.ca.gov/pds/mscp/sc.html]. Based upon these documents and maps, the subject property is mapped as "State and Federal Pre-Approved Mitigation Areas (PAMA)", the designation for a preserve area. However, this piece of property has become surrounded by residential development and is no longer contiguous with Wright's Field located to the west and southwest. The surrounding residences have increased the edge effects on the subject property, including but not limited to, habitat modifications, non-native plant introductions, increased noise levels, and increased foot traffic. Given the proximity of Wright's Field, the known occurrences of the Quino Checkerspot Butterfly and the Hermes Copper at Wright's field, and the potentially suitable habitat for both species on the subject property, protocol surveys for both butterflies were conducted over the subject property, but were negative. For these reasons, on-site mitigation is not recommended since small, island habitats subjected to edge effects do not function biologically over the long-term and since there were no listed species observed at the site.

3.0 HABITATS/VEGETATION COMMUNITIES

The subject property contains Coastal Sage - Chaparral Scrub (Holland Element Code 37G00 - Tier II), Open Engelmann Oak Woodland (Holland Element Code 71181 - Tier I), Disturbed Habitat (Holland Element Code 11300 - Tier IV), and Urban/Developed lands (Holland Element Code 12000

- no Tier level) - see attached Figure 3 for the vegetation mapping and Figure 4 for on-site photographs. Also, please refer to Table 1 for a list of the plant species observed during the site visit.

Coastal Sage - Chaparral Scrub. The majority of the site is occupied by Coastal Sage - Chaparral Scrub. Generally, these 8.54-acres of habitat occur over the length of the property from the edge of the existing residential driveway in the east to the western property boundary. California Sagebrush (*Artemisia californica*) and California Buckwheat (*Eriogonum fasciculatum*) are the dominant shrubs, but Mission Manzanita (*Xylococcus bicolor*) and Sugarbush (*Rhus ovata*) are also present. Isolated Engelmann Oak trees occur scattered within this shrub habitat, but because of the lack of other Oaks within 100-feet, they have been included within the shrub community. Nine Redberry (*Rhamnus crocea*) shrubs also are present within this habitat adjacent to the California Buckwheat providing low quality Hermes Copper butterfly habitat. One other plant species of note that occurs within this habitat is Nuttall's Snapdragon (*Antirrhinum nuttallianum*). This snapdragon is not one of the listed larval host plants of the Quino Checkerspot butterfly, but it is a potentially undocumented host plant which warrants mentioning.

Open Engelmann Oak Woodland. Approximately 0.54-acre of Open Engelmann Oak Woodland occurs on the property and is represented as three clusters. One cluster extends onto the property from the north near the north-central parcel boundary. The second cluster occurs in the eastern portion of the site, and the third cluster occurs in the western corner of the property (see Figure 3).

Disturbed Habitat. Approximately 2.18-acres of the property contains Disturbed Habitat. This Disturbed Habitat includes the area east of the existing driveway that is mowed, the fuel modification zones for the surrounding development to the south, as well as, a widened trail head near the north-central parcel boundary (see Figure 3).

Urban/Developed land. The remaining 0.44-acre is considered Urban/Developed land. It includes the existing driveway and fencing associated with the residence just off-site to the southeast, as well as, portions of South Grade Road.

The diversity and numbers of wildlife species on-site were typical of a property with native vegetation which is completely surrounded by development. The most notable wildlife on the property were birds (please refer to Table 2 for a list of the wildlife species observed). In addition to the bird species observed, four reptile species and four mammalian species were also noted on the property. The reptile species noted on-site were Western Fence Lizard (*Sceloporus occidentalis longipes*), Western Whiptail (*Aspidoscelis tigris stejnegeri*), Granite Spiny Lizard (*Sceloporus orcuttii*), and Side-blotched Lizard (*Uta stansburiana*). The four mammalian species seen on-site were California Ground Squirrel (*Spermophilus beecheyi*), Audubon's Cottontail (*Sylvilagus audubonii*), San Diego Desert Woodrat (*Neotoma lepida intermedia*), and Dusky-footed Woodrat (*Neotoma fuscipes*).

4.0 SPECIAL STATUS SPECIES

One principal goal of the biological survey was the determination of the presence or absence of sensitive plant and animal species. Lists of these sensitive plant and animal species have been compiled using the nine quad search function of the California Native Plant Society Electronic Database, the California Natural Diversity Database, the County of San Diego Sensitive Plant List found as Table 2 in the County of San Diego Guidelines for Determining Significance for Biological Resources (2010), and the County of San Diego Sensitive Animal List found as Table 3 in the same document. These generated lists of sensitive species known to occur within a 10-mile radius of the property are attached as Tables 3 and 4.

4.1 Sensitive Plants

One principal goal of the biological survey was to determine the presence or absence of sensitive plant species on the Rancho Sierra property. Prior to initiation of the field work, a search was made of the on-line California Native Plant Society Electronic Database (CNPS, 2015), and of the California Natural Diversity Database (CDFW, 2015b) to determine those plant species considered sensitive and known to occur within an approximately 10-mile radius of the subject property. This search produced a list of one hundred and six plant species. The potential for these one hundred and six sensitive plant species to be found on-site were analyzed in Table 3 and the reader's attention is directed to that Table for detailed information. Of those one hundred and six sensitive plants, only one was found on-site, the Engelmann Oak. Seven species have a high probability of being found on the property, seven have a medium probability, and eleven species have a low probability of being found on-site. The remaining eighty plants are unlikely to be found on-site due to the types of habitats, soils and elevations on the property. The seven species with a high probability are:

Lepidium virginicum ssp. *menziesii*	Poor Man's Pepper
Pentachaeta aurea ssp. *aurea*	Golden-rayed Pentachaeta
Pickeringia montana var. *tomentosa*	Woolly Chaparral Pea
Piperia cooperi	Chaparral Rein-Orchid
Polygala cornuta var. *fishiae*	Fish's Milwort
Viguiera laciniata	San Diego County Viguiera
Xanthisma junceum	Rush-like Bristleweed

The seven plant species with a medium potential to be found on-site are:

Caulanthus simulans	Payson's Jewelflower
Chorizanthe leptotheca	Peninsular Spineflower
Clarkia delicata	Delicate Clarkia
Cordylanthus rigidus ssp. *brevibracteatus*	Short-bracted Bird's Beak
Lathyrus splendens	Pride-of-California
Monardella hypoleuca ssp. *lanata*	Felt-leaved Monardella
Ribes canthariforme	Moreno Currant

The eleven plant species within a 10-mile radius of the property with a low potential to be found on-site are:

Artemisia palmeri	San Diego Sagewort
Asplenium vespertinum	Western Spleenwort
Astragalus deanei	Dean's Milkvetch
Astragalus oocarpus	San Diego Milkvetch
Ceanothus cyaneus	Lakeside Ceanothus
Delphinium parishii ssp. *subglobosum*	Colorado Desert Larkspur
Geraea viscida	Sticky Geraea
Githopsis diffusa ssp. *filicaulis*	Mission Canyon Bluecup
Hordeum intercedens	Bobtail Barley
Romneya coulteri	Coulter's Matilija Poppy
Salvia munzii	Munz's Sage

All one hundred and six plant species were looked for during the general biological surveys in 2014 and during the focused spring plant survey in 2015. Only one species, the Engelmann Oak, was observed on the property.

Engelmann Oak (*Quercus engelmannii*). The one sensitive plant species that was found on-site is the Engelmann Oak (*Quercus engelmannii*). This Oak holds no state or federal status, but it is considered a List 4.2 species by the California Native Plant Society (CNPS, 2015), and is also on the County of San Diego's List D Sensitive Plants List (San Diego, County of, 2010b).

California Sand Aster (*Corethrogyne filaginifolia*). Another species that needs to be addressed in this section is the California Sand Aster (*Corethrogyne filaginifolia*). This species has gone through numerous taxonomic changes in the last several decades. Going back to the 1984 publication, A Flora of San Diego County, California by R. Mitchel Beauchamp, six varieties of this plant were identified. Those varieties were *C. f.* var. *bernardino*, *C. f.* var. *glomerata*, *C. f.* var. *incana*, *C. f.* var. *linifolia*, *C. f.* var. *sessilis*, and *C. f.* var. *virgata*. Two of these six varieties, *C. f.* var. *incana*, and *C. f.* var. *linifolia*, were identified as sensitive based upon their limited coastal locations. Using the dichotomous key in Beauchamp, the variety of Sand Aster found on the subject property would have been identified as *C. f.* var. *virgata*, which was one of the non-sensitive varieties. In the 1990's, specifically in the first Jepson Manual (1993), the plants on the subject property would have been identified as *Lessingia filaginifolia* var. *filaginifolia*. This new taxonomy not only changed the genus from *Corethrogyne* to *Lessingia*, but also grouped several varieties together including *C. f.* var. *bernardino*, *C. f.* var. *incana*, *C. f.* var. *linifolia*, *C. f.* var. *sessilis*, and *C. f.* var. *virgata,* further confusing identification. Moving forward to the current taxonomy in the latest, second edition Jepson Manual (2012), the genus has been converted back to *Corethrogyne*, and no varieties are recognized. As such, the plants identified on the property have been listed in Table 1 as *Corethrogyne filaginifolia*. The sensitive plant table (Table 3) lists *Corethrogyne filaginifolia* var. *incana* as a potential sensitive plant known to be found within 10-miles of the property.

The older taxonomy is still in use by the California Native Plant Society and the California Department of Fish and Wildlife's Rare Find 5 database. The County's Guidelines for Determining Significance and Report Format and Content Requirements (2010) lists San Dieguito Sand Aster (*Corethrogyne filaginifolia* var. *linifolia*) and San Diego Sand Aster (*Corethrogyne filaginifolia*) as List A sensitive plant species found in north coastal sandy areas, and coastal sandy areas, respectively. This seems to follow the original distinction of the two varieties *C. f.* var. *linifolia* , and *C. f.* var. *incana* as sensitive based upon their limited coastal locations. Since the County's Guidelines have not been updated since 2010 and the Jepson Manual (2012) is more current and is recognized as the leading taxonomic reference for plants, the California Sand Aster plants found on-site should not be considered sensitive.

4.2 Sensitive Wildlife

Another goal of the biological survey effort was to identify any sensitive wildlife species that occur on, or in the immediate vicinity of, the Rancho Sierra property. A list of sixty sensitive wildlife species known to occur within a ten-mile radius of the subject property was generated from a nine quad search of the California Natural Diversity Database (CDFW, 2015b) and from a search of the County of San Diego's Sensitive Animal List (San Diego, County of, 2010b). The potential for these sixty wildlife species to occur on the property were analyzed and are detailed in Table 4. All sixty sensitive animal species were searched for during the 2014 general biological surveys. In addition, two focused protocol surveys were conducted in 2014 for the Hermes Copper butterfly and the Quino Checkerspot butterfly. Of the sixty species, seven were found on-site. Those seven species are Western Whiptail (*Aspidoscelis tigris stejnegeri*), San Diego Desert Woodrat (*Neotoma lepida intermedia*), Cooper's Hawk (*Accipiter cooperi*), Western Bluebird (*Sialia mexicana*), Lawrence's Goldfinch (*Spinus lawrencei*), Nuttall's Woodpecker (*Picoides nuttallii*), and Costa's Hummingbird (*Calypte costae*). The Hermes Copper and Quino Checkerspot Butterfly surveys were both negative.

Western Whiptail (*Aspidoscelis tigris stejnegeri*). The Western Whiptail is considered a Group 2 species on the County of San Diego Sensitive Animal List (San Diego, County of, 2010a). It does not hold any federal or state status. Four individuals were identified in the eastern portion of the site. Two of the four individuals were seen during the 19 June site visit, and the other two were seen on the 17 April and 24 April visits (see Figure 3 for locations).

San Diego Desert Woodrat (*Neotoma lepida intermedia*). The San Diego Desert Woodrat is listed as a Group 2 species on the County of San Diego Sensitive Animal List (San Diego, County of, 2010a). This woodrat is considered a Species of Special Concern by the California Department of Fish and Wildlife (CDFW, 2015a). It does not hold any federal status. At least four nests assignable to this species were located in and around the boulder outcrops on the property (see Figure 3 for locations).

Cooper's Hawk (*Accipiter cooperi*). The Cooper's Hawk is considered a Group 1 species on the County of San Diego Sensitive Animal List (San Diego, County of, 2010a), and is on the Watch List

for the California Department of Fish and Wildlife (CDFW, 2015a). Single individuals were seen as overflights during the 10 April and 24 April field visits.

Costa's Hummingbird (*Calypte costae*). The Costa's Hummingbird is not listed on either the Group 1 or Group 2 County of San Diego Sensitive Animal Lists (San Diego, County of, 2010a), nor does it hold any state status (CDFW, 2015a). However, this hummingbird is a bird of conservation concern in our region, Bird Conservation Region 32 (USFWS, 2008). A male was heard on-site performing an aerial display during the 10 May site visit (see Figure 3 for location).

Nuttall's Woodpecker (*Picoides nuttallii*). The Nuttall's Woodpecker is not listed on either the Group 1 or Group 2 County of San Diego Sensitive Animal Lists (San Diego, County of, 2010a), nor does it hold any state status (CDFW, 2015a). However, this woodpecker is a bird of conservation concern in our region, Bird Conservation Region 32 (USFWS, 2008). During the 10 May site visit, a single individual was heard from the Engelmann Oaks in the eastern part of the site (see Figure 3 for location).

Western Bluebird (*Sialia mexicana*). The Western Bluebird is listed as a Group 2 species on the County of San Diego Sensitive Animal List (San Diego, County of, 2010a). It does not hold any federal or state status. A pair of Western Bluebirds were seen in the western portion of the site during the 17 April visit (see Figure 3 for location). Also, during the 24 April visit, an individual Western Bluebird was heard as an overflight.

Lawrence's Goldfinch (*Spinus lawrencei*). The Lawrence's Goldfinch is not listed on either the Group 1 or Group 2 County of San Diego Sensitive Animal Lists (San Diego, County of, 2010a), nor does it hold any state status (CDFW, 2015a). However, this species is a bird of conservation concern in our region, Bird Conservation Region 32 (USFWS, 2008). A single female Lawrence's Goldfinch was seen perched in an Engelmann Oak during the 17 April site visit (see Figure 3 for location).

Thirty-eight of the remaining fifty-three sensitive wildlife species were considered to be unlikely given the habitats and/or soils on the property. Of the remaining fifteen, six have a low probability of occurrence on-site, four have a medium probability, and five have a high probability of occurrence.

The six species with a low potential to be found on the property are:

Silvery Legless Lizard	*Anniella pulchra pulchra*
Rosy Boa	*Charina trivirgata*
San Diego Ringneck Snake	*Diadophis punctatus similis*
Hoary Bat	*Lasiurus cinereus*
Southern Mule Deer	*Odocoileus hemionus*
California Horned Lark	*Eremophila alpestris actia*

The four species with a medium probability are:

Coronado Island Skink	*Plestiodon skiltonianus interparietalis*
Dulzura California Pocket Mouse	*Chaetodipus californicus femoralis*
Northwestern San Diego Pocket Mouse	*Chaetodipus fallax fallax*
San Diego Black-tailed Jackrabbit	*Lepus californicus bennettii*

The five sensitive wildlife species with a high probability of being found on-site are:

Orange-throated Whiptail	*Aspidoscelis hyperythra beldingi*
Red Diamond Rattlesnake	*Crotalus ruber*
San Diego Horned Lizard	*Phrynosoma coronatum*
Coast Patch-nosed Snake	*Salvador hexalepis virgultea*
Rufous-crowned Sparrow	*Aimophila ruficeps* ssp. *canescens*

Three sensitive wildlife species that were not found, but that do require discussion in this technical document are the Quino Checkerspot Butterfly, the Hermes Copper, and the California Gnatcatcher.

Quino Checkerspot Butterfly (*Euphydryas editha quino*). The Rancho Sierra property falls within the Recommended Quino Survey Area per the February 2014 federal protocol (USFWS, 2014). As such, a Site Assessment and federal protocol species for the Quino was conducted. The 2014 federal protocol survey for this species was negative. For specific information about this survey and its findings, please refer to the Quino report attached as Appendix A. Another federal protocol survey was conducted in 2003 by Mooney and Associates and was also negative.

Hermes Copper (*Lycaena hermes*). Per the County of San Diego Report Format and content Requirements (San Diego, County of, 2010b), any area containing woody Redberry shrubs (*Rhamnus crocea*) with California Buckwheat (*Eriogonum fasciculatum*) within 15-feet is considered suitable habitat for the Hermes Copper and needs to be surveyed. As such, the flight season survey protocol for the Hermes was conducted. The 2014 protocol survey for this species was negative.

California Gnatcatcher (*Polioptila californica*). Although the site contains a suitable habitat type for the California Gnatcatcher, the elevation of the property preludes this species. According to Atwood and Bolsinger (1992), most observations of California Gnatcatchers occur at 1,645-foot elevation or less. The lowest elevation on-site is 2,062-feet which is 417-feet higher than the "normal" elevational limit of the species. The site was visited by the undersigned a total of sixteen times in 2014 during the nesting season of the California Gnatcatcher. The undersigned holds a federal recovery permit to survey for the California Gnatcatcher. Although no formal federal protocol for the California Gnatcatcher was conducted in 2014, the undersigned did document all sensitive species detected incidentally on-site. If California Gnatcatchers were utilizing the site during 2014, they would have been detected during the sixteen site visits. Also, please note that a federal protocol survey was conducted on the site in 2008 by Merkel & Associates and was negative.

5.0 JURISDICTIONAL WETLANDS AND WATERWAYS

The Rancho Sierra property is located on a relatively flat piece of property (see Figure 1). There is an elevational difference across the property of approximately 52-feet from a low of 2,062-feet in the southwestern corner to 2,114-feet along the south-central parcel boundary. As can be seen on Figure 1, a blue-line stream is shown originating off-site to the northwest. The residential development to the south of the subject property has disrupted any drainage that once fed into the headwaters of this off-site feature. As such, there are no jurisdictional wetlands or waterways on the property.

6.0 OTHER UNIQUE FEATURES/RESOURCES

There are no other unique features on the subject property (i.e. no steep slopes, special soils, wildlife corridors, etc.). The site is relatively flat and is completely surrounded by development (see Figures 1 and 2). The underlying geology of the parcel is mapped as Tonalite of Las Bancas (Todd, 2004). The surficial soils mapped by Bowman (1973) include the following:

- Fallbrook sandy loam, 9-15% slopes, eroded (FaD2). These soils occupy the majority of the parcel; and

- Fallbrook rocky sandy loam, 9-30% slopes, eroded (FaD2). These soils occur only in the extreme southeast edge of the parcel.

7.0 SIGNIFICANCE OF PROJECT IMPACTS AND PROPOSED MITIGATION

As proposed, the Rancho Sierra subdivision project in Alpine will have the following vegetation impacts on-site and off-site. The table below details the types of habitat that will be impacted and the mitigation for those impacts, if required:

Vegetation Impact and Mitigation Summary[1]

Vegetative Community	Acres Impacted On-Site	Acres Impacted Off-Site[2]	Mitigation Ratio[3]	Mitigation Already Purchased[4]	Mitigation Required (acres)
Coastal Sage - Chaparral Scrub (Tier II)	8.54 (includes 0.2-acre of Hermes habitat)	0.92	1.5:1 (9.46-acres) and 1:1 (0.2-acre of Hermes)	0.0	14.2 of Tier II and 0.2 of Tier II containing potential Hermes Copper habitat
Open Engelmann Oak Woodland (Tier I)	0.54	0.04	2:1	0.25	0.91 rounded up to 0.95
Disturbed Habitat (Tier IV)	2.18	0.34	None	None	None

Vegetative Community	Acres Impacted On-Site	Acres Impacted Off-Site[2]	Mitigation Ratio[3]	Mitigation Already Purchased[4]	Mitigation Required (acres)
Urban/Developed land (no Tier)	0.44	N/A	N/A	N/A	N/A
Totals:	11.7-acres	1.3-acre		0.25-acre	14.2-acres of Tier II, 0.95-acres of Tier I, and 0.2-acre of potential Hermes Copper habitat

[1] Calculated impacts include those due to grading and off-site improvements.
[2] The acreage amounts impacted off-site are due to off-site road improvements to Rancho Sierra.
[3] The mitigation ratios were taken from the Biological Mitigation Ordinance and the County of San Diego Report Format and Content Requirements for Biological Resources document (4th Revision, 2010b).
[4] For the previous Rancho Sierra Road Extension Grading Permit L-14147 (Log No. 01-14-038, TPM 18771), 0.25-acre of Oak Woodland was mitigated at the McGinty Mountain Mitigation Site in February 2002.

In order to mitigate the above impacts to habitats within the MSCP, typical mitigation measures include either on-site mitigation if the site is within a PAMA, a combination of on-site and off-site mitigation, or just off-site mitigation at an approved bank within the MSCP. Even though the subject property is located within a PAMA, on-site mitigation is not appropriate due to the fact that the subject property is surrounded by development. As such, off-site mitigation at an approved bank within the MSCP was researched. According to Mr. Jim Carter of Environmental Land Solutions, the only approved mitigation bank within the MSCP with any credits available is the Crestridge Mitigation Bank. Ms. Tammy Lawhead of J. Whalen Associates, Inc. was contacted to determine the availability of Tier I and II credits, but she informed us that there are no more Tier II credits available at the Crestridge Mitigation Bank, only the more expensive, Tier I credits. After learning this information, alternative mitigation solutions were researched for the Tier II impacts.

Proposed Mitigation. The project proponent proposes to purchase 15.47-acres of APN 404-170-04 located adjacent to Wright's Field (see Appendix C for Proposed Mitigation Site). The 15.47-acres consists of 0.95-acre of Tier I habitat (Native Grassland), 14.4-acres of Tier II habitat (Diegan Coastal Sage Scrub with Redberry shrubs), and 0.12-acre of Disturbed Habitat. It is anticipated that these 15.47-acres will be annexed into the existing Wright's Field preserve, and will be managed in perpetuity by the Back Country Land Trust funded through a non-wasting endowment (please refer to Appendix D for the Land Management Plan dated September 25, 2012 prepared by the Back Country Land Trust for Wright's Field and Appendix E for the PAR proposed for the long-term management of the 15.47-acres).

In addition to the above proposal to mitigate for habitat impacts, an avoidance measure that needs to be noted is the avoidance of the breeding bird season. Bird species protected under the Migratory Bird Treaty Act (MBTA) were observed on-site. As such, clearing and grading of the site should not occur during the avian breeding season of 15 February to 31 August. If there is a need to clear and/or grade during the breeding season, then a biologist should survey the property for nesting birds prior to any land or vegetation disturbance. If no nests are found, then the clearing and grading can proceed. However, if nesting birds are found, then avoidance measures would need to be implemented until the nesting period is complete. These avoidance measures may include a 300-foot buffer around the nest, and/or noise barriers.

8.0 CUMULATIVE IMPACTS

Since the habitat impacts are being mitigation for per the BMO and the County of San Diego Report Format and Content Requirements for Biological Resources which was adopted to implement the goals of the MSCP, and the project will be conditioned to avoid impacts to birds protected under the MBTA, then there are no cumulative impacts associated with the 10-lot subdivision project known as the Rancho Sierra property in Alpine.

9.0 REFERENCES

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10.0 PREPARER AND PERSONS/ORGANIZATIONS CONTACTED

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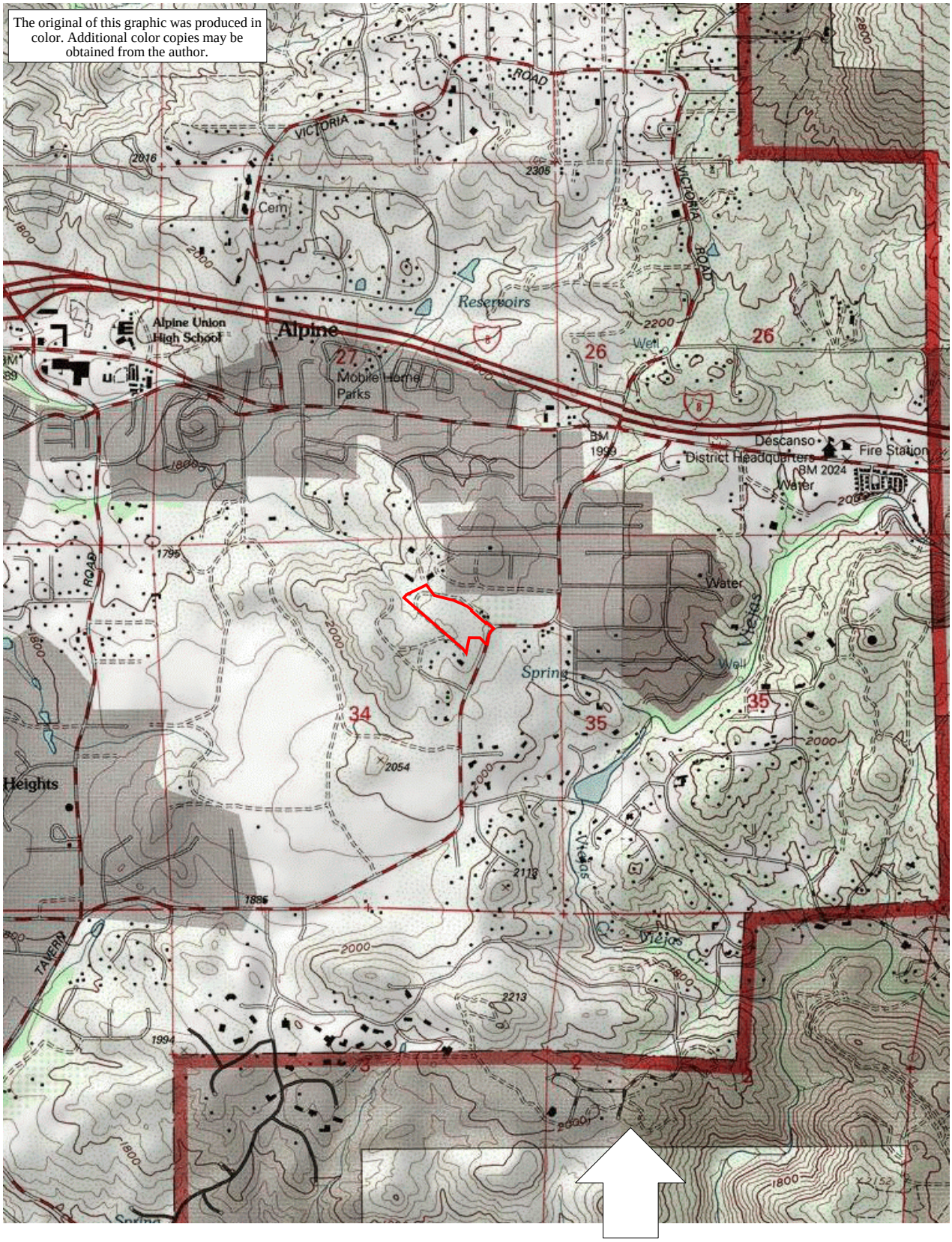
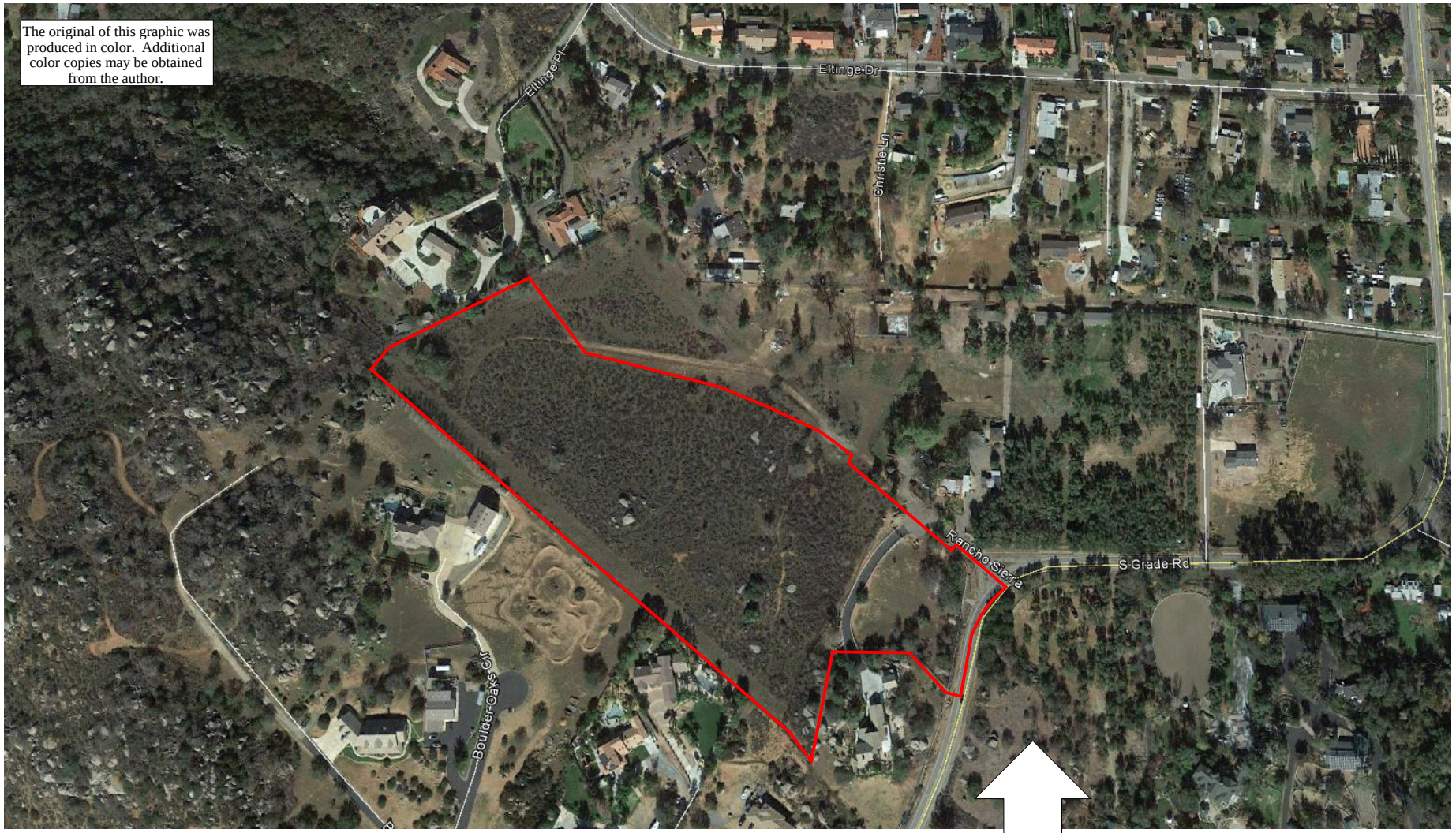


Cummings and Associates Job Number 1698.21D 12 February 2014 Scale: 1-inch = 2,000-feet [:\1698-Fig-1.wpg]

Cummings and Associates	**APN 404-430-45 Shown on the U.S.G.S. 7½-minute Alpine Quadrangle Map** [Base Map Created with TOPO!® ©2006 National Geographic; ©2005 TeleAtlas]	**Figure 1**



Scale: 1-inch = 300-feet

Cummings and Associates Job Number 1698.21D 8 April 2015 [:\1698-Fig-2-rev.wpg]

Cummings and Associates

Rancho Sierra (APN 404-430-45) Shown on an Aerial Photo
[Base Map © 2015 Google; Imagery Date 12/22/2014]

Figure 2

SITE SUMMARY:

TOTAL NUMBER OF LOTS:	10
GROSS AREA OF SITE:	500,940 SF (11.5 ACRES)
OFF-STREET COMMON AREA PARKING:	N/A
OPEN SPACE REQUIRED:	N/A
COMMON LOT OPEN SPACE PROVIDED:	N/A
AREA COVERED BY STRUCTURES:	N/A
GENERAL PLAN AREA:	VR-2.9 (VILLAGE RESIDENTIAL)
EXISTING ZONING AREA:	A-70
COMMUNITY PLAN:	ALPINE
REGIONAL CATEGORY:	–
GENERAL PLAN DESIGNATION:	RESIDENTIAL
PROPOSED USE:	RESIDENTIAL
STATUS OF LEGAL ACCESS:	SOUTH GRADE ROAD
FLOOD HAZARDS:	NONE, SITE IS OUTSIDE THE 500 YEAR FLOOD ZONE PER FLOOD
INSURANCE RATE MAP 06073C1685G	
RAILROADS:	NO EXISTING RAILROADS ON SITE
STRUCTURES:	NO EXISTING STRUCTURES ON SITE
COMMON AREA:	N/A

SERVICE PROVIDERS:

SEWER DISTRICT:	ALPINE SANITATION DISTRICT
WATER DISTRICT:	PADRE DAM MUNICIPAL WATER DISTRICT
FIRE DEPT:	ALPINE FIRE PROTECTION DISTRICT
GAS/ELECTRIC PROVIDER:	S D G & E
TELEPHONE PROVIDER:	A T & T
CABLE PROVIDER:	COX COMMUNICATIONS
SCHOOL DISTRICT:	ALPINE UNION SCHOOL (K-8) & GROSSMONT UNION HIGH SCHOOL (9-12)
STREET LIGHT:	COUNTY OF SAN DIEGO (STREET ONLY)

LEGAL DESCRIPTION

THE LAND REFERRED TO HEREIN BELOW IS SITUATED IN THE COUNTY OF SAN DIEGO, STATE OF CALIFORNIA, AND IS DESCRIBED AS FOLLOWS:

PARCEL A-1 (APN 404-430-45-00):
ALL THAT PORTION OF PARCELS 1 AND 2 OF PARCEL MAP NO. 15195 FILED IN THE OFFICE OF THE COUNTY RECORDER, COUNTY OF SAN DIEGO, STATE OF CALIFORNIA ON APRIL 7, 1988 DESCRIBED AS FOLLOWS:

BEGINNING AT THE MOST SOUTHWESTERLY CORNER OF AFORESAID PARCEL 2, SAID POINT BEING THE TRUE POINT OF BEGINNING, THENCE ALONG THE FOLLOWING NUMBERED COURSES:
N 40° 33' 03" E, 58.90' ALONG A WESTERLY LINE OF PARCEL 2; THENCE: N 63° 47' 59"E, 324.60' TO A POINT ON THE WESTERLY LINE OF PARCEL 2, THENCE; S 35° 24' 48" E, 200.00' THENCE; S 74° 58' 11"E, 346.30', THENCE; TO THE END OF A 600' RADIUS CIRCULAR ARC CONCAVE SOUTHWESTERLY, A RADIAL BEARING TO SAID POINT BEARS S 15° 00' 44" W, THENCE ALONG SAID ARC A DISTANCE OF 264.72' THROUGH A CENTRAL ANGLE OF 25° 16' 46" THENCE; S 40° 17' 29" W, 10.00 FEET, THENCE; S 49° 42' 30" E, 147.96 FEET, THENCE; S 37° 33' 18" E, 38.00 FEET TO THE CENTER OF A 38' RADIUS CUL-DE-SAC ON RANCHO SIERRA, (A PRIVATE ROAD., MORE PARTICULARLY DESCRIBED AS AN EASEMENT TO PADRE DAM MUNICIPAL WATER DISTRICT BY FILE NO. 2002-1001191 RECORDED 11/8/02, THENCE; N 40° 17' 30" E, 18.00 FEET, THENCE; S 49° 42' 30" E 217.66' TO A POINT ON CURVE OF CENTERLINE OF SOUTH GRADE ROAD RS 582, SAID POINT BEING THE INTERSECTION OF RANCHO SIERRA, A PRIVATE ROAD, WITH SOUTH GRADE ROAD. SAID CURVE IS CONCAVE SOUTHEASTERLY. A RADIAL BEARING TO SAID POINT BEARS S 37° 22' 27" E, THENCE ALONG SAID CURVE A DISTANCE OF 153.15' THROUGH A CENTRAL ANGLE OF 43 43' 42, S 08° 53' 51" W, 18.99' THENCE; TO THE BEGINNING OF A 1007.05' RADIUS CIRCULAR ARC CONCAVE NORTHWESTERLY, A RADIAL BEARING TO SAID ARC BEARS N 81° 06' 09" W, THENCE ALONG SAID ARC A DISTANCE OF 79.81' THROUGH A CENTRAL ANGLE OF 04° 32' 26" 13, N 73° 33' 43" W, 30.00' TO THE WESTERLY SIDELINE OF SOUTH GRADE ROAD, N 42° 56' 39" W, 111.31; N 89° 16' 50" W, 158.53, S 10° 28' 07" W, 231.80, N 37° 22' 13" W, 80.00; N 49° 26' 39" W, 1146.81 TO THE TRUE POINT OF BEGINNING.
SAID PARCEL ALSO DESCRIBED AS PARCEL B OF A CERTIFICATE OF COMPLIANCE RECORDED MAY 18, 2005 AS DOCUMENT NUMBER 2005-0433294

PARCEL A-2
AN EASEMENT FOR ROAD AND UTILITY PURPOSES OVER THOSE PORTIONS OF PARCELS 1, 2, 3 AND 4 OF PARCEL MAP 15195 DESCRIBED IN EASEMENT DOCUMENT TO PADRE DAM MUNICIPAL WATER DISTRICT RECORDED NOVEMBER 8, 2002 AS DOC. NO. 2002-1001191.
EXCEPTING THEREFROM THAT PORTION LYING WITHIN PARCEL A-1 ABOVE. APN 404-430-45-00

EXISTING EASEMENTS:

(6) EASEMENT TO THE COUNTY OF SAN DIEGO FOR PUBLIC HIGHWAY PURPOSES PER RECORDING DOCUMENT BOOK 456, PAGE 450 OF THE OFFICIAL RECORDS DATED JANUARY 15, 1938

(7) NON-PLOTTABLE EASEMENT TO SDG&E FOR PUBLIC UTILITIES, INGRESS AND EGRESS PER BOOK 3867, PAGE 433 OF OFFICIAL RECORDS DATED NOVEMBER 20, 1950

(10) 40 FOOT PRIVATE ROADWAY EASEMENT AND INCIDENTAL PURPOSES AS SHOWN ON SAID MAP PARCEL MAP 15195

(11) ROADWAY EASEMENT AS SHOWN ON SAID MAP PARCEL MAP 15195

(14) NON-PLOTTABLE EASEMENT TO SDG&E FOR PUBLIC UTILITIES, INGRESS AND EGRESS PER DOCUMENT NO. 88-205898 OF OFFICIAL RECORDS DATED 5-3-1988

(16) PUBLIC UTILITY EASEMENT TO PADRE DAM MUNICIPLE WATER DISTRICT, A STATE AGENCY PER DOCUMENT NO. 2002-1001191 OF OFFICIAL RECORDS DATED NOVEMBER 8, 2002

(17) NON-PLOTTABLE RIGHT OF ENTRY TO CONSTRUCT OR IMPROVE A PRIVATE ROAD PER DOCUMENT NO. 2003-1444788 OF OFFICIAL RECORDS DATED DECEMBER 5, 2003

(19) NON-PLOTTABLE EASEMENT TO SDG&E FOR PUBLIC UTILITIES, INGRESS AND EGRESS PER DOCUMENT NO. 2005-0655553 OF OFFICIAL RECORDS DATED AUGUST 2, 2005

(20) NON-PLOTTABLE EASEMENT TO COXCOM, INC D/B/A COX COMMUNICATIONS SAN DIEGO FOR PUBLIC UTILITIES, INGRESS AND EGRESS PER DOCUMENT NO. 2005-0837619 OF OFFICIAL RECORDS DATED SEPTEMBER 28,2005

(22) ROADWAY ACCESS AND UTILITY EASEMENT AND INCIDENTAL PURPOSES TO ALPINE INVESTORS, LLC PER DOCUMENT NO. 2013-0630342 OF OFFICIAL RECORD DATED OCTOBER 22, 2013

OWNER/APPLICANT:

BRAD BAILEY
10035 PROSPECT AVENUE
SANTEE, CA 92071
619-244-4879

TOPOGRAPHY:

EXISTING SITE BOUNDARY AND TOPOGRAPHIC SURVEY BY MORENO AERIAL PHOTO SURVEYS DATED 4-5-1999

GRADING STATEMENT:

CUT = 7,470 CY
FILL = 7,470 CY
IMPORT/EXPORT = 0 CY

PRELIMINARY GRADING PLAN NOTE:

THIS PLAN IS PROVIDED TO ALLOW FOR FULL AND ADEQUATE DISCRETIONARY REVIEW OF A PROPOSED DEVELOPMENT PROJECT. THE PROPERTY OWNER ACKNOWLEDGES THAT ACCEPTANCE OR APPROVAL OF THIS PLAN DOES NOT CONSTITUTE AN APPROVAL TO PERFORM ANY GRADING SHOWN HEREON, AND AGREES TO OBTAIN A VALID GRADING PERMIT BEFORE COMMENCING SUCH ACTIVITY.

RANCHO SIERRA
Vegetation Map

FIRE ACCESS NOTE:

1. PARKING ALLOWED ON ONE SIDE OF RANCHO SIERRA. OPPOSITE SIDE OF RANCHO SIERRA SHALL HAVE RED PAINT WITH "NO PARKING FIRE LANE" STENCILED IN 4" HEIGHT 1/2"STROKE EVERY 30' SEPARATED WITH SECTION 22500.2 OF THE CALIFORNIA VEHICLE CODE. THESE SIGNS SHALL BE PLACED EVERY 30' OR AS PER DISTRICT REQUIREMENTS AT THE TIME OF FINAL APPROVAL.
2. NO SPEED BUMPS, SPEED HUMPS, SPEED CONTROL DIPS, ETC. SHALL BE PERMITTED ON FIRE ACCESS ROADWAY.

KEY

CS-CS	Coastal Sage - Chaparral Scrub (Holland, 1986 as modified by Oberbauer, 1996; Element Code 37G00)
ENG	Open Engelmann Oak Woodland (Holland, 1986 as modified by Oberbauer, 1996; Element Code 71181)
Dist	Disturbed Habitat (Holland, 1986 as modified by Oberbauer, 1996; Element Code 11300) - fuel modification zones, wide trail head, and mowed areas
Dev	Urban/Developed (Holland, 1986 as modified by Oberbauer, 1996; Element Code 12000) - paved driveway and South Grade Road
WEWH	Western Whiptail Sightings (*Aspidoscelis tigris stejnegeri*)
WEBL	Western Bluebird Sighting (*Sialia mexicana*)
LAGO	Lawrence's Goldfinch (*Spinus lawrencei*)
NUWO	Nuttall's Woodpecker (*Picoides nuttallii*)
COHU	Costa's Hummingbird (*Calypte costae*)
SDDW	San Diego Desert Woodrat (*Neotoma lepida intermedia*) nest

NOTE: Individual Cooper's Hawks were seen as overflights on 4/10/14 and 4/24/14. One Western Bluebird was seen as an overflight on 4/24/14.

Cummings and Associates Job Number 1698.21D 8 September 2015 [11698-Fig-3-rev.wpg]

Cummings and Associates	Vegetation Mapping and Sensitive Species Locations Shown on the Preliminary Grading Plan for the Rancho Sierra Project	Figure 3

LEGEND:

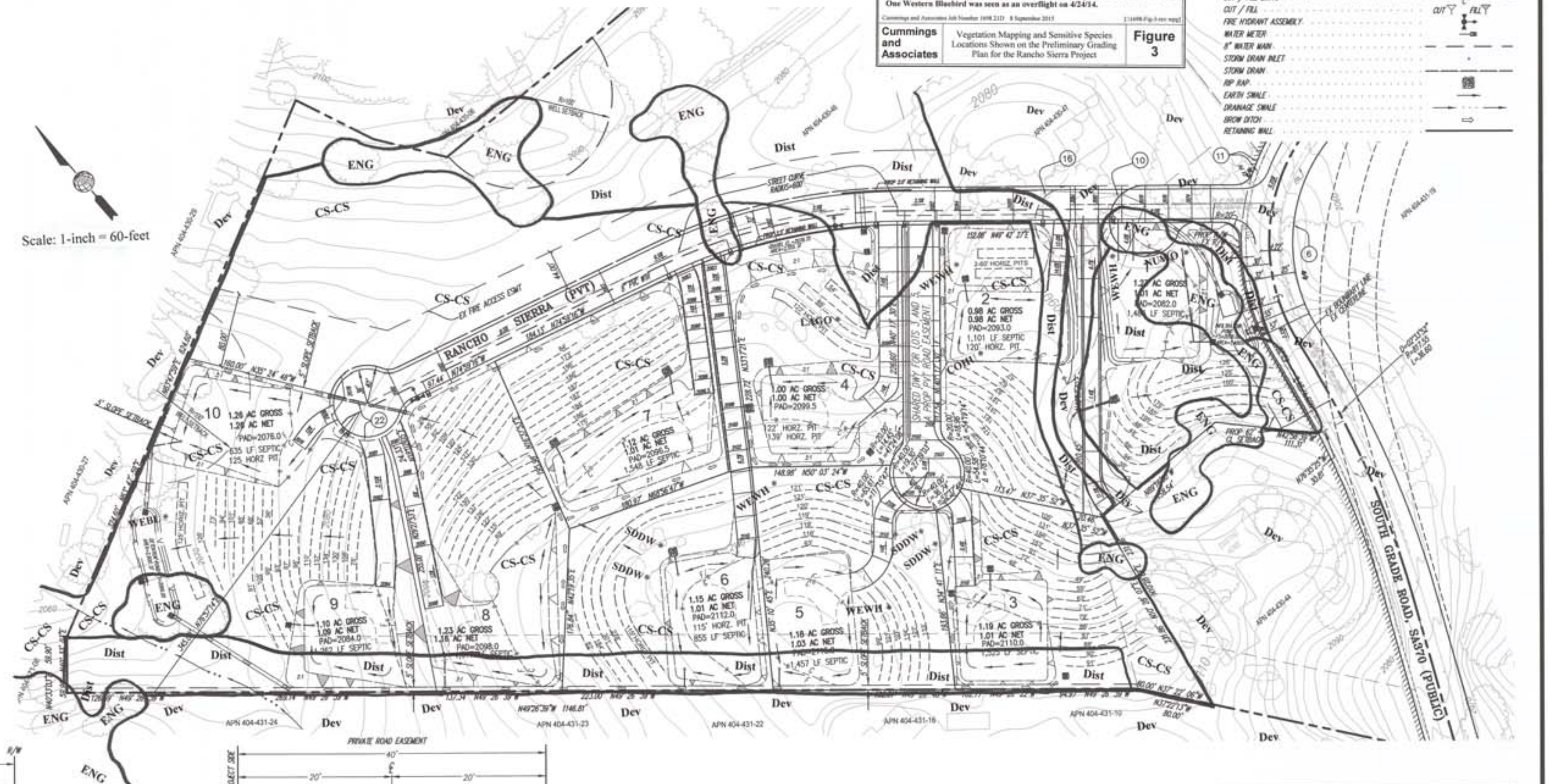
EXISTING

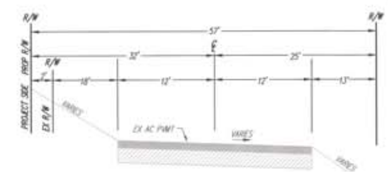
ITEM — SYMBOL

- EXISTING SPOT ELEVATIONS
- EXISTING CONTOUR
- EXISTING WATER LINE
- EXISTING FIRE HYDRANT ASSEMBLY
- EXISTING ELECTRIC OVERHEAD
- EXISTING PAVEMENT
- EXISTING DRAINAGE PATTERN
- CENTERLINE
- RIGHT OF WAY LINE
- ACCESS RIGHTS RELINQUISHED
- PROPERTY/BOUNDARY LINE
- EXISTING EASEMENT
- ROW SETBACK

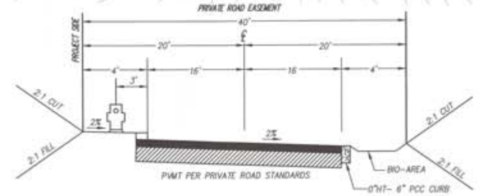
WORK TO BE DONE

- PROPOSED LOT LINE
- LEACH FIELDS
- HORIZ. PIT
- CUT / FILL LIMITS
- CUT / FILL
- FIRE HYDRANT ASSEMBLY
- WATER METER
- 8" WATER MAIN
- STORM DRAIN INLET
- STORM DRAIN
- RIP RAP
- EARTH SWALE
- DRAINAGE SWALE
- BROW DITCH
- RETAINING WALL

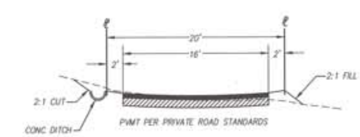




TYPICAL SECTION
SOUTH GRADE ROAD, SA370 (PUBLIC)
(N.T.S.)



TYPICAL SECTION
RANCHO SIERRA (EXTENSION)
(N.T.S.)



TYPICAL DRIVEWAY SECTION
(N.T.S.)

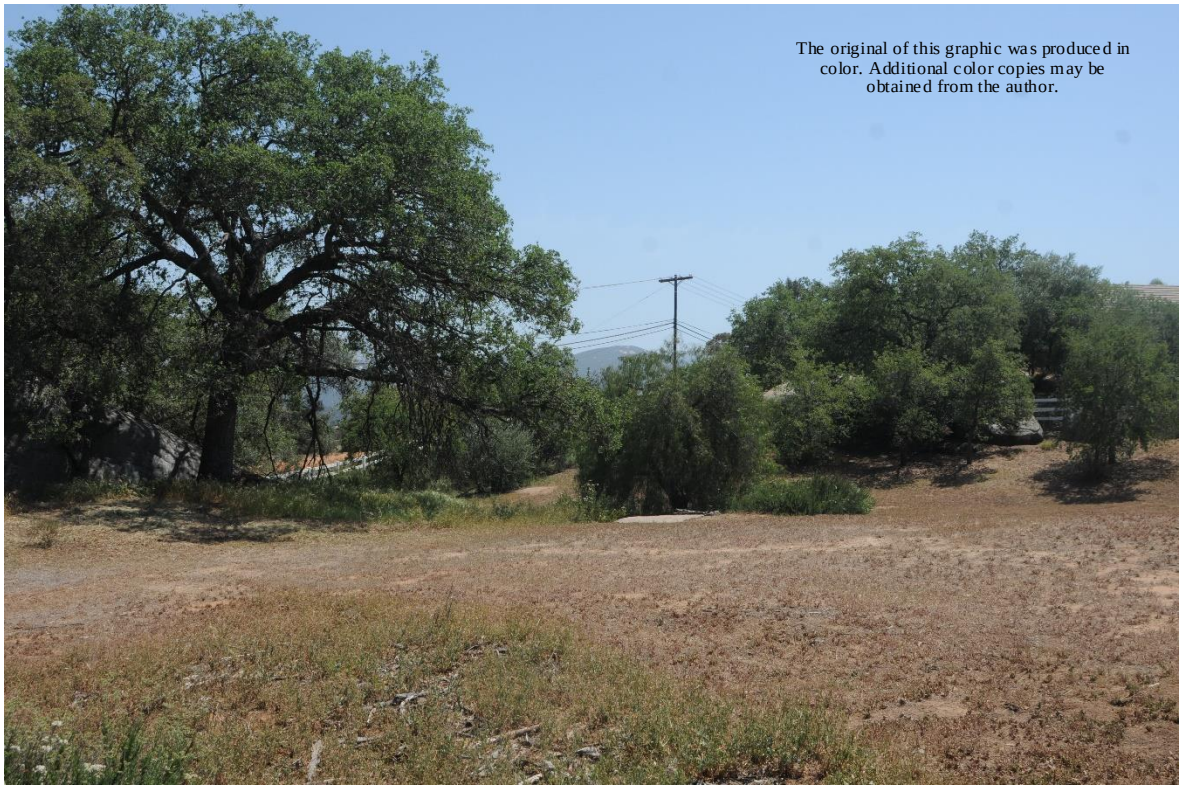
ENGINEER OF WORK:

REGISTERED PROFESSIONAL ENGINEER ANDREW J. KANN No. 50940 Exp. 9-30-15 CIVIL STATE OF CALIFORNIA

OMEGA ENGINEERING CONSULTANTS
4340 VIEWRIDGE AVE, SUITE B
SAN DIEGO, CALIFORNIA 92123
PH:(858) 634-8620 FAX:(858) 634-8627
Email: andrew@omega-consultants.com

ANDREW J. KANN R.C.E. 50940
MY REGISTRATION EXPIRES 9-30-15
DATE

DATE: 6/21/2015 10:27:21 AM BY: COLE STAFFORD FILENAME: P:\DWG OMEGA\0237 ALPINE - BAILEY\0237-PRELIMINARY GRADING.DWG



Cummings and Associates Job Number 1698.21D 26 April 2015 [:\1698-Fig-4.ppp]

Cummings and Associates	Site Photos: Top Photo Showing Open Engelmann Oak Woodland and Disturbed Habitat East of the Existing Driveway; Bottom Photo of Coastal Sage - Chaparral Scrub	Figure 4

Table 1

Vascular Plants Observed on the Rancho Sierra Property, APN 404-430-45

Plant Family	***Scientific Name*** **Common Name**	**Native (N) or Introduced (I)**
Agavaceae **Century Plant Family**	*Hesperoyucca whipplei* Our Lord's Candle	N
Anacardiaceae **Sumac Family**	*Rhus ovata* Sugar Bush	N
	Schinus molle Pepper Tree	I
	Toxicodendron diversilobum Western Poison Oak	N
Apiaceae **Carrot Family**	*Apiastrum angustifolium* Mock Parsley	N
	Sanicula tuberosa Turkey-pea Sanicle	N
Asteraceae **Sunflower Family**	*Artemisia californica* California Sagebrush	N
	Centaurea melitensis Tocalote	I
	Corethrogyne filaginifolia California Aster	N
	Eriophyllum confertiflorum Golden-Yarrow	N
	Gutierrezia sarothrae Matchweed	N
	Hazardia squarrosa Saw-toothed Goldenbush	N
	Hypochaeris glabra Smooth Cat's-Ear	I
	Logfia gallica Daggerleaf Cottonrose	I

Plant Family	*Scientific Name* Common Name	Native (N) or Introduced (I)
	Pseudognaphalium beneolens Fragrant Everlasting	N
	Pseudognaphalium californicum California Everlasting	N
	Silybum marianum Milk Thistle	I
Boraginaceae **Borage Family**	*Amsinckia menziesii* Common Fiddleneck	N
	Cryptantha micromeres Minute-flowered Cryptantha	N
	Eucrypta chrysanthemifolia Common Eucrypta	N
	Pectocarya linearis ssp. *ferocula* Narrow-toothed Pectocarya	N
	Plagiobothrys sp. Popcorn Flower	N
Brassicaceae **Mustard Family**	*Hirschfeldia incana* Shortpod Mustard	I
	Sisymbrium irio London Rocket	I
Caprifoliaceae **Honeysuckle Family**	*Lonicera subspicata* var. *denudata* Honeysuckle	N
Caryophyllaceae **Pink Family**	*Silene gallica* Windmill Pink	I
Cistaceae **Rock-Rose Family**	*Helianthemum scoparium* Peak Rush-Rose	N
Convolvulaceae **Morning-Glory Family**	*Calystegia macrostegia* Morning Glory	N
	Cuscuta californica Chaparral Dodder	N
Crassulaceae **Stonecrop Family**	*Crassula connata* Pygmy-weed	N

Plant Family	*Scientific Name* Common Name	Native (N) or Introduced (I)
Cucurbitaceae **Gourd Family**	*Marah macrocarpa* Chlicothe	N
Ericaceae **Heath Family**	*Xylococcus bicolor* Mission Manzanita	N
Euphorbiaceae **Spurge Family**	*Croton setigerus* Turkey-Mullein	N
Fabaceae **Legume Family**	*Acmispon glaber* Deerweed	N
	Acmispon strigosus Strigose Lotus	N
	Melilotus indicus Sourclover	I
Fagaceae **Oak Family**	*Quercus engelmannii* Engelmann Oak	N
Geraniaceae **Geranium Family**	*Erodium botrys* Long-beak Filaree	I
	Erodium cicutarium Redstem Filaree	I
Lamiaceae **Mint Family**	*Marrubium vulgare* Horehound	I
	Salvia apiana White Sage	N
Montiaceae **Miner's Lettuce Family**	*Calandrinia ciliata* Red Maids	N
	Claytonia perfoliata Miner's Lettuce	N
Myrsinaceae **Myrsine Family**	*Anagallis arvensis* Scarlet Pimpernel	I
Myrtaceae **Myrtle Family**	*Eucalyptus* sp. Eucalyptus	I
Oleaceae **Olive Family**	*Olea europaea* Olive	I

Plant Family	*Scientific Name* Common Name	Native (N) or Introduced (I)
Onagraceae **Evening-Primrose Family**	*Camissoniopsis bistorta* California Sun Cup	N
Phrymaceae **Lopseed Family**	*Mimulus aurantiacus* Monkeyflower	N
Plantaginaceae **Plantain Family**	*Antirrhinum nuttallianum* Nuttall's Snapdragon	N
	Nuttallanthus texanus Blue Toadflax	N
Poaceae **Grass Family**	*Avena fatua* Wild Oat	I
	Bromus diandrus Ripgut Grass	I
	Bromus madritensis ssp. rubens Red Brome	I
	Festuca myuros Rattail Sixweeks Grass	I
	Hordeum murinum ssp. *leporinum* Hare Barley	I
Polemoniaceae **Phlox Family**	*Gilia angelensis* Chaparral Gilia	N
	Navarretia hamata Hooked Skunkweed	N
Polygonaceae **Milkwort Family**	*Eriogonum fasciculatum* California Buckwheat	N
Pteridaceae **Brake Family**	*Pentagramma triangularis* ssp. *viscosa* Silverback Fern	N
Rhamnaceae **Buckthorn Family**	*Ceanothus leucodermis* Chaparral Whitethorn	N
	Rhamnus crocea Spiny Redberry	N
Rosaceae **Rose Family**	*Heteromeles arbutifolia* Toyon	N

Plant Family	*Scientific Name* Common Name	Native (N) or Introduced (I)
Rubiaceae **Madder Family**	*Galium angustifolium* ssp. *angustifolium* Narrowly Leaved Bedstraw	N
	Galium aparine Goose Grass	N
Scrophulariaceae **Figwort Family**	*Scrophularia californica* California Figwort	N
Themidaceae **Brodiaea Family**	*Dichelostemma capitatum* Blue Dicks	N
Urticaceae **Nettle Family**	*Urtica urens* Dwarf Nettle	I

67 Plants

Table 2

Wildlife Species Observed
on the Rancho Sierra Property, APN 404-430-45
County of San Diego, California

Common Name *Scientific Name*	Vegetative Community[1] in which the Species was Observed	Observations
Insects		
Apodemia mormo virgulti Mormon Metalmark	Coastal Sage - Chaparral Scrub	Seen during Quino survey.
Callophrys dumetorum Bramble Hairstreak	Coastal Sage - Chaparral Scrub	Seen during Quino survey.
cf. *Colias alexandra harfordii* Harford's Sulphur	Coastal Sage - Chaparral Scrub	Seen during Quino survey.
Erynnis funeralis Funereal Duskywing	Coastal Sage - Chaparral Scrub	Seen during Quino survey.
Euphilotes battoides Square-spotted Blue	Disturbed Habitat	Seen during Quino survey.
Glaucopsyche lygdamus Silvery Blue	Coastal Sage - Chaparral Scrub	Seen during Quino survey.
cf. *Hylephila phyleus* Fiery Skipper	Coastal Sage - Chaparral Scrub	Seen during Quino survey.
Papilio eurymedon Pale Swallowtail	Coastal Sage - Chaparral Scrub	Seen during Quino survey.

Common Name *Scientific Name*	Vegetative Community[1] in which the Species was Observed	Observations
Plebejus acmon Acmon Blue	Coastal Sage - Chaparral Scrub and Disturbed Habitat	Seen during Quino survey.
Vanessa cardui Painted Lady	Coastal Sage - Chaparral Scrub	Seen during Quino survey.
Reptiles		
Aspidoscelis tigris stejnegeri Western Whiptail	Coastal Sage - Chaparral Scrub	An individual Western Whiptail was observed during the Quino survey on 4/17/14. Another individual was seen during the visit on 4/24/14, and two individuals were seen on 6/19/14. Please see Figure 3 for the observation locations.
Sceloporus occidentalis longipes Western Fence Lizard	Coastal Sage - Chaparral Scrub	A total of seven individuals were noted during the Quino surveys on 2/25/14, 3/5/14, 3/12/14, and 4/17/14.
Sceloporus orcutti Granite Spiny Lizard	Coastal Sage - Chaparral Scrub	At least 4 individuals were seen on the boulders during the 4/17/14, 5/27/14, and 4/8/15 site visits.
Uta stansburiana Side-blotched Lizard	Coastal Sage - Chaparral Scrub and Disturbed Habitat	One individual was seen during the Quino survey on 2/25/14 and one individual was noted during the 5/10/14 visit.
Mammals		
Neotoma fuscipes Dusky-footed Woodrat	Coastal Sage - Chaparral Scrub	Several stick nests of this species were noted on the property.

Common Name *Scientific Name*	Vegetative Community[1] in which the Species was Observed	Observations
Neotoma lepida intermedia San Diego Desert Woodrat	Coastal Sage - Chaparral Scrub	Stick nests assignable to this species were noted on the property. They were found amongst the boulder outcrops on-site.
Spermophilus beecheyi California Ground Squirrel	Coastal Sage - Chaparral Scrub	At least 4 individuals were observed in and around the boulder patches on the property.
Sylvilagus audubonii Audubon's Cottontail	Coastal Sage - Chaparral Scrub and Disturbed Habitat	Three individuals were noted during the site visits and pellets assignable to this species were seen throughout the property.
Birds		
Cooper's Hawk *Accipiter cooperii*	N/A	Individual Cooper's Hawks were seen as overflights during the 4/10/14 and 4/24/14 Quino site visits.
California Quail *Callipepla californica*	Coastal Sage - Chaparral Scrub	Heard during the 4/8/15 site visit.
Greater Roadrunner *Geococcyx californianus*	Coastal Sage - Chaparral Scrub	During the 3/5/14 Quino survey, an adult was seen in the top of the one of the solitary Engelmann Oaks in the Coastal Sage - Chaparral Scrub.
Anna's Hummingbird *Calypte anna*	Coastal Sage - Chaparral Scrub	Seen and heard during the 4/24/14 survey.
Costa's Hummingbird *Calypte costae*	Coastal Sage - Chaparral Scrub	Heard in aerial display during the 5/10/14 visit.
Acorn Woodpecker *Melanerpes formicivorus*	Open Engelmann Oak Woodland	Heard in the Engelmann Oaks in the eastern part of the site during the 4/24/14 visit.

Common Name *Scientific Name*	Vegetative Community[1] in which the Species was Observed	Observations
Nuttall's Woodpecker *Picoides nuttallii*	Open Engelmann Oak Woodland	Heard in the Engelmann Oaks in the eastern part of the site during the 5/10/14 survey.
American Crow *Corvus brachyrhynchos*	N/A	Seen as an overflight during the 4/24/14 survey.
Bushtit *Psaltriparus minimus*	Coastal Sage - Chaparral Scrub	This species was noted during the 4/24/14 site visit.
Bewick's Wren *Thryomanes bewickii*	Coastal Sage - Chaparral Scrub	Seen and heard during the Quino survey on 3/12/14.
Western Bluebird *Sialia mexicana*	Coastal Sage - Chaparral Scrub	A pair were seen in the western portion of the site in a Eucalyptus tree during the 4/17/14 visit. Also, an individual was heard as an overflight on 4/24/14. See Figure 3 for the observation location made on 4/17/14.
Lark Sparrow *Chondestes grammacus*	Coastal Sage - Chaparral Scrub	An individual was seen perched in the top of a *Hesperoyucca whipplei* during the 5/10/14 visit. Also, a pair were seen during the 4/8/15 site visit.
White-crowned Sparrow *Zonotrichia leucophrys*	Coastal Sage - Chaparral Scrub	This winter visitor was seen and heard during the 4/8/15 site visit.
Lesser Goldfinch *Carduelis psaltria*	N/A	Heard as overflights during the 4/24/14 site visit.
Lawrence's Goldfinch *Carduelis lawrencei*	N/A	A male was seen in an Engelmann Oak during the Quino site visit on 4/17/14.

[1] Holland Element Codes (1986) are as follows: Coastal Sage - Chaparral Scrub (Element Code 37G00), Open Engelmann Oak Woodland (Element Code 71181), Disturbed Habitat (Element Code 11300), and Urban/Developed (Element Code 12000).

33 Species

[:\1698 Wildlife Table.wpd]

Table 3

Sensitive Plant Species Known to Occur Within an Approximate 10-mile Radius[1] of the Rancho Sierra Property - APN 404-430-45

Scientific Name Common Name[2]	Sensitivity Code and Status[3]	Habitat Preference	Found On-site (Y or N)	Potential On-site[4]	Factual Basis for Potential
Acanthomintha ilicifolia San Diego Thornmint	List A/List1B.1/S1/CE/FT	Occurs on heavy clay soils in a variety of habitats. Known elevations are 30 - 3,000 feet.	N	U	There are no clay soils mapped on the property (Bowman, 1973).
Adolphia californica California Adolphia	List B/List 2B.1/S2/-/-	Typically found on metavolcanic and/or clay soils in Sage Scrub habitats. Known elevations are 300 - 1,000 feet.	N	U	There are no metavolcanic or clay soils mapped on the property (Bowman, 1973). NOTE: The San Diego County List calls this plant San Diego Adolphia.
Ambrosia monogyra Singlewhorl Burrobrush	-/List 2B.2/S2/-/-	Found in sandy washes in the south coastal portion of San Diego County. Known elevations range from 32 - 1645 feet.	N	U	There are no washes within the subject property, and the site is located inland in Alpine, not along the coast. Elevations on-site range between approximately 2,062 to 2,114-feet. The lowest elevation on the property is ± 417-feet above the highest known elevation for the species. NOTE: *Hymenoclea monogyra* is a synonym.

Scientific Name Common Name[2]	Sensitivity Code and Status[3]	Habitat Preference	Found On-site (Y or N)	Potential On-site[4]	Factual Basis for Potential
Ambrosia pumila San Diego Ambrosia	List A/List 1B.1/S1/-/FE	Found in sandy loam or clay soils in Chaparral, Sage Scrub, or Valley and Foothill Grassland habitats. Elevations range from 60 - 1,370 feet.	N	U	Fallbrook sandy loam is mapped on the property (Bowman, 1973), and there is Coastal Sage - Chaparral Scrub habitat on the property. However, the lowest elevation on the property (approximately 2,062-feet) is ± 692-feet above the highest known elevation for the species.
Arctostaphylos otayensis Otay Manzanita	List A/List 1B.2/S2/-/- CA-Endemic	Found in Chaparral and Cismontane Woodlands at elevations ranging from 900 - 5,600 feet. Also, this species is found on metavolcanic soils.	N	U	There are no metavolcanic soils mapped on the property (Bowman, 1973).
Artemisia palmeri San Diego Sagewort	List D/List 4.2/S3.2/-/-	Found primarily along creeks and drainages near the coast; inland it may occur in mesic conditions within Chaparral, Coastal Scrub, and Riparian habitats. Found in elevations from 50 3,010 feet.	N	L	The site is located inland in Alpine and there is Coastal Sage - Chaparral Scrub habitat on the property. However, the Coastal Sage - Chaparral Scrub habitat is not mesic. The closest CNDDB record is 1½-miles to the northwest, north of I-8 in the understory of Southern Willow Scrub (CDFW, 2015b). NOTE: The San Diego County List calls this species Palmer's Sage.
Asplenium vespertinum Western Spleenwort	List D/List 4.2/S3.2/—/—	Found among rock outcrops at elevations of 590 - 3,290 feet.	N	L	There are several rock outcrops at the site. However, there are no CNDDB records of this species within the Alpine quad (CDFW, 2015b).

Scientific Name Common Name[2]	Sensitivity Code and Status[3]	Habitat Preference	Found On-site (Y or N)	Potential On-site[4]	Factual Basis for Potential
Astragalus deanei Dean's Milkvetch	List A/List 1B.1/S 1/-/- CA-Endemic	Known from Chaparral, Coastal Scrub and Riparian Forest habitats at elevations ranging from 245 - 2,200 feet.	N	L	The site contains Coastal Sage – Chaparral Scrub habitat at elevations similar to the known elevations of the species. The closest CNDDB record is 4¼-miles to the southwest along Sweetwater River/Sloan Canyon Truck Trail (CDFW, 2015b).
Astragalus douglasii var. *perstrictus* Jacumba Milkvetch	List A/List 1B.2/S2?/—/—	Found in open areas at elevations of 2,960 - 4,510 feet.	N	U	Elevations on-site range between approximately 2,062 to 2,114-feet. The highest elevation on-site is ± 846-feet below the lowest known elevation of the species. Also, there are no CNDDB records of this species within the Alpine quad (CDFW, 2015b).
Astragalus oocarpus San Diego Milkvetch	List A/List 1B.2/S3/-/- CA-Endemic	Found in Chaparral and Cismontane Woodlands at elevations ranging from 1,000 - 4,950 feet.	N	L	There are Open Engelmann Oak Woodlands on the property at elevations similar to the known elevations of the species. The closest CNDDB record is 3¾-miles to the southwest, south of Loveland Reservoir (CDFW, 2015b).

Scientific Name Common Name[2]	Sensitivity Code and Status[3]	Habitat Preference	Found On-site (Y or N)	Potential On-site[4]	Factual Basis for Potential
Atriplex pacifica South Coast Saltscale	List A/List 1B.2/S2/-/-	Although most populations occur immediately along the coast or on saltpans, one or two populations do occur within inland Sage Scrub habitats. Grows at elevations of 0 - 461 feet.	N	U	The site is located inland in Alpine, not along the coast. There is Coastal Sage - Chaparral Scrub on the property, but the elevations on-site are much higher than the known elevations for the species.
Baccharis vanessae Encinitas Baccharis	List A/List 1B.1/S1/CE/FT CA-Endemic	Found locally in Chaparral habitats, close to the coast and on soils derived from marine sandstones. Grows at elevations from 197 - 2,369 feet.	N	U	The sandy soils on-site are not derived from marine sandstones (Bowman, 1973).
Bloomeria clevelandii San Diego Goldenstar	List A/List 1B.1/S2/-/-	Found in a variety of habitats on clay soils at elevations of 164 1,530 feet.	N	U	There are no clay soils mapped on the property (Bowman, 1973). NOTE: *Muilla clevelandii* is a synonym.
Brodiaea orcuttii Orcutt's Brodiaea	List A/List 1B.1/S2/-/-	Found on heavy clay soils at elevations that range from 98 - 5,567 feet.	N	U	There are no clay soils mapped on the property (Bowman, 1973).
Calandrinia breweri Brewer's Calandrinia	List D/List 4.2/S3.2?/-/-	Seldom seen except in recent burn areas in Chaparral and Coastal Sage Scrub at elevations ranging from 32 - 4,014 feet.	N	U	The site contains Coastal Sage – Chaparral Scrub habitat at elevations similar to the known elevations of the species. However, the site has not recently burned.

Scientific Name Common Name[2]	Sensitivity Code and Status[3]	Habitat Preference	Found On-site (Y or N)	Potential On-site[4]	Factual Basis for Potential
California macrophylla Round-Leaved Filaree	List B/List 1B.1/S2/-/-	Found on clay soils in Valley and Foothill Grasslands at elevations of 49 - 3,948 feet.	N	U	There are no clay soils mapped on the property (Bowman, 1973). NOTE: *Erodium macrophyllum* is a synonym.
Calochortus dunnii Dunn's Mariposa Lily	List A/List1B.2/S2?/CR/-	Found on metavolcanic or gabbroic soils in openings in Chaparral and Closed-Cone Coniferous Forest habitats. Known elevations for this species range from 1,250 - 6,000 feet.	N	U	There are no metavolcanic or gabbroic soils mapped on the property (Bowman, 1973).
Camissoniopsis lewisii Lewis' Evening-Primrose	List C/List 3/S1S3/-/-	Found in fine sandy soils along the beach at elevations from 0 - 987 feet.	N	U	The property is located inland (in Alpine), not along the beach. NOTE: The San Diego County List calls this plant Lewis's Sun Cup. *Camissonia lewisii* is a synonym.
Carex obispoensis *San Luis Obispo Sedge*	— /List 1B.2/S2S3/-/- CA-Endemic	Found on gabbroic soils on Sycuan and McGinty Mountains. The elevation range for this plant is 32 - 2,599 feet.	N	U	There are no gabbroic soils mapped on the property (Bowman, 1973).

Scientific Name Common Name[2]	Sensitivity Code and Status[3]	Habitat Preference	Found On-site (Y or N)	Potential On-site[4]	Factual Basis for Potential
Castilleja plagiotoma *Mojave Paintbrush*	---/List 4.3/S3.3/-/-	Found in Great Basin Scrub, Joshua Tree Woodland, Lower Montane Coniferous Forest, and Pinyon and Juniper Woodlands at elevations of 987 – 8,225 feet.	N	U	There are no Great Basin Scrub, Joshua Tree Woodland, Lower Montane Coniferous Forest, or Pinyon and Juniper Woodlands on the property.
Caulanthus simulans Payson's Jewelflower	List D/List 4.2/S3.2/-/- CA-Endemic	Found in Juniper Woodland, Chaparral, and Sage Scrub at an elevation range of 296 - 7,238 feet.	N	M	The site contains Coastal Sage – Chaparral Scrub habitat at elevations similar to the known elevations of the species. According to the CNPS (2015), this species is known from the Alpine quad.
Ceanothus cyaneus Lakeside Ceanothus	List A/List 1B.2/S2/-/-	Found in Chaparral and Cismontane Woodlands at elevations ranging from 775 - 4,985 feet.	N	L	There are Open Engelmann Oak Woodland and Coastal Sage – Chaparral Scrub habitats on the property at elevations similar to the known elevations of the species. However, the closest CNDDB record is 1.8-miles to the southwest, along the Sycuan Truck Trail (CDFW, 2015b).
Ceanothus otayensis Otay Mountain Ceanothus	—/List 1B.2/S1/-/-	Found in Chaparral habitats on gabbroic or metavolcanic soils ranging from 1,950 3,600 feet.	N	U	There are no gabbroic or metavolcanic soils mapped on the property (Bowman, 1973).

Scientific Name Common Name[2]	Sensitivity Code and Status[3]	Habitat Preference	Found On-site (Y or N)	Potential On-site[4]	Factual Basis for Potential
Ceanothus verrucosus Wart-stemmed Ceanothus	List B/List 2B.2/S2.2/-/-	Associated with Chaparral habitats, it is frequently an indicator of Southern Maritime Chaparral. Known elevations range from 3 - 1,250 feet.	N	U	There is a Coastal Sage – Chaparral Scrub habitat on the property. However, the highest known elevation of the species is ± 812-feet lower than the lowest elevation on the property.
Centromadia pungens ssp. *laevis* Smooth Tarplant	List A/List 1B.1/S2/-/- CA-Endemic	Found on alkaline soils in mesic habitats, such as Meadows and Seeps, Playas, and Riparian Woodlands. Known elevation is 0 1,580 feet.	N	U	There are no alkaline soils mapped on the property (Bowman, 1973).
Chamaebatia australis Southern Mountain Misery	List D/List 4.2/S3.2/-/-	Grows in gabbroic or metavolcanic soil in Chaparral at elevations from 987 - 2,303 feet. Typically surrounded by Chamise Chaparral.	N	U	There are no gabbroic or metavolcanic soils mapped on the property (Bowman, 1973).
Chamaesyce abramsiana Abrams' Spurge	—/List 2B.2/S2/—/—	Found in Mojavean Desert Scrub and sandy Sonoran Desert Scrub at elevations of -9 to 3,011 feet.	N	U	There are no Mojavean Desert Scrub, or Sonoran Desert Scrub habitats on the property.

Scientific Name Common Name[2]	Sensitivity Code and Status[3]	Habitat Preference	Found On-site (Y or N)	Potential On-site[4]	Factual Basis for Potential
Chorizanthe leptotheca Peninsular Spineflower	List D/List 4.2/S3.2/-/-	Found in xeric openings in Chaparral, Coastal Scrub, and Lower Montane Coniferous Forests at elevations of 987 - 6,251 feet.	N	M	The site contains Coastal Sage – Chaparral Scrub habitat at elevations similar to the known elevations of the species. According to the CNPS (2015), this species is known from the Alpine quad.
Chorizanthe polygonoides var. *longispina* Long-Spined Spineflower	List A/List 1B.2/S3/-/-	Found on clay soils in a variety of habitats. Known elevations of 987 - 5,034 feet.	N	U	There are no clay soils mapped on the property (Bowman, 1973).
Clarkia delicata Delicate Clarkia	List A/List 1B.2/S3/-/-	Found in Chaparral and Cismontane Woodlands at elevations ranging from 775 - 4,200 feet. Often on gabbroic soils.	N	M	There are no gabbroic soils mapped on the property (Bowman, 1973). However, there are Open Engelmann Oak Woodland and Coastal Sage – Chaparral Scrub habitats on the property at elevations similar to the known elevations of the species. The closest CNDDB record is 0.6-mile to the northeast (CDFW, 2015b).
Clinopodium chandleri San Miguel Savory	List A/List 1B.2/S2/-/-	Found on gabbroic or metavolcanic soils in a variety of habitats at elevations of 394 3,537 feet.	N	U	There are no gabbroic or metavolcanic soils mapped on the property (Bowman, 1973). NOTE: A synonym is *Satureja chandleri*.

Scientific Name Common Name[2]	Sensitivity Code and Status[3]	Habitat Preference	Found On-site (Y or N)	Potential On-site[4]	Factual Basis for Potential
Comarostaphylis diversifolia ssp. *diversifolia* Summer Holly	List A/List 1B.2/S2/-/-	Found in coastal and inland Chaparral habitats, as well as Cismontane Woodlands. Known elevations range from 98 - 1,809 feet.	N	U	There are Open Engelmann Oak Woodland and Coastal Sage – Chaparral Scrub habitats on the property. However, the elevations on-site are slightly higher than the highest known elevation for the species. The closest CNDDB record is 12¼-miles to the northwest, and this record is from 1938 (CDFW, 2015b).
Convolvulus simulans Small-Flowered Morning-Glory	List D/List 4.2/S3.2/-/-	Grows on friable clay soils in a variety of habitats in areas devoid of shrubs. Found at elevations of 987 - 2,303 feet.	N	U	There are no clay soils mapped on the property (Bowman, 1973).
Cordylanthus rigidus ssp. brevibracteatus Short-bracted Bird's-Beak	---/List 4.3/S3.3/-/- CA-Endemic	Openings on granitic soils in Chaparral, Lower Montane Coniferous Forest, Pinyon and Juniper Woodland, and Upper Montane Coniferous Forest at elevations of 2,007 – 8,521 feet.	N	M	The site contains Coastal Sage – Chaparral Scrub habitat at elevations similar to the known elevations of the species. According to the CNPS (2015), the only quad in San Diego in which this species is found is the Alpine quad.

Scientific Name Common Name[2]	Sensitivity Code and Status[3]	Habitat Preference	Found On-site (Y or N)	Potential On-site[4]	Factual Basis for Potential
Corethrogyne filaginifolia var. *incana* San Diego Sand Aster	List A/List 1B.1/S1/-/-	Grows in coastal sandy areas at elevations of 9 - 379 feet.	N	U	The site is located inland in Alpine at elevations much higher than the known elevations for this variety. *Corethrogyne filaginifolia* was noted on-site, but if using the old taxonomy, it would be of the variety *virgata*, which is a non-sensitive variety. NOTE: The Flora of North America (Volume 20) and the 2nd Edition of the Jepson Manual unite this variety and *C. f.* var. *linifolia* as a single species, *Corethrogyne filaginifolia.*
Cylindropuntia californica var. *californica* Snake Cholla	List A/List 1B.1/S1/-/-	Found in Coastal Scrub and Chaparral habitats at elevations of 98 - 494 feet.	N	U	The site contains Coastal Sage – Chaparral Scrub habitat. However, the highest known elevation of the species is ± 1,568-feet lower than the lowest elevation on the property. NOTE: Synonyms are *Opuntia californica var.californica* and *Opuntia parryi* var. *serpentina.*
Deinandra conjugens Otay Tarplant	List A/List 1B.1/S1CE/FT	Found on clay soils in Coastal Scrub and Valley and Foothill Grassland habitats. Known at elevations of 82 - 987 feet.	N	U	There are no clay soils mapped on the property (Bowman, 1973).

Scientific Name Common Name[2]	Sensitivity Code and Status[3]	Habitat Preference	Found On-site (Y or N)	Potential On-site[4]	Factual Basis for Potential
Deinandra floribunda Tecate Tarplant	List A/List 1B.2/S2.2/-/-	Found in sandy washes in Chaparral and Coastal Scrub at elevations of 230 - 4,014 feet.	N	U	There are no sandy washes on the property. Also, the closest CNDDB record is 10.3-miles to the south in Bratton Valley (CDFW, 2015b).
Deinandra paniculata Paniculate Tarplant	List D/List 4.2/S3.2/-/-	Found in Coastal Scrub, Valley and Foothill Grassland and Vernal Pools at elevations of 82 -3,093 feet. Usually on vernally mesic soils.	N	U	Although the site contains Coastal Sage – Chaparral Scrub habitat at elevations similar to the known elevations of the species, the soils on-site would not be considered mesic.
Delphinium parishii ssp. *subglobosum* Colorado Desert Larkspur	List D/List 4.3/S3.2/-/-	Grows in Chaparral, Cismontane Woodland, Pinyon and Juniper Woodland, and Sonoran Desert Scrub at elevations of 1,974 - 5,922 feet.	N	L	There are Open Engelmann Oak Woodland and Coastal Sage – Chaparral Scrub habitats on the property at elevations similar to the known elevations of the species. However, the CNPS (2015b), does not list this species as being recorded in the Alpine quad.
Dichondra occidentalis Western Dichondra	List D/List 4.2/S3.2/-/-	Known in a variety of habitats with variable soil tolerances. Often grows almost completely hidden at the base of leafy shrubs. Grows at elevations of 164 - 1,645 feet.	N	U	The site contains Coastal Sage – Chaparral Scrub and Open Engelmann Oak Woodland habitats. However, the highest known elevation of the species is ± 417-feet lower than the lowest elevation on the property. Also, the CNPS (2015), does not list this species within the Alpine quad.

Scientific Name Common Name[2]	Sensitivity Code and Status[3]	Habitat Preference	Found On-site (Y or N)	Potential On-site[4]	Factual Basis for Potential
Dicranostegia orcuttiana Orcutt's Bird's Beak	List B/List 2B.1/S1/-/-	Associated with Sage Scrub habitats at elevations ranging from 35 - 1,150 feet.	N	U	The site contains Coastal Sage – Chaparral Scrub habitat. However, the highest known elevation of the species is ± 912-feet lower than the lowest elevation on the property. NOTE: A synonym is *Cordylanthus orcuttianus.*
Dudleya variegata Variegated Dudleya	List A/List 1B.2/S2.2/-/-	Found on clay soils and clay lenses in sunny openings in a variety of habitats. It also occurs on sandy soils in Sage Scrub habitats. Known at elevations of 9 - 1,909 feet.	N	U	There are no clay soils mapped on the property (Bowman, 1973).
Ericameria palmeri ssp. *palmeri* Palmer's Goldenbush	List B/List 1B.1/S1/-/-	Associated with mesic soils in Chaparral and Sage Scrub habitats. Seasonally wet/moist locales are strongly preferred. Grows at elevations of 98 - 1,974 feet.	N	U	The soils on-site are not mesic (Bowman, 1973). .

Scientific Name Common Name[2]	Sensitivity Code and Status[3]	Habitat Preference	Found On-site (Y or N)	Potential On-site[4]	Factual Basis for Potential
Eriogonum evanidum Vanishing Wild Buckwheat	List A/List 1B.1/S1.1/-/-	Associated with Chaparral, Cismontane Woodland, Lower Montane Coniferous Forests, and Pinyon and Juniper Woodland habitats at sandy sites. Known elevations are 3,619 - 7,320 feet.	N	U	The elevation at the site ranges between 2,062 to 2,114-feet, which is 1,505-feet below the lowest known elevation of the species. NOTE: *Eriogonum foliosum* is a synonym.
Eryngium aristulatum var. *parishii* San Diego Button-Celery	List A/List 1B.1/S1/CE/FE	Typically found in Vernal Pools, but this species is also tolerant of some of the habitats adjacent to Vernal Pools, such as Coastal Scrub and Valley and Foothill Grassland habitats. Grows at elevations of 65 - 2,040 feet.	N	U	There are no Vernal Pools on the property.
Ferocactus viridescens San Diego Barrel Cactus	List B/List 2B.1/S3/-/-	Found in a variety of habitats, such as Sage Scrub, Chaparral, and Valley and Foothill Grassland. Often found on south-facing slopes at elevations ranging from 9 - 1,481 feet.	N	U	Although the site contains Coastal Sage –Chaparral Scrub habitat, the highest known elevation of the species is ±581-feet lower than the lowest elevation on the property.

Scientific Name Common Name[2]	Sensitivity Code and Status[3]	Habitat Preference	Found On-site (Y or N)	Potential On-site[4]	Factual Basis for Potential
Fraxinus parryi Chaparral Ash	—/List 2B.2/S1/-/-	Found in arid, relatively open Chaparral at elevations of 700 - 2,040 feet.	N	U	Although there is Coastal Sage – Chaparral Scrub habitat on the property, this species is often found at elevations lower than the known elevations on the property. The only CNDDB record from within 10-miles of the property is located at the intersection of Skyline Truck Trail and Lawson Valley Road, approximately 7¼-miles to the southwest (CDFW, 2015b).
Fremontodendron mexicanum Mexican Flannelbush	List A/List 1B.1/S1/CR/FE	Found on gabbroic, metavolcanic or serpentine soils within Chaparral, Cismontane Woodland and Closed-Cone Coniferous Forest habitats. Elevations range from 32 - 2,356 feet.	N	U	There are no gabbroic, metavolcanic, or serpentine soils mapped on the property (Bowman, 1973).
Galium proliferum Desert Bedstraw	—/List 2B.2/S2/—/—	Found in Joshua Tree Woodland, Mojavean Desert Scrub and Pinyon and Juniper Woodland at elevations of 3,915 – 4,959 feet.	N	U	There are no Joshua Tree Woodland, Mojavean Desert Scrub, or Pinyon and Juniper Woodland habitats on the property. Also, the elevation at the site ranges between 2,062 to 2,114-feet, which is 1,801-feet below the lowest known elevation of the species.

Scientific Name Common Name[2]	Sensitivity Code and Status[3]	Habitat Preference	Found On-site (Y or N)	Potential On-site[4]	Factual Basis for Potential
Geraea viscida Sticky Geraea	List B/List 2B.3/S2.3?/—/—	Found in Chaparral habitat (often in disturbed areas) at elevations of 1,480 - 5,593 feet.	N	L	There is Coastal Sage – Chaparral Scrub habitat on the property at elevations similar to the known elevations of the species. However, the closest CNDDB record is 5.4-miles to the southeast along Japatul Valley Road from 1971 (CDFW, 2015b).
Githopsis diffusa ssp. filicaulis Mission Canyon Bluecup	List C/List 3.1/S1/-/- CA-Endemic	Found on mesic soils or in disturbed areas within Chaparral habitats at elevations of 1,480 - 2,300 feet.	N	L	There is Coastal Sage – Chaparral Scrub habitat on the property at elevations similar to the known elevations of the species. However, there are no mesic soils mapped on the property (Bowman, 1973), but there are small disturbed areas. The closest CNDDB record is 7-miles to the northwest on the north side of El Cajon Mountain (CDFW, 2015b). The only other CNDDB record for this subspecies within 10-miles of the project is at the Silverwood Wildlife Sanctuary approximately 8.4-miles to the northwest (CDFW, 2015b).
Grindelia hallii San Diego Gumplant	---/List 1B.2/S2.2/—/— CA-Endemic	Grows in Montane Meadows and Lower Montane Coniferous Forests with sunny openings. Prefers locales which are quite wet in the early spring. Known elevations range from 608 - 5,742 feet.	N	U	There are no Montane Meadows or Lower Montane Coniferous Forests on the property.

Scientific Name Common Name[2]	Sensitivity Code and Status[3]	Habitat Preference	Found On-site (Y or N)	Potential On-site[4]	Factual Basis for Potential
Harpagonella palmeri Palmer's Grapplinghook	List D/List 4.2/S3.2/-/-	Found in clay vertisols with open grassy slopes or in open Diegan Sage Scrub. Diablo clays are favored along the coast. Elevations range from 658 3,142 feet.	N	U	There are no clay soils mapped on the property (Bowman, 1973).
Hesperocyparis forbesii Tecate Cypress	List A/List 1B.1/S1.1/-/-	Found on clay or gabbroic soils in Chaparral and Closed Cone Coniferous Forests at elevations ranging from 263 - 4,935 feet.	N	U	There are no clay or gabbroic soils mapped on the property (Bowman, 1973). NOTE: *Callitropsis forbesii* and *Cupressus forbesii* are synonyms.
Hesperocyparis stephensonii Cuyamaca Cypress	List A/List 1B.1/S1/—/— CA-Endemic	Restricted to the southwest slopes of Cuyamaca Peak on gabbroic soils at elevations of 3,405 - 5,610 feet.	N	U	There are no gabbroic soils mapped on the property (Bowman, 1973), and the site is located in Alpine, not on Cuyamaca Peak. NOTE: *Cupressus stephensonii* and *Cupressus arizonica* are synonyms.
Holocarpha virgata ssp. *elongata* Graceful Tarplant	List D/List 4.2/S3.2/-/- CA-Endemic	Found in annual and perennial grasslands at elevations of 197 - 3,619 feet.	N	U	There are no grasslands on the property, and the CNPS does not list the Alpine quad as a quad in which this subspecies is found (CNPS, 2015).

Scientific Name Common Name[2]	Sensitivity Code and Status[3]	Habitat Preference	Found On-site (Y or N)	Potential On-site[4]	Factual Basis for Potential
Hordeum intercedens Bobtail Barley	List C/List 3.2/S3S4/-/-	Occurs on Coastal Dunes, in Coastal Scrub, on saline flats or depressions in grasslands, or within Vernal Pool basins. Grows at elevations that range from 16 - 3,290 feet.	N	L	There is Coastal Sage – Chaparral Scrub habitat on the property at elevations similar to the known elevations of the species. However, the CNPS does not list the Apine quad as a quad in which this subspecies is found (CNPS, 2015). NOTE: SD County and CNPS Lists call this plant Vernal Barley.
Horkelia truncata Ramona Horkelia	List A/List 1B.3/S2.3/-/-	Found in clay soils within Chaparral and Cismontane Woodlands at elevations ranging from 1,300 - 4,270 feet.	N	U	There are no clay soils mapped on the property (Bowman, 1973).
Hulsea californica San Diego Hulsea	List A/List 1B.3/S2.1/—/— CA-Endemic	Found in Montane Coniferous Forests and lightly disturbed Chaparral on sandy loams. This plant is a "fire follower." Found at elevations of 3,010 - 9,591 feet.	N	U	Although there is Coastal Sage – Chaparral Scrub habitat on the property on sandy loam soils (Bowman, 1973), the lowest known elevation for the species is ± 896-feet higher than the highest elevation on the property.

Scientific Name Common Name[2]	Sensitivity Code and Status[3]	Habitat Preference	Found On-site (Y or N)	Potential On-site[4]	Factual Basis for Potential
Isocoma menziesii var. *decumbens* Decumbent Goldenbush	List A/List 1B.2/S2.2/-/-	Associated with Sage Scrub habitats at elevations ranging from 30 - 440 feet.	N	U	Although there is Coastal Sage – Chaparral Scrub habitat on the property on sandy loam soils (Bowman, 1973), the highest known elevation for the species is ± 1,622-feet lower than the lowest elevation on the property. NOTE: The Flora of North America (volume 20) has eliminated all varieties and just calls the plant *Isocoma menziesii.* Rebman identifies the plant as *Isocoma menziesii* var. *menziesii* and calls it Spreading Goldenbush.
Iva hayesiana San Diego Marsh-Elder	List B/List 2B.2/S2.2?/-/-	A species found in marshy habitats in slow moving waters. Found at elevations of 32 - 1,645 feet.	N	U	There are no marshy habitats on the property.
Juncus acutus ssp. *leopoldii* Southwestern Spiny Rush	List D/List 4.2/S3.2/-/-	Found in mesic Coastal Dunes, Meadows and Seeps, and coastal Marshes and Swamps at elevations that range from 9 - 2,961 feet.	N	U	There are no Coastal Dunes, Meadows, Seeps or coastal Marshes and Swamps on the property.
Lasthenia glabrata ssp. *coulteri* Coulter's Goldfields	List A/List 1B.1/S2.1/-/-	A species of Salt Marshes, Playas and Vernal Pools. Found at elevations of 3 - 4,014 feet.	N	U	There are no Salt Marshes, Playas or Vernal Pools on the property.

Scientific Name Common Name[2]	Sensitivity Code and Status[3]	Habitat Preference	Found On-site (Y or N)	Potential On-site[4]	Factual Basis for Potential
Lathyrus splendens Pride-of-California	List D/List 4.3/S3.3/-/-	Found in Chaparral typically clambering through woody shrubs. Elevations range from 658 - 5,018 feet.	N	M	Although there is Coastal Sage – Chaparral Scrub habitat on the property, the Chaparral component of this mixed association is minor. The Alpine quad is listed as one of the quads in which this species is found (CNPS, 2015).
Lepechinia cardiophylla Heart-leaved Pitcher Sage	List A/List 1B.2/S2.2/-/-	In San Diego County, this species is found in Chaparral habitat on Iron Mountain. Found at elevations of 1,710 - 4,508 feet.	N	U	Although there is Coastal Sage – Chaparral Scrub habitat on the property, the site is located in Alpine, not on Iron Mountain.
Lepechinia ganderi Gander's Pitcher Sage	List A/List 1B.3/S2.2/-/-	Found in a variety of habitats on metavolcanic or gabbroic soils at elevations ranging from 1,000 - 3,300 feet.	N	U	There are no metavolcanic or gabbroic soils mapped on the property (Bowman, 1973).
Lepidium virginicum ssp. *menziesii* Poor Man's Pepper	List A/List 4.3/S3/-/-	Found in Coastal Scrub and Chaparral habitats generally well away from the coast in foothill elevations. It grows in relatively dry, exposed locales at elevations of 3 - 2,912 feet.	N	H	There is Coastal Sage – Chaparral Scrub habitat on the property. The closest CNDDB record is 1.3-miles to the northwest in Peutz Valley (CDFW, 2015b). NOTE: A synonym is *Lepidium virginicum* var. *robinsonii.*

Scientific Name Common Name[2]	Sensitivity Code and Status[3]	Habitat Preference	Found On-site (Y or N)	Potential On-site[4]	Factual Basis for Potential
Lilium parryi Lemon Lily	ListA/List 1B.2/S3/—/—	Occurs in wet, mountainous areas. Locally found at elevations of 4,103 - 9,032 feet.	N	U	The Lemon Lily is found at elevations higher than those represented on the property.
Microseris douglasi ssp. *platycarpha* Small-flowered Microseris	List D/List 4.2/S3.2/-/-	Grows in clay lenses in perennial Grasslands, on the periphery of Vernal Pools, or in broad openings in Sage Scrub. Found at elevations of 49 - 3,521 feet.	N	U	There are no clay soils mapped on the property (Bowman, 1973).
Mimulus clevelandii Cleveland's Bush Monkeyflower	List D/List 4.2/S3.2/-/-	Grows in Chaparral and Lower Montane Coniferous Forests in metavolcanic or gabbroic soils. Has a strong preference for peaks and upper ridgelines. Found at elevations of 2,681 - 6,580 feet.	N	U	There are no clay or metavolcanic soils mapped on the property (Bowman, 1973).

Scientific Name Common Name[2]	Sensitivity Code and Status[3]	Habitat Preference	Found On-site (Y or N)	Potential On-site[4]	Factual Basis for Potential
Mimulus palmeri Palomar Monkey Flower	List D/List 4.3/S3.3/-/-	Found in Chaparral or Lower Montane Coniferous Forests on sandy or gravelly soils at elevations from 4,013 - 6,021 feet.	N	U	Although there is Coastal Sage – Chaparral Scrub habitat on the property on sandy loam soils (Bowman, 1973), the lowest known elevation for the species is ± 1,899-feet higher than the highest elevation on the property. NOTE: Synonym for *Mimulus diffusus.*
Monardella hypoleuca ssp. *lanata* Felt-Leaved Monardella	List A/List 1B.2/S2.2/-/-	Found in Chaparral and Cismontane Woodlands on sandy and gabbroic soils at elevations ranging from 987 – 5,182 feet.	N	M	There are Coastal Sage – Chaparral Scrub and Open Engelmann Oak Woodland habitats on the property on sandy loam soils (Bowman, 1973), within the known elevational range of the subspecies. The closest CNDDB record is 1.7-miles to the northeast on the southern slope of Viejas Mountain on gabbroic soils (CDFW, 2015b).
Monardella viminea Willowy Monardella	List A/List 1B.1/S1/CE/FE CA-Endemic	A species found in canyons and washes. Associated with riparian, Sage Scrub and Chaparral habitats. Found at 164 - 741 feet in elevation.	N	U	There are no canyons or washes on this property.

Scientific Name Common Name[2]	Sensitivity Code and Status[3]	Habitat Preference	Found On-site (Y or N)	Potential On-site[4]	Factual Basis for Potential
Myosurus minimus Little Mousetail	List C/List 3.1/S2.2/-/-	Found in Vernal Pools and occasionally in Valley and Foothill Grasslands adjacent to Vernal Pools at elevations of 65 - 2,106 feet.	N	U	There are no Vernal Pools on the property. NOTE: A synonym is *Myosurus minimus* ssp. *apus.*
Nama stenocarpum Mud Nama	List B/List 2B.2/S1S2/-/-	This species is found on the muddy embankments of ponds, lakes, and occasionally rivers. Grows at elevations from 16 - 1,645 feet.	N	U	There are no wetlands on the property.
Navarretia fossalis Spreading Navarretia	List A/List 1B.1/S1/-/FT	In San Diego County, the preferred habitat of this species is Vernal Pools. Found at elevations of 987 4,277 feet.	N	U	There are no Vernal Pools on the property.
Nolina cismontana Peninsular Bear-Grass	List A/List 1B.2/S2/—/— CA-Endemic	Found in Chaparral and Coastal Scrub habitats on gabbroic or sandstone soils. Grows at elevations of 460 - 4,195 feet.	N	U	There are no gabbroic or sandstone soils mapped on the property (Bowman, 1973).

Scientific Name Common Name[2]	Sensitivity Code and Status[3]	Habitat Preference	Found On-site (Y or N)	Potential On-site[4]	Factual Basis for Potential
Nolina interrata Dehesa Nolina	List A/List 1B.1/S2/CE/-	Found in Chaparral habitats on gabbroic, metavolcanic or serpentine soils. Known at elevations of 608 - 2,813 feet.	N	U	There are no gabbroic, metavolcanic, or serpentine soils mapped on the property (Bowman, 1973).
Ophioglossum californicum California Adder's-Tongue	List D/List 4.2/S3.2/-/-	Found on the periphery of Vernal Pools and seeps and vernally moist locales. Grows at elevations of 197 - 1,728 feet. Difficult to find during extended periods without rainfall.	N	U	There are no Vernal Pools, seeps or vernally moist locales on the property.
Packera ganderi Gander's Ragwort	List A/List 1B.2/S2.2/CR/-CA-Endemic	A species found in Chaparral habitat on gabbroic soils at elevations of 1,316 3,948 feet.	N	U	There are no gabbroic soils mapped on the property (Bowman, 1973). NOTE: A synonym is *Senecio ganderii.*

Scientific Name Common Name[2]	Sensitivity Code and Status[3]	Habitat Preference	Found On-site (Y or N)	Potential On-site[4]	Factual Basis for Potential
Pentachaeta aurea ssp. *aurea* Golden-rayed Pentachaeta	List D/List 4.2/S3/-/-	Found in Cismontane Woodland, Coastal Scrub, Lower Montane Coniferous Forest, and Valley and Foothill Grassland habitats at elevations of 263 - 6,087 feet.	N	H	There are Coastal Sage – Chaparral Scrub and Open Engelmann Oak Woodland habitats on the property within the known elevational range of the subspecies. The CNPS does list the Alpine quad as a quad in which this subspecies is found (CNPS, 2015b). NOTE: The County List D only refers to the specific epithet, not to any subspecies.
Pickeringia montana var. *tomentosa* Woolly Chaparral Pea	—/List 4.3/S2S4.3/—/—	Found in Chaparral in gabbroic, granitic or clay soil at elevations of 0 - 5,593 feet.	N	H	There is Coastal Sage – Chaparral Scrub habitat on the property on sandy soils derived from granodiorite (Bowman, 1973), within the known elevational range of the subspecies. The CNPS does list the Alpine quad as a quad in which this subspecies is found (CNPS, 2015).
Piperia colemanii Coleman's Rein Orchid	---/List 4.3/S3.3/—/—	Found in Chaparral and Lower Montane Coniferous Forest at elevations ranging between 3,948 - 7,567 feet.	N	U	Although there is Coastal Sage – Chaparral Scrub habitat on the property, the lowest known elevation of the species is ± 1,834-feet higher than the highest elevation on the property.

Scientific Name Common Name[2]	Sensitivity Code and Status[3]	Habitat Preference	Found On-site (Y or N)	Potential On-site[4]	Factual Basis for Potential
Piperia cooperi Chaparral Rein-Orchid	List D/List 4.2/S3.2/-/-	Grows in Chaparral, Cismontane Woodland, and Valley and Foothill Grasslands at elevations that range from 49 - 5,215 feet.	N	H	There is Coastal Sage – Chaparral Scrub habitat on the property within the known elevational range of the species. The CNPS does list the Alpine quad as a quad in which this subspecies is found (CNPS, 2015).
Polygala cornuta var. *fishiae* Fish's Milkwort	List D/List 4.3/S3.3/-/-	Found in Chaparral, Riparian Woodland, or Cismontane Woodland with Coast Live Oaks at elevations of 329 - 3,290 feet.	N	H	There are Coastal Sage – Chaparral Scrub and Open Engelmann Oak Woodland habitats on the property within the known elevational range of the variety. The CNPS does list the Alpine quad as a quad in which this subspecies is found (CNPS, 2015).
Quercus cedrosensis Cedros Island Oak	List B/List 2B.2/S1/—	Found in Chaparral, Closed-Cone Coniferous Forest, and Coastal Scrub habitats. Found at elevations of 839 - 3,158 feet.	N	U	There is Coastal Sage – Chaparral Scrub habitat on the property within the known elevational range of the species. However, according to the CNPS (2015), there are fewer than 10 occurrences near Otay Mountain.
Quercus dumosa Nuttall's Scrub Oak	List A/List 1B.1/S2/-/-	A coastal form of the Scrub Oak typically found in Chaparral habitats at elevations of 49 - 1,316 feet.	N	U	There is Coastal Sage – Chaparral Scrub habitat on the property. However, the property is located inland in Alpine, and the highest known elevation of the species is ± 746-feet lower than the lowest elevation on the property.

Scientific Name Common Name[2]	Sensitivity Code and Status[3]	Habitat Preference	Found On-site (Y or N)	Potential On-site[4]	Factual Basis for Potential
Quercus engelmannii *Engelmann Oak*	List D/List 4.2/S3.2/-/-	Found in Oak Woodland and Southern Mixed Chaparral at elevations of 164 - 4,277 feet. Larger oaks sometimes occur in vast savannah grasslands. In the foothills it may also occur as a shrubby element within the chaparral in relatively dense understory and on the periphery of watercourses or mesic slope aspects.	Y	Observed	This species occurs on the property in clumps forming an Oak Woodland and individually within the Coastal Sage – Chaparral Scrub. There is approximately 0.54-acre of Open Engelmann Oak Woodland habitat on the property represented as three separate clusters.
Ribes canthariforme Moreno Currant	List A/List 1B.3/S2/-/- CA-Endemic	Associated with Chaparral or Riparian Scrub habitats at elevations ranging from 1,118 - 3,948 feet.	N	M	There is Coastal Sage – Chaparral Scrub habitat on the property within the known elevational range of the species, but the Chaparral component of this association is minimal. The closest CNDDB record is 3-miles to the southeast in Hidden Glen (CDFW, 2015b).
Romneya coulteri Coulter's Matilija Poppy	List D/List 4.2/S3.2/-/- CA-Endemic	Grows in Chaparral and Sage Scrub habitats at elevations of 65 - 3,948 feet.	N	L	There is Coastal Sage – Chaparral Scrub habitat on the property within the known elevational range of the species. However, the CNPS does not list the Alpine quad as a quad in which this subspecies is found (CNPS, 2015).

Scientific Name Common Name[2]	Sensitivity Code and Status[3]	Habitat Preference	Found On-site (Y or N)	Potential On-site[4]	Factual Basis for Potential
Salvia munzii Munz's Sage	List B/List 2B.2/S2.2/-/-	Found in Coastal Scrub and Chaparral habitats in rocky soils at elevations of 394 - 3,504 feet.	N	L	There is Coastal Sage – Chaparral Scrub habitat on the property within the known elevational range of the species. However, only the extreme southeast part of the property is mapped as Fallbrook rocky, sandy loam (Bowman, 1973).
Scutellaria bolanderi ssp. au*stromontana* Southern Skullcap	List A/List 1B.2/S2/—/— CA-Endemic	Grows in gravelly soils on stream banks or in mesic sites within Oak or Pine Woodland at elevations of 1,398 - 6,580 feet.	N	U	There are no streams or mesic sites within the Open Engelmann Oak Woodland on the property.
Selaginella cinerascens Ashy Spike-Moss	List D/List 4.1/S3S4/-/-	Found in undisturbed Chaparral and Diegan Sage Scrub. Rarely inhabits disturbed soils. Grows at elevations of 66 - 2,106 feet.	N	U	The soils on the subject property have been disturbed in the recent past by cattle grazing. Also, the CNPS does not list the Alpine quad as one of the quads in which this species is found (CNPS, 2015).
Senecio aphanactis Chaparral Ragwort	List B/List 2B.2/S2/-/-	Found on alkaline soils in Chaparral, Coastal Scrub and Cismontane Woodland habitats. Grows at elevations of 49 - 2,632 feet.	N	U	There are no alkaline soils mapped on the property (Bowman, 1973). NOTE: The San Diego County List calls this plant Rayless Ragwort.

Scientific Name Common Name[2]	Sensitivity Code and Status[3]	Habitat Preference	Found On-site (Y or N)	Potential On-site[4]	Factual Basis for Potential
Senna covesii Coves's Cassia	List B/List 2B.2/S3/—/—	Found in Sonoran Desert Scrub on slopes and in washes. It grows in relatively open, low-growing desert scrub cover in unshaded full-day sun at elevations of 1,003 - 3,521 feet.	N	U	There is no Sonoran Desert Scrub habitat on the property.
Sibaropsis hammittii Hammitt's Clay-Cress	List A/List 1B.2/S2.2/-/- CA-Endemic	Found in Chaparral and Valley and Foothill Grassland habitats on clay soils at elevations ranging from 2,368 – 3,504 feet.	N	U	There are no clay soils mapped on the property (Bowman, 1973).
Sphenopholis obtusata Prairie Wedgegrass	---/List 2B.2/S2.2/—/—	Found in wet meadows.	N	U	There are no wet meadows on the property. Also, the only San Diego County occurrence is on the Cuyamaca Peak quad (CDFW, 2015b).
Stemodia durantifolia Purple Stemodia	List B/List 2B.1/S2.1?/-/-	A species of mesic, sandy areas in Sonoran Desert Scrub. Grows at elevations of 592 - 987 feet.	N	U	There are no mesic soils on the property (Bowman, 1973), nor is there Sonoran Desert Scrub habitat on-site.

Scientific Name Common Name[2]	Sensitivity Code and Status[3]	Habitat Preference	Found On-site (Y or N)	Potential On-site[4]	Factual Basis for Potential
Stipa diegoensis San Diego Needle Grass	List D/List 4.2/S3.2/-/-	Found in Chaparral or Coastal Sage Scrub on rocky soils near streams or along the coast. Occurs at elevations ranging from 32 – 2,632 feet.	N	U	There are no streams on this inland property in Alpine. Also, only the extreme southeast part of the property is mapped as Fallbrook rocky, sandy loam (Bowman, 1973). NOTE: This is a synonym for *Achnatherum diegoensis.*
Streptanthus bernardinus Laguna Mountains Jewelflower	List D/List 4.3/S3/-/- CA-Endemic	Found in Chaparral or Lower Montane Coniferous Forrest habitats on clay or decomposed granite soils at elevations of 4,737 - 8,225 feet.	N	U	Although there is Coastal Sage – Chaparral Scrub habitat on the property, the site is located ± 2,623 feet below the lowest known elevation of the species.
Symphyotrichum defoliatum San Bernardino Aster	---/List 1B.2/S2/-/- CA-Endemic	Found in a variety of habitats near ditches, streams or springs. Known elevations range from 6 - 6,711 feet.	N	U	There are no ditches, streams or springs on the property.
Tetracoccus dioicus Parry's Tetracoccus	List A/List 1B.2/S2.2/-/-	Found on gabbroic soils, typically in Chaparral habitats at elevations of 542 - 3,290 feet.	N	U	There are no gabbroic soils mapped on the property (Bowman, 1973).

Scientific Name Common Name[2]	Sensitivity Code and Status[3]	Habitat Preference	Found On-site (Y or N)	Potential On-site[4]	Factual Basis for Potential
Triquetrella californica Coastal Triquetrella	—/List 1B.2/S1/-/-	Found in Coastal Bluff Scrub, Coastal Scrub, and Valley and Foothill Grassland habitats at elevations of 32 - 329 feet. Occurs on gravel soils, or thin soil over rock outcrops.	N	U	There is Coastal Sage – Chaparral Scrub habitat on the property. However, this species is found at elevations much lower than those represented on-site (± 1,733 feet).
Viguiera laciniata San Diego County Viguiera	List D/List 4.2/S3.2/-/-	Found in arid Diegan Sage Scrub away from immediate coast at elevations of 197 - 2,468 feet.	N	H	There is Coastal Sage – Chaparral Scrub habitat on the property, and the CNPS lists the Alpine quad as one of the quads in which this species is found.
Xanthisma junceum Rush-like Bristleweed	—/List 4.3/S3.3/-/-	Found in Chaparral and Sage Scrub habitats at elevations ranging between 789 – 3,290 feet.	N	H	There is Coastal Sage – Chaparral Scrub habitat on the property, and the CNPS lists the Alpine quad as one of the quads in which this species is found. NOTE: Synonyms are *Haplopappus junceus*, and *Machaeranthera juncea*.

[1]This plant list was generated by the nine quad search function of the on-line California Native Plant Society (CNPS) inventory. This list was augmented with plants from the San Diego County Sensitive Plant Lists A, B, C, and D and a nine quad search of the California Natural Diversity Data Base (CNDDB).

[2]The Common Names were taken from Baldwin, B.G., Goldman, D.H., Keil, D.J., Patterson, R., Rosatti, T.J., and Wilken, D.H. eds. 2012. The Jepson Manual Vascular Plants of California, 2nd Edition. University of California Press, Berkeley, xxii + 1568 pp.

[3]The first line in the "Sensitivity Code and Status" column shows the County List, the California Rare Plant Rank with threat code extensions/the state ranking of the California Natural Diversity Database (CNDDB) with the threat rank extension/the California state threatened and endangered status code/the federal threatened and endangered status code. The second line in the "Sensitivity Code and Status" column identifies whether the species is a California Endemic as identified by the CNPS or not (blank second line). Following is a key to the codes in the table.

Key to the County Lists

List A — Plants rare, threatened or endangered in California and elsewhere

List B — Plants rare, threatened or endangered in California but more common elsewhere

List C — Plants which may be quite rare, but need more information to determine their true rarity status
List D — Plants of limited distribution and are uncommon, but not presently rare or endangered

Key to the California Rare Plant Ranking System

List 1A — Presumed extinct in California
List 1B — Plants threatened or endangered in California and elsewhere
List 2 — Plants rare, threatened or endangered in California but more common elsewhere
List 3 — Plants about which more information is needed; a watch list
List 4 — Limited distribution (a watch list)

Key to the California Rare Plant Rank Threat Code Extensions

.1 — Seriously endangered in California (over 80% of occurrences threatened/high degree and immediacy of threat)
.2 — Fairly endangered in California (20-80% occurrences threatened)
.3 — Not very endangered in California (<20% of occurrences threatened or no current threats known)

Key to the State Ranking of the CNDDB

S1 — Less than 6 element occurrences OR less than 1,000 individuals OR less than 2,000 acres*
S2 — 6 - 20 element occurrences OR 1,000 - 3,000 individuals OR 2,000 - 10,000 acres*
S3 — 21 - 80 element occurrences OR 3,000 - 10,000 individuals OR 10,000 - 50,000 acres*
S4 — Apparently secure within California, but factors do exist to cause some concern
S5 — Demonstrably secure in California
S? OR S2? OR S2S3 — Uncertainty about the rank of an element
SXC — All sites in California are extirpated, but the species exists in cultivation

Key to the Threat Rank Extensions of S1, S2 or S3 (if assigned)

.1 — very threatened
.2 — threatened
.3 — that no current threats are known

State and Federal Threatened and Endangered Species Status Codes

CR — State of California listed as rare
CE — State of California listed as endangered
CT — State of California listed as threatened
PT — Proposed for Listing as Threatened under the Federal Endangered Species Act
PE — Proposed for Listing as Endangered under the Federal Endangered Species Act
FC — Candidate for Listing under the Federal Endangered Species Act
FE — Designated Endangered under Federal Endangered Species Act

FT — Designated as Threatened under the Federal Endangered Species Act

[4] The "Potential On-site" column assesses the potential for the particular species to occur on the subject property given the known habitat preferences and distribution of that species. The codes used in this column are defined as follows:

Observed — Individuals of this species were found within the bounds of the site

H — The potential for occurrence is "high". Habitats on-site are considered suitable for the species, and the species is known from the immediate vicinity.

M — The potential for occurrence is "medium". Habitats and conditions on-site are considered possible for the species.

L — The potential for occurrence is "low". The habitats present on-site are marginal for the species and/or extremely limited in extent. In other words, the species is not anticipated, but it's occurrence can not be precluded.

U — The potential for occurrence is "unlikely". The habitat requirements of the species are not present on the subject property.

Table 4

Sensitive Wildlife Species Known to Occur Within an Approximate 10-mile Radius[1] of the Rancho Sierra Property, APN 404-430-45

Scientific Name Common Name	Sensitivity Code and Status[2]	Habitat Preference	Found On-site (Y or N)	Potential On-site[3]	Factual Basis for Potential
Insects					
Callophrys thornei Thorne*'s* Hairstreak	Group 1,—/—/BLM Sensitive SD County Endemic	Restricted to the vicinity of Otay Mountain. Found in Tecate Cypress groves in woody Chaparral slopes. Larval host plant is Tecate Cypress (*Callitropsis forbesii*).	N	U	There are no Tecate Cypress on the property and the site is located in Alpine, not near Otay Mountain. NOTE: *Mitoura thornei* is a synonym.
Euphydryas editha quino Quino Checkerspot Butterfly	Group 1, FE/—/X-CI	The Quino is found in a variety of open canopy habitats where the butterfly's larval host plants are found. These host plants include, Dot-seed Plantain (*Plantago erecta*), Desert Plantain (*Plantago patagonica*), Owl's Clover (*Castilleja exserta*), Coulter's Snapdragon (*Antirrhinum coulterianum*), Chinese Houses (*Collinsia heterophylla*), and Thread-leaved Bird's Beak (*Cordylanthus rigidus*). It is precluded from closed canopy situations and is a hilltopping species.	N	U	A federal protocol survey for the Quino was conducted during the 2014 flight season and was negative. None of the listed host plants were noted on the property. However, a dozen Nuttall's Snapdragon (*Antirrhinum nuttallianum*) were noted at the base of one of the boulders near the middle of the property. This plant is suspected to be an undocumented potential host plant.

Scientific Name Common Name	Sensitivity Code and Status[2]	Habitat Preference	Found On-site (Y or N)	Potential On-site[3]	Factual Basis for Potential
Halictus harmonius Harmonius Halictid Bee	—, —/—/X-CI	No habitats per se, but from the one known location in San Diego County, this bee was collected from the flowers of *Chorizanthe procumbens*, *Calochortus splendens*, *Lotus scoparius*, *Eriophyllum confertiflorum*, *Eriogonum fasciculatum*, and *Adenostoma fasciculatum*.	N	U	Found mostly in San Bernardino and Riverside Counties. The one CNDDB record for this species in San Diego County is within the Descanso quad (CDFW, 2015b).
Lycaena hermes Hermes Copper Butterfly	Group 1,— /—/—	Associated closely with the larval food plant, Redberry (*Rhamnus crocea*). Recent studies indicate that the butterfly prefers those Redberry that are roughly 18-years and older.	N	U	A protocol survey for the Hermes Copper was conducted during the 2014 flight season and was negative. There are only 9 Redberry shrubs on the Rancho Sierra property.
Crustaceans					
Branchinecta sandiegonenis San Diego Fairy Shrimp	Group 1, FE/—/—	A Vernal Pool obligate.	N	U	There are no Vernal Pools on the property.
Amphibians					
Bufo californicus Arroyo Southwestern Toad	Group 1, FE/CSC/—	Found primarily in the foothills and mountains along stream courses that afford open, sunny sandbars.	N	U	There are no streams on the property. NOTE: *Bufo miocroscaphus californicus* and *Anaxyrus californicus* are synonyms.

Scientific Name Common Name	Sensitivity Code and Status[2]	Habitat Preference	Found On-site (Y or N)	Potential On-site[3]	Factual Basis for Potential
Spea hammondii Western Spadefoot Toad	Group 2, —/CSC/BLM Sensitive	A cryptic species, this toad probably occurs throughout the coastal plain and foothills, anywhere ephemeral water sources develop.	N	U	There are no ephemeral water sources on the property. NOTE: The SD County List names this toad as *Spea scaphiopus hammondii.*
Taricha torosa Coast Range Newt	Group 2, —/CSC/—	Found in creeks surrounded by Oak Woodland, Sage Scrub, and Chaparral habitats.	N	U	There are no creeks on the property.
Reptiles					
Actinemys marmorata pallida Southwestern Pond Turtle	Group 1,—/CSC/FS and BLM Sensitive	Most often found in environments where water persists year-round. It has also been found at two drainages in the desert. It prefers lakes, streams, ponds or other areas with emergent or floating vegetation and often basks on rocks or protruding logs.	N	U	There are no year-round water bodies on the property. NOTE: Synonyms are *Clemmys marmorata pallida* and *Emys marmorata*.
Anniella pulchra pulchra Silvery Legless Lizard	Group 2, —/CSC/FS Sensitive	Occurs throughout the County (except for the low desert) where it is fossorial in soft soils and deep leaf litters. Some soil moisture is preferred.	N	L	The areas under the Engelmann Oaks have deep leaf litters that would be suitable habitat for this reptile. However, the closest CNDDB record is 8.1-miles to the northwest, just west of Lake Jennings (CDFW, 2015b).

Scientific Name Common Name	Sensitivity Code and Status[2]	Habitat Preference	Found On-site (Y or N)	Potential On-site[3]	Factual Basis for Potential
Aspidoscelis hyperythra Orange-throated Whiptail	Group 2, —/CSC/—	Occupies scrub habitats on the coastal plain and lower foothills where Subterranean Termites (*Reticulitermes* sp.), the principal prey species, is found. Shrub cover with openings are required for thermoregulation.	N	H	The habitat on the property is suitable for this reptile and it has been noted in the immediate vicinity (CDFW, 2015b). NOTE: Synonyms are *Aspidoscelis hyperythrus beldingi* and *Cnemidophorus hyperythrus*.
Aspidoscelis tigris stejnegeri Coastal Western Whiptail	Group 2, —/—/—	Occupies scrub habitats on the coastal plain and lower foothills where shrub cover with openings is required for thermoregulation.	Y	Observed	Four individuals were noted in the eastern half of the property during the 17 April, 24 April and 19 June site visits. NOTE: A synonym is *Cnemidophorus tigris multiscutatus*.
Charina trivirgata Rosy Boa	Group 2, —/—/FS Sensitive	A cryptic species found in a variety of habitats, including sage scrubs, Chaparrals and Pinyon-Juniper Woodlands. It prefers rocky soil.	N	L	There is Coastal Sage - Chaparral Scrub habitat on the property, but the only rocky soil is mapped in the extreme southeast corner of the property (Bowman, 1973). The closest CNDDB record is 3.3-miles to the northwest in Chocolate Canyon (CDFW, 2015b).
Crotalus ruber Red Diamond Rattlesnake	Group 2, —/CSC/—	In a variety of habitats, although most frequently found in Sage Scrub and Chaparral. It is found throughout the County except for the low desert.	N	H	There is Coastal Sage - Chaparral Scrub habitat on the property. The closest CNDDB record is 1.8-miles to the northwest (CDFW, 2015b).

Scientific Name Common Name	Sensitivity Code and Status[2]	Habitat Preference	Found On-site (Y or N)	Potential On-site[3]	Factual Basis for Potential
Diadophis punctatus similis San Diego Ringneck Snake	Group 2, —/—/FS Sensitive	In San Diego, this snake is found in a variety of habitats from the coast to the mountains. It is typically found under rotting logs, bark, rocks and damp leaves.	N	L	The areas under the Engelmann Oaks have deep leaf litters that would be suitable habitat for this reptile. The closest CNDDB record is 9.4-miles to the northwest, south of Muth Valley and east of Moreno Valley (CDFW, 2015b).
Phrynosoma coronatum San Diego Horned Lizard	Group 2, —/CSC/FS Sensitive	Found throughout the County (except the low deserts) anywhere the primary prey species, harvester ants (*Pogonomyrmex* sp. and *Messor* sp.) are found. It requires some openings in vegetation for thermoregulation.	N	H	There is Coastal Sage - Chaparral Scrub habitat on the property suitable for this horned lizard. Harvester ants were noted on the site, and the species has been recorded from Alpine (CDFW, 2015b). NOTE: A synonym is *Phrynosoma blainvillii.*
Plestiodon skiltonianus interparietalis Coronado Island Skink	—/CSC/BLM Sensitive	In a variety of habitats ranging from Coastal Scrub, to Chaparral and forested slopes, into the denser desert scrub and Pinyon-Juniper Woodlands.	N	M	There is Coastal Sage - Chaparral Scrub habitat on the property. The closest CNDDB record is 5.7-miles to the southeast (CDFW, 2015b). NOTE: A synonym is *Eumeces skiltonianus interparietalis*.
Salvadora hexalepis virgultea Coast Patch-nosed Snake	Group 2, —/CSC/—	Found in arid Sage Scrub and Chaparral habitats.	N	H	There is Coastal Sage - Chaparral Scrub habitat on the property. The closest CNDDB record is 1.7-miles to the southeast at the eastern end of Loveland Reservoir (CDFW, 2015b).

Scientific Name Common Name	Sensitivity Code and Status[2]	Habitat Preference	Found On-site (Y or N)	Potential On-site[3]	Factual Basis for Potential
Thamnophis hammondii Two-striped Garter Snake	Group 1, —/CSC/FS and BLM Sensitive	An aquatic snake found in association with fluvial and lacustrine environments, even cattle tanks. Aestivating individuals may be found some distance from water sources.	N	U	There are no moist areas on the property in which this snake would occur.
Mammals					
Antrozous pallidus Pallid Bat	Group 2, —/CSC/FS and BLM Sensitive; WBWG High Priority	A bat that feeds on the ground (Jerusalem Crickets and scorpions are typical fare). This species will roost in any cavity (natural or man-made) that affords a considerable modicum of darkness.	N	U	There are no suitable roosting sites on the property.
Chaetodipus californicus femoralis Dulzura California Pocket Mouse	Group 2, —/CSC/—	Frequent in arid Chaparral habitats in the foothills and lower mountain slopes of the County.	N	M	There is Coastal Sage - Chaparral Scrub on the property. However, the closest CNDDB record is 5-miles to the northwest on the west side of El Capitan (CDFW, 2015b).
Chaetodipus fallax fallax Northwestern San Diego Pocket Mouse	Group 2, —/CSC/—	Found in coastal sage scrub, sage scrub/grassland ecotones and chaparral communities. Found in open, sandy areas.	N	M	There is Coastal Sage - Chaparral Scrub on the property. However, the closest CNDDB record is 7.3-miles to the southwest (CDFW, 2015b).

Scientific Name Common Name	Sensitivity Code and Status[2]	Habitat Preference	Found On-site (Y or N)	Potential On-site[3]	Factual Basis for Potential
Choeronycteris mexicana Mexican Long-tongued Bat	Group 2, —/CSC/WBWG High Priority	This bat feeds on the nectar of night-blooming succulents. Occurs occasionally in extreme southern California at the northern edge of its range. Roosts in caves and buildings.	N	U	There are no suitable roosting sites on the property.
Corynorhinus townsendii Townsend's Big-eared Bat	Group 2, —/CSC/BLM Sensitive; FS Sensitive; WBWG High Priority	Associated with Desert Scrub and Pinyon and Juniper Woodlands. It roosts in caves or man-made structures.	N	U	There are no suitable roosting sites on the property.
Eumops perotis californicus Greater Western Mastiff Bat	Group 2, —/CSC/BLM Sensitive; WBWG High Priority	Frequently associated with cliffs or abandoned buildings that afford a considerable vertical drop from the roost to become airborne.	N	U	There are no suitable roosting sites on the property.
Felis concolor Mountain Lion	Group 2, —/—/—	The Mountain Lion prefers habitats with sufficient vegetative cover and ample prey including, deer, rabbits, squirrels, skunks, and other mammals.	N	U	The property is surrounded by development and few prey (rabbits) were seen on-site.
Lasiurus blossevillii Western Red Bat	Group 2, —/CSC/FS Sensitive; WBWG High Priority	It is found in and near deciduous trees, frequently in orchards.	N	U	The trees on-site are evergreen (Engelmann Oaks).

Scientific Name Common Name	Sensitivity Code and Status[2]	Habitat Preference	Found On-site (Y or N)	Potential On-site[3]	Factual Basis for Potential
Lasiurus cinereus Hoary Bat	—, —/—/WBWG Medium Priority	Seasonally found in forested areas.	N	L	There is only 0.54-acre of Open Engelmann Oak Woodland on the property. Also, the closest CNDDB record is 10.7-miles to the southwest in the Rancho Jamul Ecological Reserve (CDFW, 2015b).
Lasiurus xanthinus Western Yellow Bat	—, —/CSC/WBWG High Priority	Found in Valley Foothill Riparian, Desert Riparian, Desert Wash, and Palm Oasis habitats. Roosts in trees.	N	U	There are no Valley Foothill Riparian, Desert Riparian, Desert Wash, or Palm Oasis habitats on the property.
Lepus californicus bennettii San Diego Black-tailed Jackrabbit	Group 2, —/CSC/—	Found in a variety of habitats throughout the County, but requires open or semi-open vegetation.	N	M	There is an open Coastal Sage - Chaparral Scrub habitat on the property. However, the closest CNDDB record is 9-miles to the southwest (CDFW, 2015b).
Macrotus californicus California Leaf-nosed Bat	Group 2, —/CSC/ FS and BLM Sensitive; WBWG High Priority	Found in the arid extreme southern regions of California. This bat roosts in buildings, mines and caves.	N	U	There are no suitable roosting sites on the property.
Myotis ciliolabrum Small-footed Myotis	Group2, —/—/BLM Sensitive; WBWG Medium Priority	Roosts alone or in small groups in rock crevices, mines, caves, or buildings.	N	U	There are no suitable roosting sites on the property.
Myotis evotis Long-eared Myotis	Group 2,—/—/BLM Sensitive; WBWG Medium Priority	Roosts in buildings, crevices, spaces under bark, snags and caves.	N	U	There are no suitable roosting sites on the property.

Scientific Name Common Name	Sensitivity Code and Status[2]	Habitat Preference	Found On-site (Y or N)	Potential On-site[3]	Factual Basis for Potential
Myotis yumanensis Yuma Myotis	Group 2, —/—/BLM Sensitive; WBWG Low to Medium Priority	This species roosts in caves and man-made structures, and is closely associated with water sources.	N	U	There are no suitable roosting sites on the property.
Neotoma lepida intermedia San Diego Desert Woodrat	Group 2, —/CSC/—	An inhabitant of Sage Scrubs and Chaparral, especially with yuccas and cactus. Typical nests are embedded in rock crevices and partially underground.	Y	Observed	Nests and scat assignable to this species due to its location in and around boulder outcrops were noted on the property.
Nyctinomops femorosaccus Pocketed Free-tailed Bat	Group 2, —/CSC/—;WBWG Medium Priority	Roosting in a variety of situations, this species is associated with desert scrub and pine-oak woodlands. They prefer rocky areas with high cliffs.	N	U	There are no suitable roosting sites on the property.
Nyctinomops macrotis Big Free-tailed Bat	Group 2, —/CSC/WBWG Medium to High Priority	Associated with desert scrub, woodlands, and evergreen forests, where there are high cliffs and rocky outcrops for roosting.	N	U	There are no suitable roosting sites on the property.
Odocoileus hemionus Southern Mule Deer	Group 2, —/—/—	Found in habitats with sufficient vegetative cover.	N	L	No pellets assignable to this species were noted on-site. Also, this site is surrounded by development with few areas providing suitable cover on-site.
Taxidea taxus American Badger	Group 2, —/CSC/—	A fossorial species of open deserts and grassland habitats.	N	U	There are no grassland habitats on the property.

Scientific Name Common Name	Sensitivity Code and Status[2]	Habitat Preference	Found On-site (Y or N)	Potential On-site[3]	Factual Basis for Potential
Birds					
Accipiter cooperii Cooper's Hawk (nesting)	Group 1, —/WL/—	Nesting Cooper's generally use taller trees, including a number of horticultural species and native Oaks.	Y	Observed	This raptor was seen as an overflight during the 10 April and 24 April site visits.
Agelaius tricolor Tricolored Blackbird (nesting colonies only)	Group 1, BCC/CSC/BLM Sensitive	Breeding colonies are limited to ponds with adjacent, undisturbed foraging habitat.	N	U	There are no ponds on the property.
Aimophila ruficeps ssp. *canescens* Rufous-crowned Sparrow	Group 1, —/WL/—	This species nests in Sage Scrub, open or burned Chaparral, and in Non-Native Grasslands with scattered shrubs.	N	H	There is Coastal Sage - Chaparral Scrub habitat on the property and this species was previously identified on-site by Merkel & Associates in 2008.
Ammodramus savannarum Grasshopper Sparrow (nesting)	Group 1, —/CSC/—	Found in Native, and to a lesser extent, Non-Native Grasslands.	N	U	There are no Native or Non-Native Grassland habitats on the property.
Aquila chrysaetos Golden Eagle (nesting and wintering)	Group 1, —/WL; Fully Protected/BLM Sensitive	The Golden Eagle nests on cliff ledges and forages in nearby grassland, Sage Scrub or Chaparral.	N	U	There are no suitable nest sites on the property. According to Unitt (2004), the Golden Eagle is not known to breed or winter in this area.
Amphispiza belli belli Bell's Sage Sparrow	Group 1, —/WL/—	This species prefers Sage Scrub and Chaparral habitats with an open canopy and areas of bare soil.	N	U	Although the site contains Coastal Sage - Chaparral Scrub with open areas on the ground, this property is surrounded by development. This species is sensitive to habitat fragmentation (Unitt, 2004). NOTE: *Artemisiospiza belli belli* is a synonym.

Scientific Name Common Name	Sensitivity Code and Status[2]	Habitat Preference	Found On-site (Y or N)	Potential On-site[3]	Factual Basis for Potential
Buteo swainsoni Swainson's Hawk (nesting)	Group 1,—/CT/ FS Sensitive	Found on grasslands and farmlands. Nests in isolated trees. Usually solitary, but migrates in large flocks and large numbers concentrate at migration points. The Borrego Valley is on a migration corridor, the birds stopping to roost in strips of tamarisk trees and at nurseries.	N	U	The Swainson's Hawk does not breed in San Diego County (Unitt, 2004).
Calypte costae Costa's Hummingbird	—, BCC/—/—	Found in a variety of habitats, including mature Sage Scrub and Chaparral.	Y	Observed	A male Costa's Hummingbird was heard in an aerial display during the 10 May site visit.
Campylorhynchus brunneicapillum sandiegensis Coastal Cactus Wren	Group 1, BCC/CSC/FS Sensitive	Found in association with stands of *Opuntia* sp. and/or *Cylindropuntia* sp. along the coastal strip and lower foothills.	N	U	No cactus species were noted on the property.
Dendroica petechia brewsteri Yellow Warbler (nesting)	Group 2, BCC/CSC/—	Breeding occurs in mature riparian habitats, primarily along the coastal slope.	N	U	There are no riparian habitats on the property. NOTE: *Setophaga petechia* is a synonym.
Elanus leucurus White-tailed Kite (nesting)	Group 1, —/Fully Protected/—	This species nests in tall trees adjacent to foraging habitat that contains its primary prey, the California Vole (*Microtus californicus*).	N	U	Although there are Engelmann Oak trees on the property that provide suitable nest sites, there are no adjacent grasslands for foraging. NOTE: *Elanus caeruleus* is a synonym.
Empidonax traillii extimus Southwestern Willow Flycatcher (nesting)	Group 1, FE/CE/—	This species is restricted to wide riparian habitats, generally with flowing water.	N	U	There are no riparian habitats on the property.

Scientific Name Common Name	Sensitivity Code and Status[2]	Habitat Preference	Found On-site (Y or N)	Potential On-site[3]	Factual Basis for Potential
Eremophila alpestris actia California Horned Lark	Group 2, —/WL/—	A species of open (often disturbed), arid habitats, such as grasslands, coastal strand, and sandy deserts.	N	L	The majority of the property is too vegetated to expect this species. However, the Disturbed Habitat areas (those areas mowed for fuel modification) do provide suitable habitat.
Falco mexicanus Prairie Falcon (nesting)	Group1, —/WL/—	This falcon nests on cliff ledges, and forages in open desert or grassland.	N	U	The site does not contain appropriate nesting habitat.
Icteria virens Yellow-breasted Chat (nesting)	Group 1, —/CSC/—	In San Diego County, this bird is typically found in the coastal lowland where riparian woodlands occur.	N	U	There are no riparian habitats on the property.
Phalacrocorax auritus Double-crested Cormorant	Group 2, —/WL/—	A non-breeding visitor on both fresh and salt water.	N	U	There are no water bodies on the property.
Picoides nuttallii Nuttall's Woodpecker (nesting)	—, BCC/—/—	Found in Riparian, Oak, and Coniferous Woodland habitats.	Y	Observed	During the 10 May site visit, a single individual was heard in the Engelmann Oaks.

Scientific Name Common Name	Sensitivity Code and Status[2]	Habitat Preference	Found On-site (Y or N)	Potential On-site[3]	Factual Basis for Potential
Polioptila californica Coastal California Gnatcatcher	Group 1, FT/CSC/—	An obligate inhabitant of Sage Scrub or sometimes Chaparral where the two habitats intermix.	N	U	Although there is Coastal Sage - Chaparral Scrub habitat on the property, the 2,062 to 2,114-foot elevations on-site probably preclude this species. According to Atwood and Bolsinger (1992), most observations of California Gnatcatchers occur at 1,645-foot elevation or less. Also, a federal protocol survey was conducted on the site in 2008 by Merkel & Associates and was negative.
Sialia mexicana Western Bluebird	Group 2, —/—/—	Found in the foothills and mountains of San Diego in Coniferous and Oak Woodlands near meadows, but also found in urbanized areas with large trees and wide lawns.	Y	Observed	A pair of Western Bluebirds were seen in the western portion of the site during the 17 April visit. On 24 April, an individual Western Bluebird was heard as an overflight.
Spinus lawrencei Lawrence's Goldfinch (nesting)	—, BCC/—/—	A nomadic species that nests in trees within Oak Woodlands, Riparian habitat, and Coniferous forests.	Y	Observed	A female was seen perched in an Engelmann Oak during the 17 April Quino survey.
Vireo bellii pusillus Least Bell's Vireo	Group 1, FE/CE/—	An obligate inhabitant of dense, fairly broad, riparian woodlands with adjacent uplands that provide foraging habitat.	N	U	There are no riparian habitats on the property.

[1] This sensitive wildlife list is based on a search of the California Natural Diversity Database (CNDDB), the County of San Diego Sensitive Animal List taken from San Diego, County of. 2008. County of San Diego Guidelines for Determining Significance and Report Format and Contents for Biological

Resources. Second Revision. Available from the County's website at http://www.sdcounty.ca.gov/dplu/docs/Biological_Guidelines.pdf, and Fish and Game, California Department of. 2011. California Natural Diversity Data Base: Special Animals. The Author, Sacramento, California, 60 pp. [available at http://www.dfg.ca.gov/biogeodata/cnddb/pdfs/SPAnimals.pdf], edition of January 2011.

[2] The status codes are given in the sequence "County Group, federal/state/other." A "—" indicates no status at that level. The codes used are defined as follows:

FE — Federal Endangered
pFE — A petition for Federal Endangerment status has been submitted
FT — Federal Threatened
D — Delisted from the Endangered Species Act
BCC — Birds of Conservation Concern on the BCC 2008 list within BCR 32
CE — State Endangered
CT — State Threatened
CSC — California Special Concern species
WL — California Department of Fish and Game Watch List
AFS EN — defined as an endangered species by the American Fisheries Society
Fully Protected — A species for which special state legislation exists protecting the species
FS Sensitive — defined as a sensitive species by the USDA Forest Service
BLM Sensitive — defined as a sensitive species by the Bureau of Land Management
WBWG — priority status as defined by the multi-agency Western Bat Working Group
X-CI — defined as critically imperiled by the Xerces Society

[3] The "Potential On-site" column assesses the potential for the particular species to occur on the subject property given the known habitat preferences and distribution of that species. The codes used in this column are defined as follows:

Observed — Individuals of this species were found within the bounds of the site.
H — The potential for occurrence is "high". Habitats on-site are considered suitable for the species, and the species is known from the immediate vicinity.
M — The potential for occurrence is "medium". Habitats and conditions on-site are considered possible for the species.
L — The potential for occurrence is "low". The habitats present on-site are marginal for the species and/or extremely limited in extent. In other words, the species is not anticipated, but it's occurrence can not be precluded.
U — The potential for occurrence is "unlikely". The habitat and/or food requirements of the species are not present on the subject property.

[:\1698 Sensitive Wildlife List.wpd]

Appendix A

Report of a Federal Protocol Survey for the Quino Checkerspot Butterfly Over the Rancho Sierra Project, APN 404-430-45

Prepared by
Cummings and Associates
9 June 2014

Report of a Federal Protocol Survey for the Quino Checkerspot Butterfly Over the Rancho Sierra Project, APN 404-430-45 County of San Diego, California

Prepared For:

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Prepared By:

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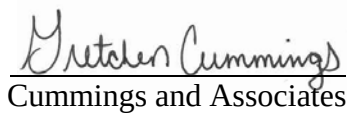

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9 June 2014
Job Number 1698.21D

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Table of Contents

Attachments

Executive Summary

The Quino Checkerspot Butterfly (*Euphydryas editha quino*) is listed under the Federal Endangered Species Act (ESA) as an endangered subspecies. Prior to development-related activities that might adversely affect habitats potentially occupied by the butterfly, surveys are recommended so as to prevent a "take" of the species under the ESA. A federal protocol survey for the Quino was conducted under permit TE-031850-4 during the 2014 flight season. No Quino were observed on APN 404-430-45 during this 2014 survey.

No adult or larval Quino were found during the 2014 survey effort which occurred between 19 February and 10 May. Per the February 2014 Quino Checkerspot Butterfly Survey Protocol (USFWS, 2014), the list of larval Quino host plant species includes Dot-seed Plantain (*Plantago erecta*), White Snapdragon (*Antirrhinum coulterianum*), Thread-leaved Bird's Beak (*Cordylanthus rigidus*), Owl's Clover (*Castilleja exserta*), and Chinese Houses (*Collinsia heterophylla*). None of these listed larval Quino host plant species were noted on-site. However, one *potential* larval Quino host plant species, Nuttall's Snapdragon (*Antirrhinum nuttallianum*), was noted during the protocol survey and is represented on-site by a dozen plants.

I. Introduction

The Quino Checkerspot Butterfly (*Euphydryas editha quino*) is a small, spring flying butterfly listed under the Federal Endangered Species Act (ESA) as an endangered subspecies. Thought to be extinct in 1995, a small population was found in Riverside County in 1996 and the subspecies was listed as endangered in 1997 (USFWS, 1997). Critical habitat for this species was dedicated in 2002 (USFWS, 2002), then revised and finalized in 2009 (USFWS, 2009).

The Quino Checkerspot Butterfly is best thought of in two "phases". The larvae (or first "phase") are obligate feeders on a limited variety of food plants: Dot-seed Plantain (*Plantago erecta*), White Snapdragon (*Antirrhinum coulterianum*), Thread-leaved Bird's Beak (*Cordylanthus rigidus*), Owl's Clover (*Castilleja exserta*), and Chinese Houses (*Collinsia heterophylla*). The second "phase" is the adult butterfly which is much more mobile. The males of the species exhibit what is referred to as "hilltopping" behavior. They fly to prominent topographical points where they inspect each butterfly that passes-by in the hopes of finding a receptive female Quino.

This federal protocol survey for the Quino was conducted in accordance with the 2014 Quino Checkerspot Butterfly Survey Protocol (USFWS, 2014). The survey for the Quino focused on "open" areas within vegetation and between vegetation, and on the Nuttall's Snapdragon. There is a highpoint on the property along the southern boundary with a very small hilltop. This hilltop was inspected during each of the surveys.

II. Property Location and Description

Assessor's Parcel Number 404-430-45 is located south of Interstate 8 and west of South Grade Road in Alpine (see Figure 1). The site is located on relatively flat ground with the exception being a small hilltop along the southern property boundary (see Figures 1 and 2). Except for the fuel modification zone along the southern parcel boundary, and the disturbance in the eastern part of the site due to the adjacent residence, the parcel is undisturbed (see Figure 3). A 10-lot subdivision is proposed on APN 404-430-45, known as the Rancho Sierra project.

The underlying geology of the parcel is mapped as Tonalite of Las Bancas (Todd, 2004). The surficial soils mapped by Bowman (1973) include the following:

- Fallbrook sandy loam, 9-15% slopes, eroded (FaD2). These soils occupy the majority of the parcel; and

- Fallbrook rocky sandy loam, 9-30% slopes, eroded (FaD2). These soils occur only in the extreme southeast edge of the parcel.

The vegetative communities found on-site can be classified into four types:

Coastal Sage - Chaparral Scrub. The Coastal Sage - Chaparral Scrub (Holland, 1986; Element Code 37G00) is found on the majority of the parcel (see Figure 3). Shrub species in this association include:

California Sagebrush	*Artemisia californica*
California Buckwheat	*Eriogonum fasciculatum*
Sugarbush	*Rhus ovata*
Mission Manzanita	*Xylococcus bicolor*

One plant species identified on-site, Nuttall's Snapdragon (*Antirrhinum nuttallianum*), needs mentioning. Although it is **not** one of the larval Quino host plant species listed in the 2014 Quino protocol, this species is a potentially undocumented larval Quino host plant. It is only being mentioned because the 2014 Quino protocol states that other host plants should be noted and mapped accordingly. Nuttall's Snapdragon were observed in low densities at the base of one of the large boulders in the south/central portion of the site (see Figures 2 and 3). Approximately one dozen individuals were counted.

Open Engelmann Oak Woodland. Open Engelmann Oak Woodland (Holland, 1986; Element Code 71181) occurs on the property and is represented as three clusters. One cluster extends onto the property from the north near the north-central parcel boundary. The second cluster occurs in the eastern portion of the site, and the third cluster occurs in the western corner of the property (see Figure 3). This habitat is dominated by Engelmann Oaks with an understory of Poison Oak (*Toxicodendron diversilobum*), Miner's Lettuce (*Claytonia perfoliata*), and non-native grasses.

Disturbed Habitat. The vegetation along the southwestern property boundary has been mowed for fuel modification purposes associated with the existing residences to the south. This area is best described as Disturbed Habitat (Holland, 1986; Element Code 11300). Other areas on-site that are classified as Disturbed Habitat include a wide trail head along the northeastern property boundary, mowed areas adjacent to the driveway and residence in the eastern part of the property, and a small area in between South Grade Road and the Engelmann Oaks in the eastern part of the site (see Figure 3).

Urban/Developed Land. The remaining areas are considered Urban/Developed land (Holland Element Code 12000). It includes the existing driveway and fencing to a residence off-site, as well as, portions of South Grade Road.

III. Methods

Per the 2014 Quino Checkerspot Butterfly Survey Protocol (USFWS, 2014), a site assessment was conducted on 19 February 2014 prior to the first Quino survey to determine the location of the larval host food plants. Eleven subsequent visits were conducted representing the Quino survey dates. During all survey efforts for the Quino Checkerspot, the undersigned was equipped with a collapsible insect net (BioQuip), close focusing photographic gear, and close focusing binoculars (8x42). The photographic gear used this season consisted of a Nikon D300 body and a 70 - 300 mm Quantaray lens with a macro function. This equipment allowed a minimum working distance of approximately fourteen inches. During the twelve field dates, wind, and air temperature were taken with a Kestrel. With this instrument, it was possible to record wind speed to the nearest 0.1 mph, and temperature to the nearest .1°. Weather conditions at the beginning and ending of each survey period were recorded and are presented in Table 1.

IV. Results

Although this 2014 butterfly season was a dry one, nectar sources were available on-site throughout the survey period (see Field Notes in Appendix A). A total of twelve site visits were made to APN 404-430-45 between 19 February and 10 May. The first of the twelve visits, as mentioned above, was a site assessment, conducted to locate any populations of larval host plants for the Quino. The remaining eleven visits represented the actual surveys for the Quino Checkerspot. A small population of Nuttall's Snapdragon (an *undocumented potential* larval Quino host plant) was observed (see Figure 2 for location) and is represented by only a dozen individual plants on-site. No larvae or adult Quino Checkerspot were observed on the property during any of the twelve site visits.

The following points highlight the results of the butterfly survey effort on APN 404-430-45:

- A total of 10 butterfly species were observed (see Figure 4 for photos of the representative butterfly species observed and Table 2 for a list of the butterfly species).

- One butterfly species, the Mormon Metalmark, was observed during all twelve surveys.

- Five of the ten species observed were represented by a single individual observation (Bramble Hairstreak, Harford's Sulphur, Silvery Blue, Fiery Skipper, and Pale Swallowtail).

A compilation of the butterflies observed during the protocol survey effort is presented as Table 2. The reader's attention is directed to that table, to the attached Figure 4, and to the attached Field Notes in Appendix A for additional information and details on the results of the field effort.

During the course of the survey, a concerted effort was made to identify other plant and wildlife species that would be considered sensitive. While this part of the field effort does not constitute a comprehensive survey, any observations of interest must be reported per the requirements of the federal protocol for the Quino. Three sensitive wildlife species and one sensitive plant species were identified on the property. The three sensitive wildlife species were the Cooper's Hawk (*Accipiter cooperi*), Western Bluebird (*Sialia mexicana*), and Western Whiptail (*Aspidoscelis tigris stejnegeri*) - see Figure 5 for locations of these observations. The one sensitive plant species was the Engelmann Oak (*Quercus engelmannii*). This tree dominates the Open Engelmann Oak Woodland habitat clusters on the property and also occurs as solitary individuals within the Coastal Sage - Chaparral Scrub. The Engelmann Oak is considered a List 4.2 sensitive plant by the California Native Plant Society.

V. Recommendation

Although this year was a dry year, nectar sources were available throughout the survey period from 19 February 2014 to 10 May 2014. The one dozen Nuttall's Snapdragon plants are not listed as one of the documented larval Quino host plants in the 2014 protocol survey, but are merely an undocumented potential host plant species. In that only a dozen of an undocumented potential host plant species were identified on-site, and that neither larvae nor adults of the Quino Checkerspot were identified during the protocol survey, it would appear that any proposed future development of APN 404-430-45 will have no effect on the endangered Quino Checkerspot Butterfly. Absent a demonstrable effect on the species, no mitigation measures are required, and none are recommended.

VI. Surveyor Certification

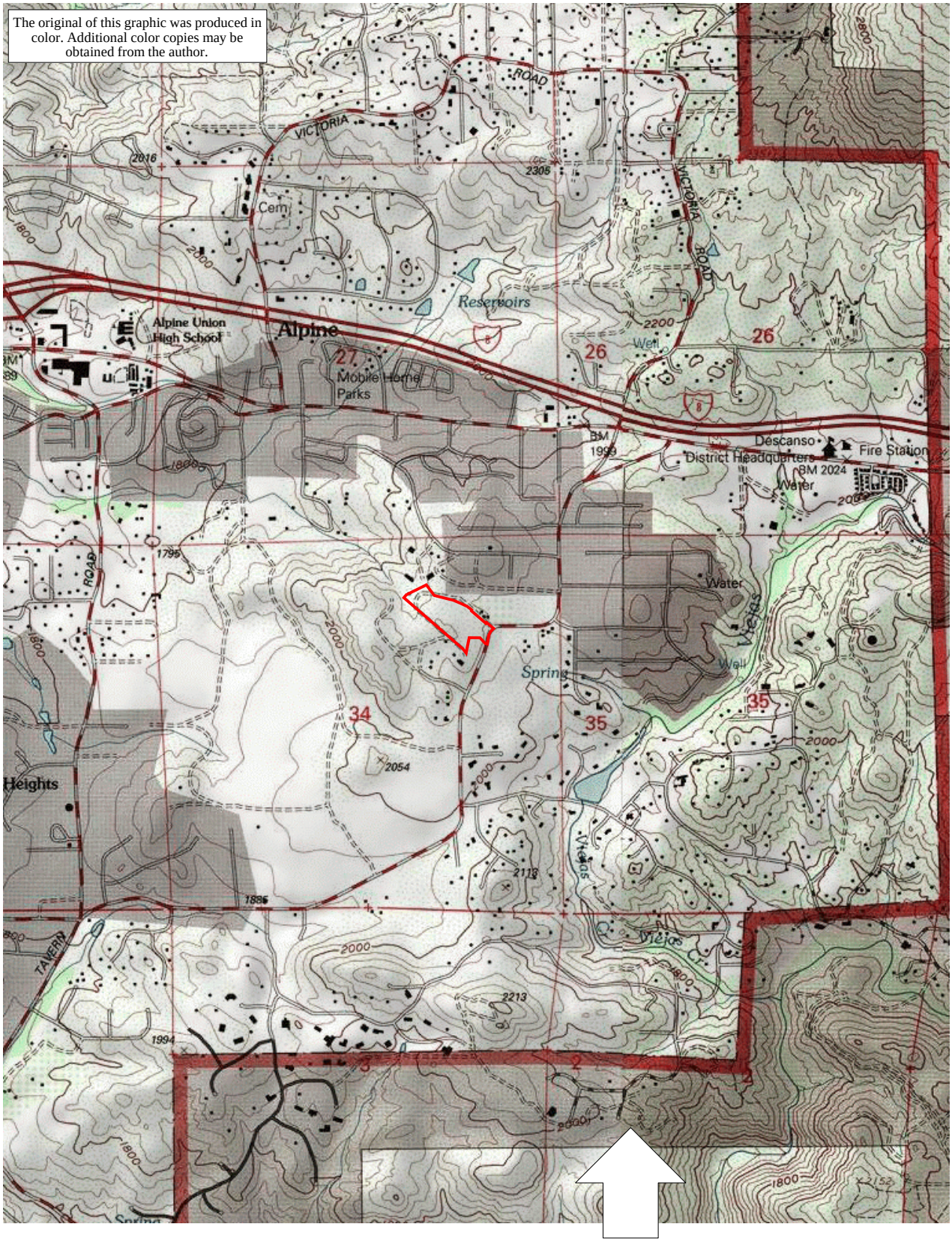
I certify that the information in this survey report and attached exhibits fully and accurately represents my work. Any errors or omissions are solely my responsibility.

Gretchen Cummings

Gretchen Cummings
Principal/Consulting Biologist
[TE-031850-4]

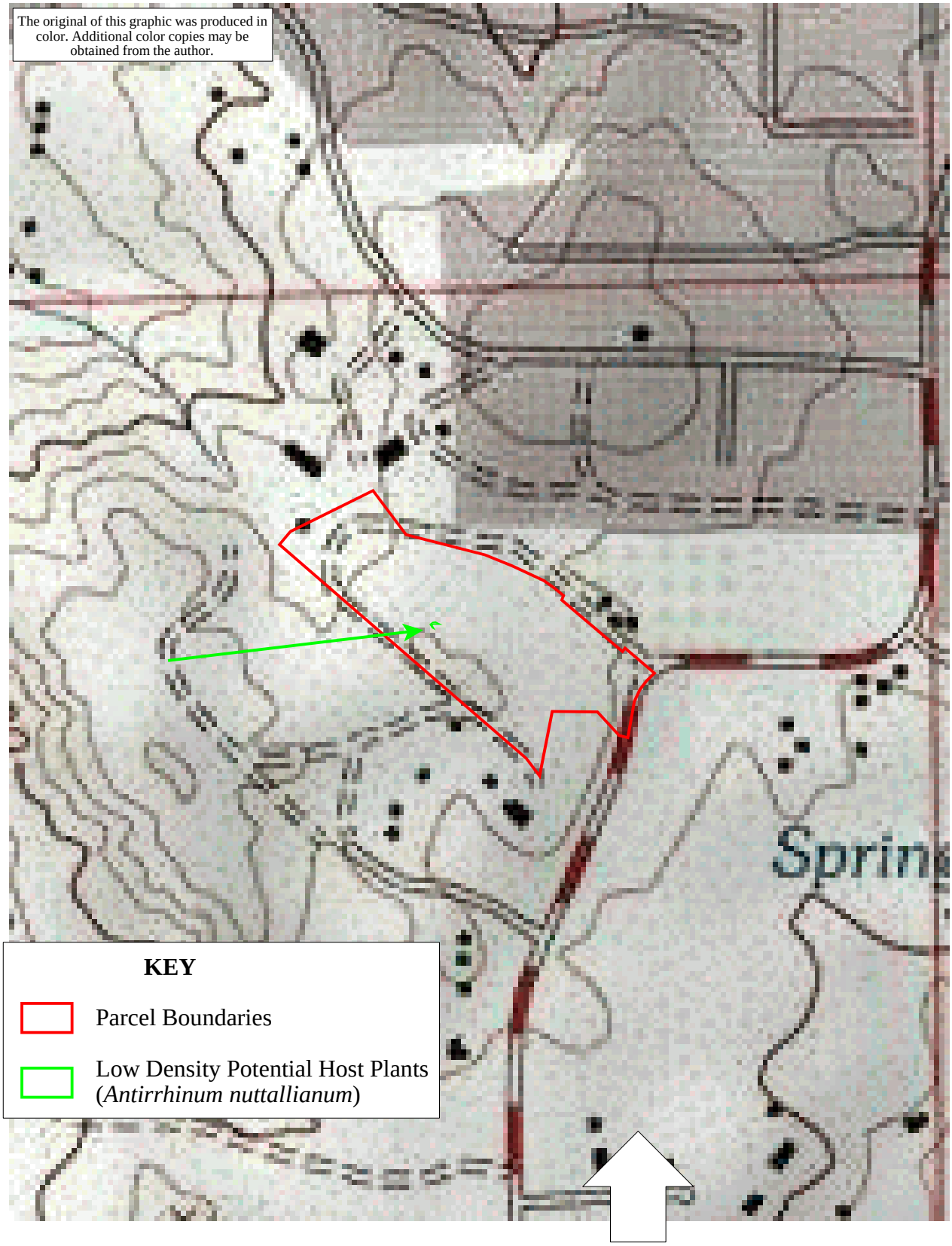
6/9/14
Date

[:\1698Quino-report.wpd]



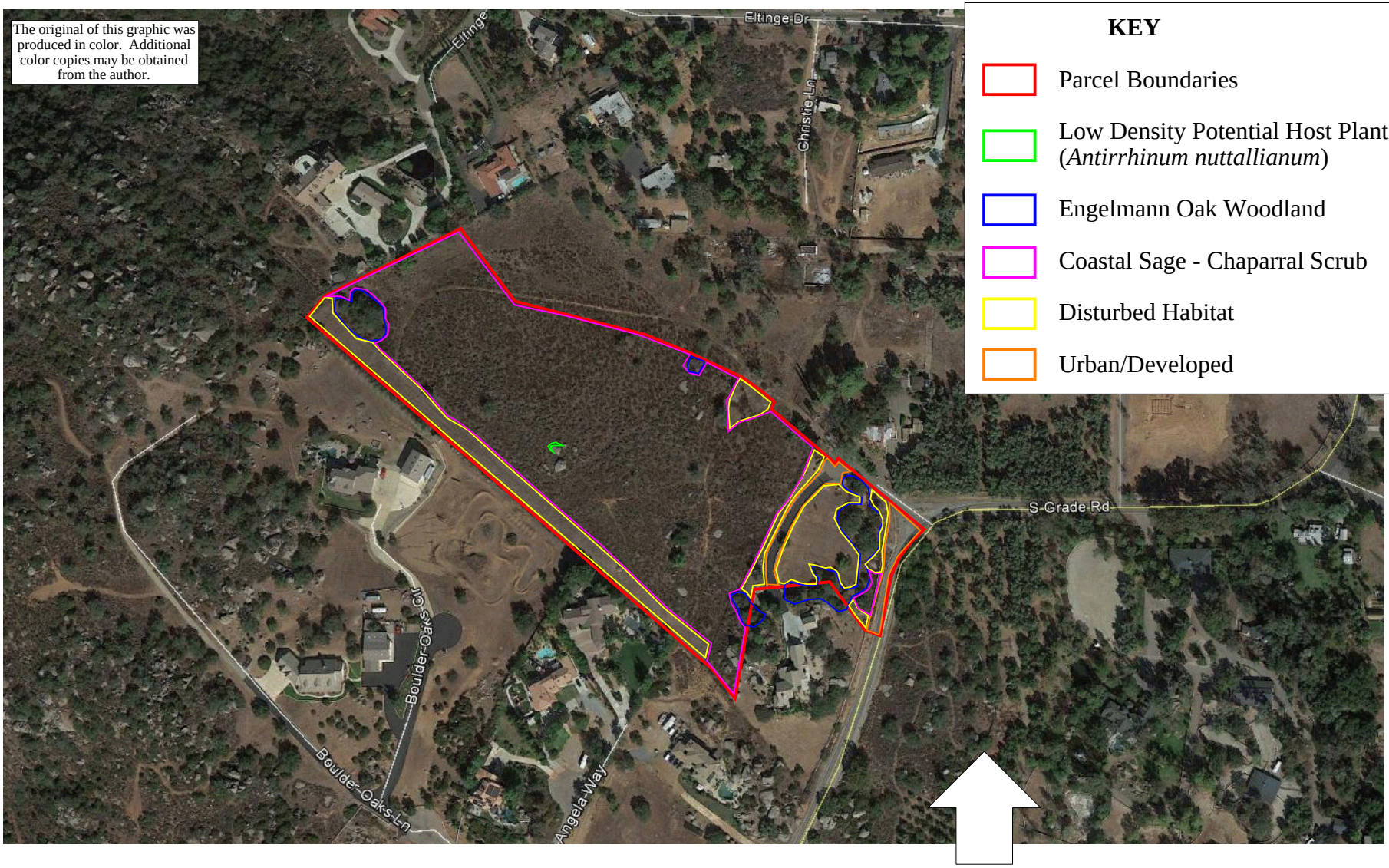
Cummings and Associates Job Number 1698.21D 12 February 2014 Scale: 1-inch = 2,000-feet [:\1698-Quino-Fig-1.wpg]

Cummings and Associates	**APN 404-430-45 Shown on the U.S.G.S. 7½-minute Alpine Quadrangle Map** [Base Map Created with TOPO!® ©2006 National Geographic; ©2005 TeleAtlas]	**Figure 1**



Cummings and Associates Job Number 1698.21D 31 March 2014 Scale: 1-inch = 500-feet [:\1698-Quino-Fig-2.wpg]

Cummings and Associates	**Site Assessment Map for the Rancho Sierra Project Shown on the U.S.G.S. 7½-minute Alpine Quadrangle Map** [Base Map Created with TOPO!® ©2006 National Geographic; ©2005 TeleAtlas]	**Figure 2**



Cummings and Associates Job Number 1698.21D 31 March 2014

Scale: 1-inch = 300-feet

[:\1698-Quino-Fig-3.wpg]

Cummings and Associates

Host Plant Location and Plant Communities on the Rancho Sierra Project Shown on an Aerial Photo [Base Map © 2013 Google; Imagery Date 10/27/2012]

Figure 3

The original of this graphic was produced in color. Additional color copies may be obtained from the author.

Figure 4A — Mormon Metalmark (*Apodemia mormo virgulti*)
This species was seen during all twelve surveys. The larvae feed on California Buckwheat.
[Photo taken on-site during the Quino survey.]

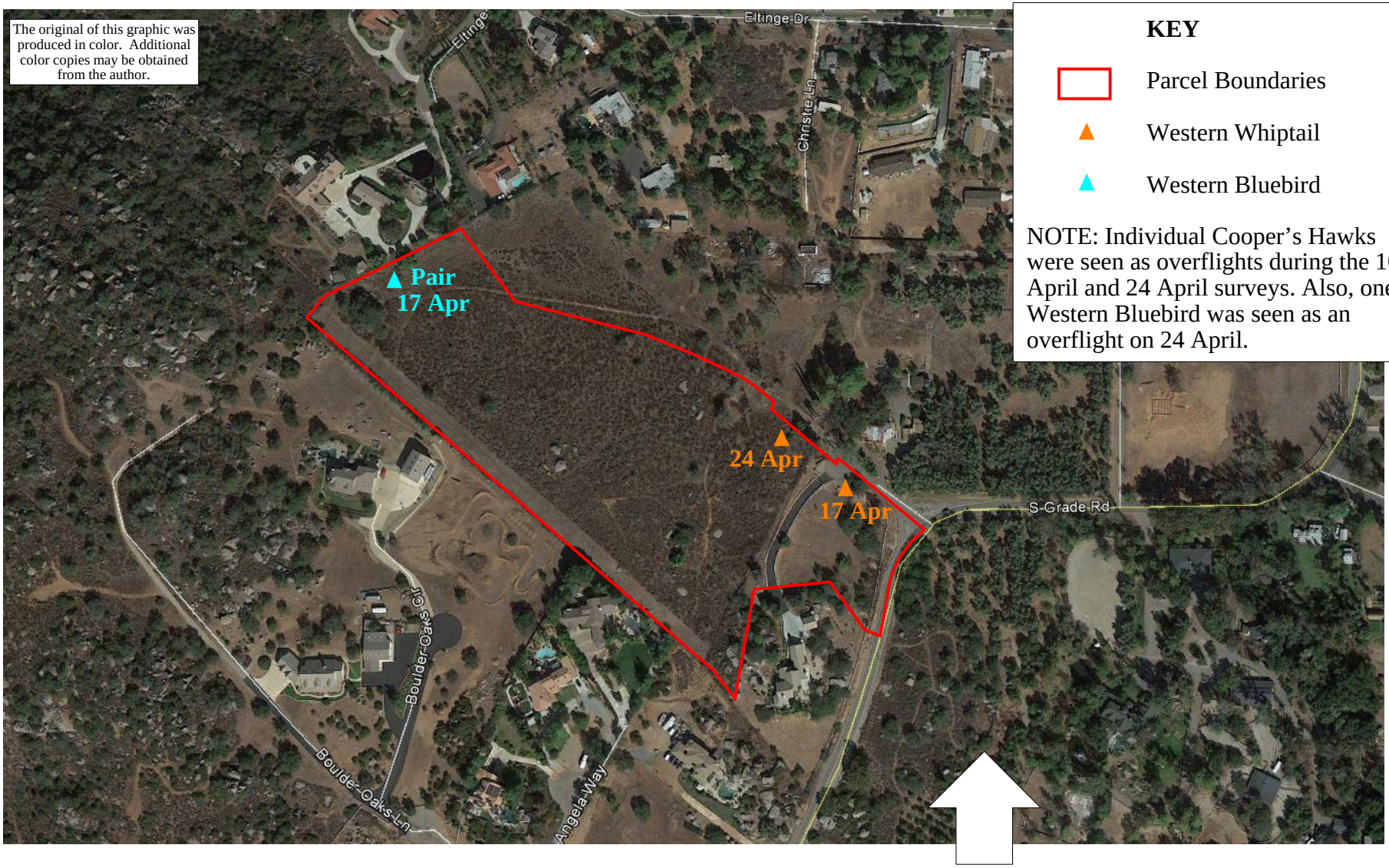
Figure 4B — Bramble Hairstreak (*Callophrys dumetorum*)
This species was observed only once during the first official Quino survey. The larvae feed on Buckwheats and Deerweed.
[Photo taken on-site during the Quino survey.]

Figure 4C —Painted Lady (*Vanessa cardui*)
This butterlly species was seen during the first six of the twelve Quino site visits. Numbers of this species were very low even during the peak of the season.
[Photo taken at a different site.]

Figure 4D — Acmon Blue (*Plebejus acmon*)
This species was seen during eight of the twelve Quino site visits. The larvae of this species feed on legumes and Buckwheats.
[Photo taken on- site during the Quino survey.]

Cummings and Associates Job Number 1698.21D 9 June 2014 [:\1698-Quino-Fig-4.ppp]

Cummings and Associates	**APN 404-430-45 — Representative Butterfly Species Noted During the 2014 Quino Checkerspot Butterfly Survey**	**Figure 4**



Cummings and Associates Job Number 1698.21D 9 June 2014

Scale: 1-inch = 300-feet

[:\1698-Quino-Fig-5.wpg]

Cummings and Associates

Locations of Sensitive Species Observations made During the Quino Checkerspot Survey Shown on an Aerial Photo of APN 404-430-45 [Base Map © 2013 Google; Imagery Date 10/27/2012]

Figure 5

Table 1

Summary of Weather Conditions at the Time of the Individual Survey Dates

Rancho Sierra APN 404-430-45									
Survey	Date	Beginning of Observation Period				End of Observation Period			
		Time	Cloud Cover	Wind	Air Temp	Time	Cloud Cover	Wind	Air Temp
Habitat/Host Plant Assessment	19 Feb	1055	80%	< 2.9 mph from the W	65.8°F	1200	30%	< 2.7 mph from the W	66.2°F
Quino Survey #1	25 Feb	1050	30%	< 2.1 mph from the W	71.9°F	1200	50%	1.2 - 3.8 mph with gusts to 8.2 mph from the SW	70.8°F
Quino Survey #2	5 Mar	1015	Clear	< 2.5 mph from the W	70.6°F	1120	Clear	< 2.9 mph from the NW	74.1°F
Quino Survey #3	12 Mar	1100	10%	2.0 - 5.8 mph from the E	71.3°F	1210	10%	0.9 - 3.1 mph from SE	75.7°F
Quino Survey #4	19 Mar	1320	Clear	2.5 - 4.8 mph gusts to 7.2 mph from the W	73.1°F	1420	Clear	3.2 - 4.6 mph gusts to 6.6 mph from the W	75.5°F
Quino Survey #5	31 Mar	1400	5%	1.4 - 3.6 mph from the SW with gusts to 7.9 mph	66.9°F	1505	5%	2.0 - 4.2 mph from the SW with gusts to 9.4 mph	66.2°F

Rancho Sierra APN 404-430-45									
Survey	Date	Beginning of Observation Period				End of Observation Period			
		Time	Cloud Cover	Wind	Air Temp	Time	Cloud Cover	Wind	Air Temp
Quino Survey #6	3 Apr	1330	Clear	1.0 - 4.3 mph from the W	67.6°F	1430	Clear	4.1 - 6.5 mph from the W	68.0°F
Quino Survey #7	10 Apr	1200	90% high thin clouds	< 2.8 mph from the W	87.6°F	1300	95% high thin clouds	< 3.2 mph from the W	88.9°F
Quino Survey #8	17 Apr	1220	100%	< 3.3 mph from the W	72.1°F	1330	95%	< 2.8 mph from the W	74.9°F
Quino Survey #9	24 Apr	1205	20% high thin clouds	1.1 - 4.4 mph from the W	76.8°F	1305	5% high thin clouds	1.5 - 5.8 mph from the W	77.1°F
Quino Survey #10	4 May	1155	Clear	< 3.0 mph from the SW	86.8°F	1255	Clear	< 2.0 mph with gusts to 5.1 mph from the W	89.4°F
Quino Survey #11	10 May	0910	20%	< 2.0 mph from the W	67.3°F	1010	10%	1.2 - 5.8 mph from the W	68.8°F

[:\1698weather-tbl.wpd]

Table 2

Summary of the Butterfly Species Observed at the Rancho Sierra Project, APN 404-430-45 County of San Diego, California

Scientific Name[1]/ Common Name	19 Feb[2]	25 Feb	5 Mar	12 Mar	19 Mar	31 Mar	3 Apr	10 Apr	17 Apr	24 Apr	4 May	10 May
Apodemia mormo virgulti (Mormon Metalmark)	3	6	6	7	12	6	7	7	7	10	19	6
Callophrys dumetorum (Bramble Hairstreak)	—	1	—	—	—	—	—	—	—	—	—	—
cf. *Colias alexandra harfordii* (cf. Harford's Sulphur)	—	—	—	—	—	—	—	—	—	—	1	—
Erynnis funeralis (Funereal Duskywing)	—	2	1	3	2	—	—	—	1	—	2	—
Euphilotes battoides (Square-spotted Blue)	—	—	—	—	—	—	—	—	—	2	—	—
Glaucopsyche lygdamus (Silvery Blue)	—	—	—	1	—	—	—	—	—	—	—	—
cf. *Hylephila phyleus* (cf. Fiery Skipper)	—	—	—	—	—	—	—	—	1	—	—	—
Papilio eurymedon (Pale Swallowtail)	—	1	—	—	—	—	—	—	—	—	—	—
Plebejus acmon (Acmon Blue)	1	1	2	2	4	—	—	—	—	1	5	3
Vanessa cardui (Painted Lady)	1	3	15	7	4	1	—	—	—	—	—	—
Total Individuals/ Total Species Observed	5/ 3	14/ 6	24/ 4	20/ 5	22/ 4	7/ 2	7/ 1	7/ 1	9/ 3	13/ 3	27/ 4	9/ 2

[1]For a discussion of the identification and species observed, see text. Nomenclature taken from:
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[2] This site visit was considered the official "site assessment" according to the 2014 Protocol Survey for the Quino Checkerspot.

[:\1698bug-tbl.wpd]

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[:\1698Quino-ref-cit.wpd]

Appendix A

Field Notes

2014 Field Notes for the Quino Survey over the Rancho Sierra property in Alpine

19 February 2014

A Quino Checkerspot Butterfly habitat assessment was conducted over the Rancho Sierra property today (Cummings and Associates Job #1698.21D). The assessment occurred between 1055 and 1200 hours. The sky contained a cloud cover of 80% at the start of the site visit and decreased to 30% by the end of the survey. The temperature rose during the survey period from 65.8°F at 1055 hours to 66.2°F at 1200 hours. Wind speeds were measured < 2.9 mph from the west at the beginning of the survey. At the completion of the assessment, wind speeds were measured < 2.7 mph from the west. Butterfly species observed during the habitat assessment were:

Vanessa cardui (1)
Apodemia mormo virgulti (3)
Plebejus acmon (1)

Nectaring sources included:

Gutierrezia sarothrae
Eriogonum fasciculatum
Plagiobothrys sp.
Mimulus aurantiacus

Other observations included *Pogonomyrmex* colonies, and 1 California Ground Squirrel (*Spermophilus beecheyi*).

25 February 2014

Today was the first of the protocol Quino surveys over the Rancho Sierra property (Cummings and Associates Job #1698.21D). The survey occurred between 1050 and 1200 hours. The ambient temperature decreased from 71.9°F at the onset of the field visit to 70.8°F at the end of the survey. The wind was blowing from the west throughout the observation period. Wind speeds were measured < 2.1 mph at the beginning of the visit and between 1.2 - 3.8 mph with gusts to 8.2 mph from the southwest at the end of the survey. The sky was 30% cloudy at the beginning of the observation period and 50% by the end of the survey. Butterflies observed were:

Papilio eurymedon (1) - traversed the property from NE to SW
Apodemia mormo virgulti (6)
Vanessa cardui (3)
Callophrys dumetorum (1) - nectaring on *Eriogonum fasciculatum*

Erynnis funeralis (1) - nectaring on *Amsinckia menziesii*
Plebejus acmon (1)

Nectaring sources included:

Erodium botrys
Eriogonum fasciculatum
Pseudognaphalium beneolens
Gutierrezia sarothrae
Mimulus aurantiacus
Acmispon glaber
Amsinckia menziesii
Erodium cicutarium

Other observations included two Western Fence Lizards (*Sceloporus occidentalis*), and one Side-blotched Lizard (*Uta stansburiana)*.

5 March 2014

The second Quino protocol survey was conducted over the Rancho Sierra property today (Cummings and Associates Job #1698.21D). This second survey was conducted between 1015 and 1120 hours. The sky was clear throughout the visit. The temperature increased from 70.6°F at 1015 hours to 74.1°F at 1120 hours. Winds were blowing from the west at speeds < 2.5 mph at 1015 hours. At the end of the survey, the winds were blowing from the northwest at speeds that measured < 2.9 mph. Butterfly species observed during this second protocol survey were:

Vanessa cardui (15)
Plebejus acmon (2)
Apodemia mormo virgulti (6)
Erynnis funeralis (1)

Nectaring sources included:

Erodium botrys
Eriogonum fasciculatum
Pseudognaphalium beneolens
Gutierrezia sarothrae
Mimulus aurantiacus
Acmispon glaber
Amsinckia menziesii
Erodium cicutarium

Other observations included a Greater Road Runner in the top of an Engelmann Oak.

12 March 2014

Today the third of the required Quino protocol surveys was conducted over the Rancho Sierra property (Cummings and Associates Job #1698.21D). The field visit occurred between 1100 and 1210 hours. The sky was partly cloudy throughout the survey with approximately 10% cloud cover. Ambient temperatures were measured at 71.3°F at the onset of the visit and at 75.7°F at the end of the observation period. At the beginning of the survey, the wind was blowing from the east at speeds ranging between 2.0 - 5.8 mph. By the end of the visit, the winds were blowing from the southeast, but had decreased and were measured between 0.9 - 3.1 mph. Butterfly species observed during this visit were:

Vanessa cardui (7)
Apodemia mormo virgulti (7)
Erynnis funeralis (3)
Glaucopsyche lygdamus (1)
Plebejus acmon (2)

Nectaring sources observed during this visit included:

Erodium botrys
Eriogonum fasciculatum
Acmispon glaber
Gutierrezia sarothrae
Mimulus aurantiacus
Sanicula tuberosa
Amsinckia menziesii
Plagiobothrys sp.
Corethrogyne filaginifolia
Dichelostemma capitatum

Please note that a small number of Nuttall's Snapdragon (*Antirrhinum nuttallianum*) were noted at the base of one of th boulders near the central portion of the site (< dozen plants). These plants were not in bloom.

Other observations included three Audubon's Cottontail (*Sylvilagus audubonii)*, two California Ground Squirrels (*Spermophilus beecheyi*), and three Western Fence Lizards (*Sceloporus occidentalis*).

19 March 2014

Today the fourth of the required Quino protocol surveys was conducted over the Rancho Sierra property (Cummings and Associates Job #1698.21D). The field visit occurred between 1320 and 1420 hours. The sky was clear throughout the survey. Ambient temperatures were measured at

73.1°F at 1320 hours and at 75.5°F at 1420 hours. At the beginning of the survey, the wind was blowing at speeds ranging between 2.5 - 4.8 mph with gusts to 7.2 mph. By the end of the visit, the winds were blowing at speeds ranging between 3.2 - 4.6 mph with gusts to 6.6 mph. Butterfly species observed during this visit were:

Apodemia mormo virgulti (12)
Plebejus acmon (4)
Erynnis funeralis (2)
Vanessa cardui (4)

Nectaring sources observed during this visit included:

Erodium botrys
Eriogonum fasciculatum
Acmispon glaber
Gutierrezia sarothrae
Mimulus aurantiacus
Gilia angelensis
Amsinckia menziesii
Pseudognaphalium beneolens
Pectocarya linearis ssp. *ferocula*
Erodium cicutarium

Please note that a small number of Nuttall's Snapdragon (*Antirrhinum nuttallianum*) were noted at the base of one of th boulders near the central portion of the site (< dozen plants). These plants were not in bloom.

31 March 2014

Today the fifth of the required Quino protocol surveys was conducted over the Rancho Sierra property between 1400 and 1505 hours (Cummings and Associates Job #1698.21D). The sky was partly cloudy throughout the survey with approximately 5% cloud cover. Temperatures were 66.9°F at the onset of the visit and 66.2°F at the end of the observation period. Wind speeds were measured between1.4 - 3.6 mph from the southwest with gusts up to 7.9 mph at the beginning of the butterfly survey. Wind speeds ranged between 2.0 - 4.2 mph from the southwest with gusts up to 9.4 mph by the end of the visit. Butterfly species observed were:

Apodemia mormo virgulti (6)
Vanessa cardui (1)

Nectaring sources noted during this visit included:

Erodium botrys

Eriogonum fasciculatum
Acmispon glaber
Gutierrezia sarothrae
Mimulus aurantiacus
Plagiobothrys sp.
Amsinckia menziesii
Nuttallanthus texanus
Pectocarya linearis ssp. *ferocula*
Anagallis arvensis
Dichelostemma capitatum
Hirschfeldia incana
Acmispon strigosus
Calandrinia ciliata

Please note that a small number of Nuttall's Snapdragon (*Antirrhinum nuttallianum*) were noted at the base of one of th boulders near the central portion of the site (< dozen plants). These plants were not in bloom.

3 April 2014

The sixth Quino protocol survey was conducted over the Rancho Sierra property today (Cummings and Associates Job #1698.21D). The survey occurred between 1330 and 1430 hours. The sky was clear throughout the survey. Temperatures increased slightly from 67.6°F at the onset of the visit to 68.0°F at the end of the observation period. Wind speeds were measured between 1.0 - 4.3 mph from the west at the beginning of the butterfly survey. Speeds increased and were measured between 4.1 - 6.5 mph from the west by the end of the visit. Only one butterfly species was observed today, *Apodemia mormo virgulti* (7).

Nectaring sources noted during this visit included:

Erodium botrys
Eriogonum fasciculatum
Acmispon glaber
Gutierrezia sarothrae
Mimulus aurantiacus
Plagiobothrys sp.
Amsinckia menziesii
Pseudognaphalium beneolens
Acmispon strigosus

Please note that a small number of Nuttall's Snapdragon (*Antirrhinum nuttallianum*) were noted at the base of one of th boulders near the central portion of the site (< dozen plants). These plants were not in bloom.

10 April 2014

The seventh Quino protocol survey was conducted over the Rancho Sierra property today (Cummings and Associates Job #1698.21D). The survey occurred between 1200 and 1300 hours. The sky was mostly cloudy throughout the survey with approximately 90% cloud cover of high, thin clouds at the beginning of the survey increasing to 95% clouds by the end of the survey. Temperatures ranged from 87.6°F at the onset of the visit to 88.9°F at the end of the observation period. Wind speed measurements were < 2.8 mph from the west at the beginning and < 3.2 mph from the west at the end of the butterfly survey. Only one butterfly species was observed today, *Apodemia mormo virgulti* (7).

Nectaring sources observed during this visit included:

Erodium botrys
Eriogonum fasciculatum
Acmispon glaber
Gutierrezia sarothrae
Mimulus aurantiacus
Plagiobothrys sp.
Pectocarya linearis ssp. *ferocula*
Anagallis arvensis
Dichelostemma capitatum
Silybum marianum
Hirschfeldia incana
Pseudognaphalium californicum
Hypochaeris glabra
Erodium cicutarium
Calandrinia ciliata
Plagiobothrys sp.
Antirrhinum nuttallianum
Silene gallica
Melilotus indicus
Eriophyllum confertiflorum
Sanicula tuberosa

Other observations included two Audubon's Cottontail (*Sylvilagus audubonii*).

17 April 2014

The eighth Quino protocol survey was conducted over the Rancho Sierra property today (Cummings and Associates Job #1698.21D). The survey occurred between 1220 and 1330 hours. The sky was mostly cloudy throughout the survey with approximately 100% cloud cover at 1220 hours and 95% cloud cover at 1330 hours. Temperatures ranged from 72.1°F at the onset of the

visit to 74.9°F at the end of the observation period. Wind speeds were measured at < 3.3 mph from the west at the beginning of the butterfly survey. The winds continued to blow from the west at the end of the visit with speeds recorded at < 2.8 mph. Butterfly species observed were:

Apodemia mormo virgulti (7)
Hylephila phyleus (1)
Erynnis funeralis (1)

Nectaring sources noted during this visit included:

Erodium botrys
Eriogonum fasciculatum
Acmispon glaber
Gutierrezia sarothrae
Mimulus aurantiacus
Hesperoyucca whipplei
Pectocarya linearis ssp. *ferocula*
Silybum marianum
Dichelostemma capitatum
Gilia angelensis
Pseudognaphalium californicum
Hypochaeris glabra
Erodium cicutarium
Antirrhinum nuttallianum
Calandrinia ciliata
Sisymbrium irio
Melilotus indicus
Eriophyllum confertiflorum

Other observations included one Western Whiptail (*Aspidoscelis tigris*), one Western Fence Lizard (*Sceloporus occidentalis*), and one Audubon's Cottontail (*Sylvilagus audubonii*).

24 April 2014

Today the ninth of the required Quino protocol surveys was conducted over the Rancho Sierra property between 1205 and 1305 hours (Cummings and Associates Job #1698.21D). The sky was partly cloudy with 20% high thin clouds at the start of the survey decreasing to 5% high thin clouds by the end of the survey. Ambient temperatures increased from 76.8°F at 1205 hours to 77.1°F at 1305 hours. At the beginning of the survey, the wind was blowing from the west at speeds ranging between 1.1 - 4.4 mph. By the end of the visit, the winds continued to blow from the west, at speeds ranging between 1.5 - 5.8 mph. Butterfly species observed during this visit were:

Apodemia mormo virgulti (10)
Euphilotes battoides (2)
Plebejus acmon (1)

Nectaring sources noted during this visit included:

Eriogonum fasciculatum
Acmispon glaber
Gutierrezia sarothrae
Mimulus aurantiacus
Silybum marianum
Dichelostemma capitatum
Antirrhinum nuttallianum
Pseudognaphalium californicum
Erodium cicutarium
Calandrinia ciliata
Melilotus indicus
Eriophyllum confertiflorum
Hypochaeris glabra
Navarretia hamata

4 May 2014

Today was the tenth of the protocol Quino surveys over the Rancho Sierra property (Cummings and Associates Job #1698.21D). The survey occurred between 1155 and 1255 hours. Temperature increased from 86.8°F at the onset of the field visit to 89.4°F at the end of the survey. The wind was blowing from the southwest at the beginning of the visit at speeds of < 3.0 mph. At the end of the survey, the wind was blowing from the west at speeds < 2.0 mph with gusts to 5.7 mph. The sky was sunny and clear throughout. Butterflies observed were:

Colias alexandra harfordii (1)
Erynnis funeralis (2)
Apodemia mormo virgulti (19)
Plebejus acmon (5)

Nectaring sources observed during this visit included:

Eriogonum fasciculatum
Acmispon glaber
Gutierrezia sarothrae
Mimulus aurantiacus
Erodium botrys
Antirrhinum nuttallianum

Calandrinia ciliata
Eriophyllum confertiflorum
Helianthemum scoparium

Other observations included two Audubon's Cottontail (*Sylvilagus audubonii*).

10 May 2014

Today was the last of the protocol Quino surveys over the Rancho Sierra property (Cummings and Associates Job #1698.21D). The survey occurred between 0910 and 1010 hours. Temperatures increased slightly from 67.3°F at the onset of the field visit to 68.8°F at the end of the survey. The wind was blowing from the west during the observation period. Wind speeds were measured < 2.0 mph at the beginning of the visit and between 1.2 - 5.8 mph at the end of the survey. The sky was partly cloudy throughout with approximately 20% cloud cover at 0910 hours and 10% cloud cover at 1010 hours. Butterflies observed were:

Plebejus acmon (3)
Apodemia mormo virgulti (6)

Nectaring sources noted during this visit included:

Eriogonum fasciculatum
Acmispon glaber
Gutierrezia sarothrae
Mimulus aurantiacus
Centaurea melitensis
Erodium cicutarium
Antirrhinum nuttallianum
Hirschfeldia incana
Navarretia hamata
Eriophyllum confertiflorum

Appendix B

Report of a Protocol Survey for the Hermes Copper Butterfly Over the Rancho Sierra Project, APN 404-430-45

Prepared by
Cummings and Associates
15 August 2014

Report of a Protocol Survey for the Hermes Copper Butterfly Over the Rancho Sierra Property, APN 404-430-45 County of San Diego, California

Prepared For:

Mr. Brad Bailey
10035 Prospect Avenue, Suite 101
Santee, CA 92071
(619)244-4979

Prepared By:

Gretchen Cummings

Gretchen Cummings

Cummings and Associates
P.O. Box 1209
Ramona, CA 92065
(760)440-0349

15 August 2014
Job Number 1698.21D

Report of a Protocol Survey for the Hermes Copper Butterfly Over the Rancho Sierra Property, APN 404-430-45 County of San Diego, California

Prepared For

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Ramona, CA 92065
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15 August 2014
Job Number 1698.21D

Table of Contents

Attachments

I. Introduction and Background

The Hermes Copper (*Lycaena hermes*) is an approximately 1-inch, tailed, yellow and brown butterfly in the Lycaenidae family. This butterfly is closely tied to its larval host plant, Redberry (*Rhamnus crocea*), and is found in habitats which contain both the adult primary nectaring plant, Flat-top Buckwheat (*Eriogonum fasciculatum*), and mature Redberry. The Hermes Copper is extremely limited in range as it is found only in San Diego County and northern Baja California.

Following the 2003 Cedar Fire in San Diego County which destroyed a significant portion of the species' habitat north of Interstate 8, a petition was filed with the U.S. Fish and Wildlife Service (USFWS) in 2004, requesting that the Hermes Copper be listed under the federal Endangered Species Act (ESA). The USFWS published a finding in 2006 that there was not enough information to support the listing of the species under the ESA. Another "mega" fire burned a large portion of San Diego County in 2007, again destroying the species' habitat, this time in the vicinity of State Route 94. In 2009, a complaint was filed with the USFWS for not listing the Hermes Copper under the ESA. All available information on the species was evaluated, and on April 14, 2011, the Hermes Copper was added as a Candidate species under the ESA (USFWS, 2011a). At the end of each year, the USFWS reviews the Candidate species and determines if any action should be taken. There has been no change in the federal Candidate status of the Hermes (USFWS, 2011b, USFWS, 2012 and USFWS, 2013). Concurrent with the USFWS review of the species in 2010, the County of San Diego's Land Use and Environment Group reevaluated their processes for identifying potential Hermes Copper habitat and mitigating for impacts to that habitat and the species. On September 15, 2010, the County of San Diego published the Fourth Revision to the Report Format and Content Requirements for Biological Resources document (San Diego, County of, 2010). In Attachment B of that document, the County of San Diego presented guidelines for the Hermes Copper. Specifically, they defined what is and what is not potential Hermes Copper habitat, how to map potential Hermes Copper habitat, the protocol for flight season surveys, and the mitigation ratios to be utilized for impacts to both potential and occupied Hermes Copper habitat.

The Rancho Sierra property is located south of Interstate 8 and west of South Grade Road in Alpine (see Figure 1). During a Quino habitat assessment on the property in February 2014, suitable habitat for the Hermes Copper was identified by the undersigned. Since the property is being proposed for a 10-lot subdivision, a Hermes Copper survey per the protocol in the County of San Diego's Report Format and Content Requirements for Biological Resources was conducted.

II. Methods

The typical adult flight period for the Hermes Copper occurs between mid-May and early July with a peak between June 10th - 20th. Per the County of San Diego Guidelines for Hermes Copper (*Lycaena hermes*), potential Hermes Copper habitat consisting of mature Redberry plant with California Buckwheat within 15-feet was mapped and surveyed. Four surveys were conducted between the third full week in May and the first full week of July with eight to fourteen days in between surveys. Weather conditions at the beginning and ending of each survey period were recorded and are presented in Table 1.

During all survey efforts for the Hermes Copper, the undersigned was equipped with a collapsible insect net (BioQuip), close focusing photographic gear, a Global Positioning System (GPS) unit, and close focusing binoculars (8x42). The photographic gear used this season consisted of a Nikon D300 body and a 70 - 300 mm Quantaray lens with a macro function. This equipment allowed a minimum working distance of approximately fourteen inches. Wind speed and air temperature were taken with a Kestrel. With this instrument, it was possible to record wind speed to the nearest 0.1 mph, and temperature to the nearest .1°. The GPS unit used this season was a Garmin Montana 650t.

III. Results

There are nine Redberry shrubs (*Rhamnus crocea*) on the Rancho Sierra property. With the adjacent California Buckwheat mapped within15-feet of the Redberry, the potential habitat on the property comprises 0.2-acre (see Figures 2 and 3). No Hermes Copper were seen during the protocol survey.

The following points highlight the results of the butterfly survey effort on the Rancho Sierra property:

- One butterfly species, the Mormon Metalmark, was observed during all four surveys.
- The largest number of individual butterflies seen during the four surveys was 9 on 19 June.
- A total of 5 butterfly species were observed throughout the course of the four site visits.

A compilation of the butterflies observed during the protocol survey effort is presented as Table 2. The reader's attention is directed to that table, to the attached Figures, and to the attached Field Notes for additional information and details on the results of the field effort.

IV. Discussion

No Hermes Copper were observed at the Rancho Sierra property. The 2010 County of San Diego Guidelines for Hermes Copper require mitigation for projects impacting occupied Hermes Copper habitat, as well as, just "potential" Hermes Copper habitat. Impacts to potential habitat are required to be mitigated at a 1:1 ratio. Given these mitigation requirements for County projects, the 0.2-acre of potential Hermes Copper habitat will have to be mitigated at a 1:1 ratio.

V. Surveyor Certification

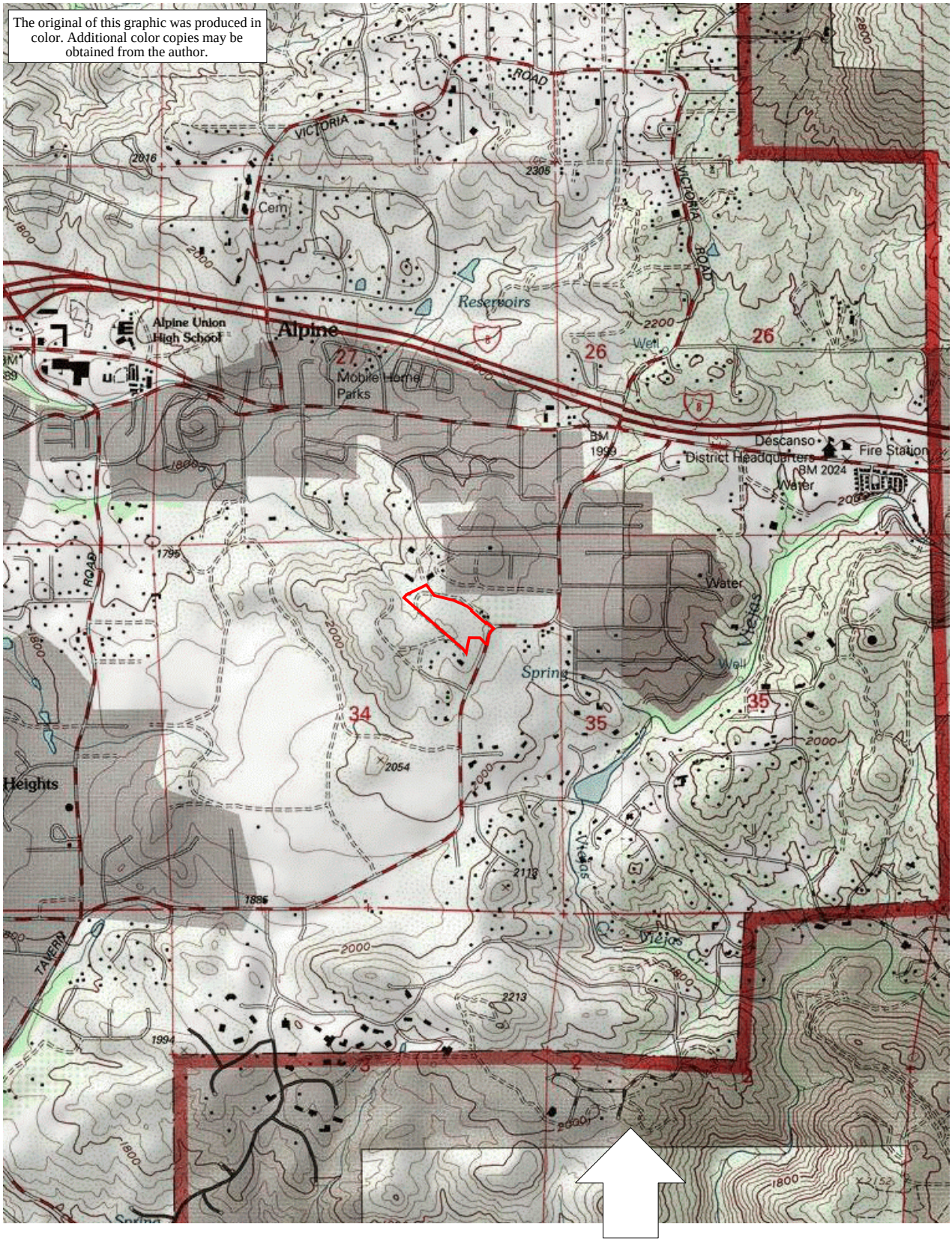
I certify that the information in this survey report and attached exhibits fully and accurately represents my work. Any errors or omissions are solely my responsibility.

Gretchen Cummings

Gretchen Cummings
Principal/Consulting Biologist

8/15/14
Date

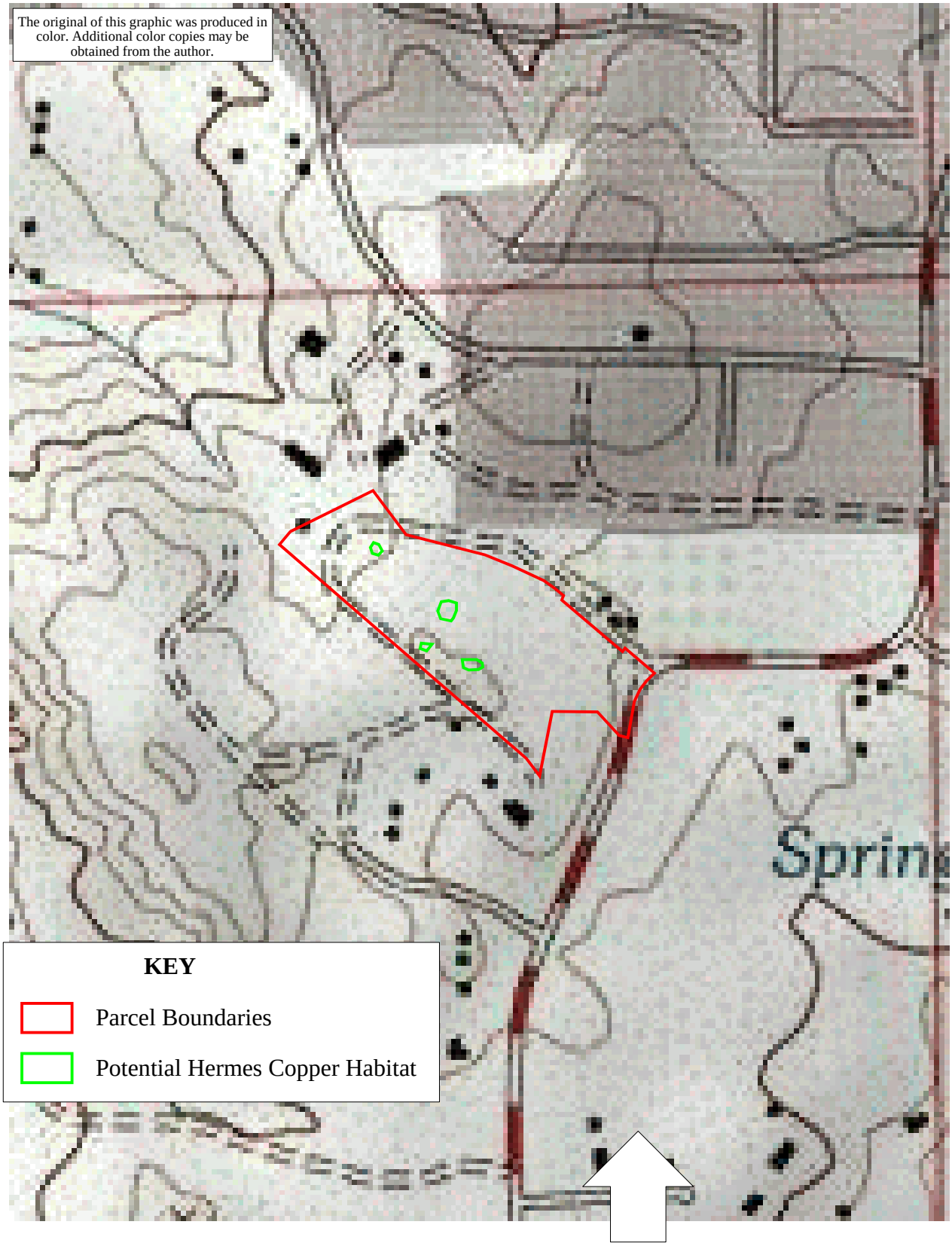
[:\1698Hermes-report.wpd]



Scale: 1-inch = 2,000-feet [:\1698-Hermes-Fig-1.wpg]

Cummings and Associates Job Number 1698.21D 27 May 2014

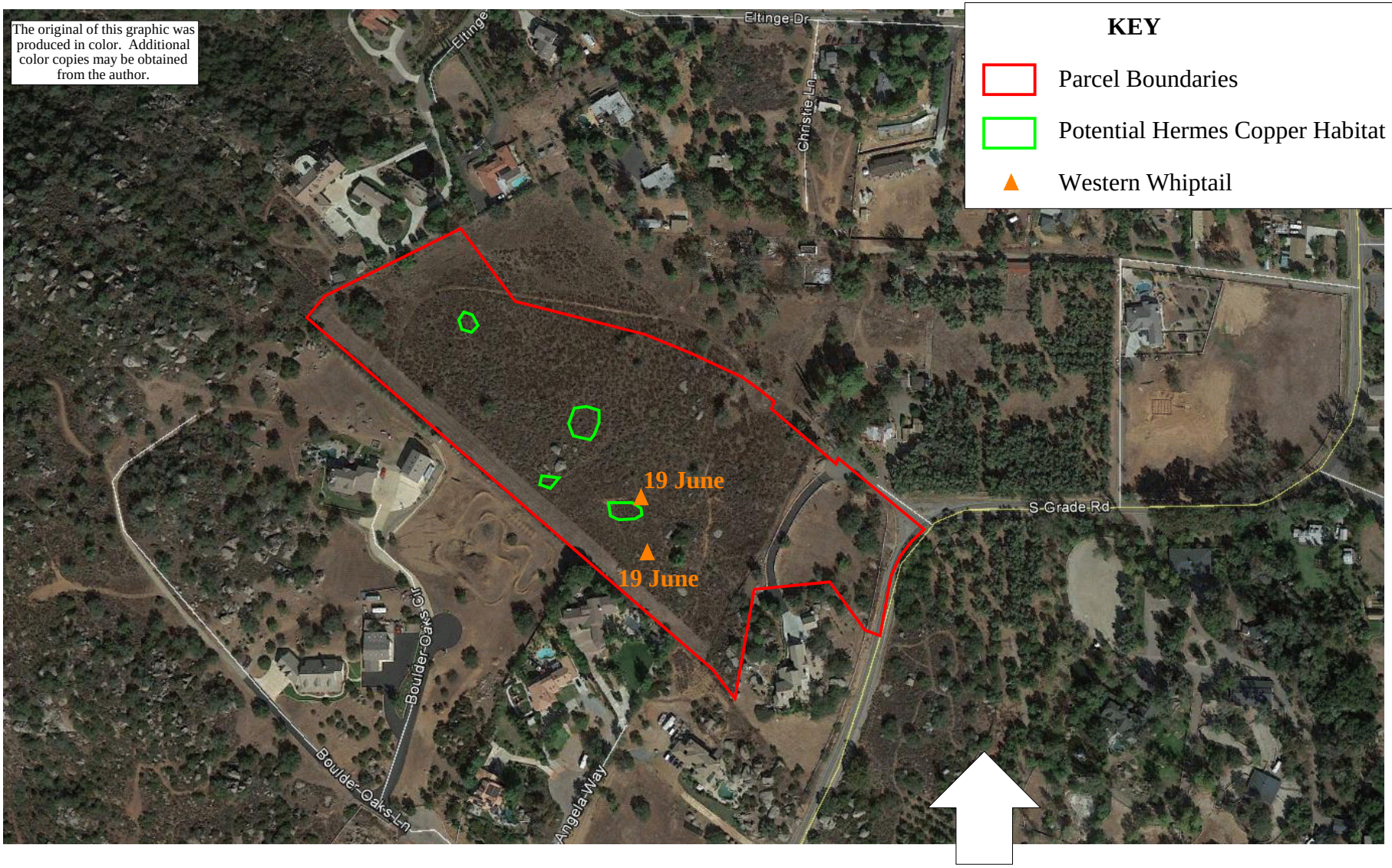
Cummings and Associates	**APN 404-430-45 Shown on the U.S.G.S. 7½-minute Alpine Quadrangle Map** [Base Map Created with TOPO!® ©2006 National Geographic; ©2005 TeleAtlas]	**Figure 1**



Cummings and Associates Job Number 1698.21D 27 May 2014

Scale: 1-inch = 500-feet [:\1698-Hermes-Fig-2.wpg]

Cummings and Associates	**Site Assessment Map for the Rancho Sierra Project Shown on the U.S.G.S. 7½-minute Alpine Quadrangle Map** [Base Map Created with TOPO!® ©2006 National Geographic; ©2005 TeleAtlas]	**Figure 2**



Cummings and Associates Job Number 1698.21D 15 August 2014

Scale: 1-inch = 300-feet

[:\1698-Hermes-Fig-3.wpg]

Cummings and Associates

Potential Hermes Copper Habitat and Sensitive Species Locations on the Rancho Sierra Project Shown on an Aerial Photo [Base Map © 2013 Google; Imagery Date 10/27/2012]

Figure 3

Table 1

Summary of Weather Conditions at the Time of the Individual Hermes Survey Dates

Rancho Sierra, APN 404-430-45									
Survey	Date	Beginning of Observation Period				End of Observation Period			
		Time	Cloud Cover	Wind	Air Temp	Time	Cloud Cover	Wind	Air Temp
Hermes Survey #1	27 May	1230	Clear	< 5.1 mph from the W	86.7°F	1315	Clear	2.4 - 6.3 mph from the SW	87.0°F
Hermes Survey #2	8 June	1020	Clear	< 3.3 mph from the W	81.1°F	1120	Clear	2.1 - 4.9 mph from the W with gusts to 7.0 mph	83.3°F
Hermes Survey #3	19 June	1425	Clear	< 2.7 mph from the W	84.5°F	1525	Clear	< 4.1 mph from the W	85.3°F
Hermes Survey #4	3 July	1420	Clear	1.9 - 4.1 mph from the W	92.8°F	1510	Clear	0.8 - 4.3 mph from the W	92.4°F

[:\1698Hermesweather-tbl.wpd]

Table 2

Summary of the Butterfly Species Observed at the Rancho Sierra Project, APN 404-430-45 County of San Diego, California

Scientific Name[1]/ Common Name	27 May	8 June	19 June	3 July
Apodemia mormo virgulti (Mormon Metalmark)	3	2	5	5
Erynnis funeralis (Funereal Duskywing)	—	—	1	—
cf. *Hylephila phyleus* (cf. Fiery Skipper)	—	—	3	—
Plebejus acmon (Acmon Blue)	4	2	—	—
Pontia protodice (Checkered White)	—	1	—	—
Total Individuals/ Total Species Observed	7/ 2	5/ 3	9/ 3	5/ 1

[1]For a discussion of the identification and species observed, see text. Nomenclature taken from: Cassie, Brian, J. Glassberg, A. Swengel, and G. Tudor. 2001. North American Butterfly Association (NABA) Checklist & English Names of North American Butterflies. Second Edition. North American Butterfly Association, Inc., Morristown, NJ, 60 pp.

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[:\1698Hermes-ref-cit.wpd]

Appendix A

Field Notes

2014 Field Notes for the Hermes Copper Survey over the Rancho Sierra Property in Alpine

27 May 2014

Today was the first of the protocol Hermes Copper surveys over the Rancho Sierra property (Cummings and Associates Job #1698.21D). The survey occurred between 1230 and 1315 hours. The ambient temperature increased from 86.7°F at the onset of the field visit to 87.0°F at the end of the survey. Wind speeds were measured at < 5.1 mph from the west at the beginning of the visit. At the end of the survey, wind speeds were measured between 2.4 - 6.3 mph from the southwest. The sky was sunny and clear throughout the survey. Butterflies observed were:

Apodemia mormo virgulti (3)
Plebejus acmon (4)

Nectaring sources included:

Eriogonum fasciculatum
Gutierrezia sarothrae

Other observations included one Granite Spiny Lizard (*Sceloporus orcuttii*) and a Bewick's Wren.

8 June 2014

The second Hermes Copper protocol survey was conducted over the Rancho Sierra property today (Cummings and Associates Job #1698.21D). This second survey was conducted between 1020 and 1120 hours. The sky was clear throughout the visit. The temperature increased from 81.1°F at 1020 hours to 83.3°F at 1120 hours. Winds were blowing from the west at speeds < 3.3 mph at 1020 hours. At the end of the survey, the winds were blowing from the west at speeds that were measured between 2.1 - 4.9 mph with gusts up to 7.0 mph. Butterfly species observed during this second protocol survey were:

Pontia protodice (1)
Plebejus acmon (2)
Apodemia mormo virgulti (2)

Nectaring sources included:

Eriogonum fasciculatum
Gutierrezia sarothrae
Antirrhinum nuttallianum

19 June 2014

Today the third Hermes Copper protocol survey was conducted over the Rancho Sierra property (Cummings and Associates Job #1698.21D). The field visit occurred between 1425 and 1525 hours. The sky was sunny and clear throughout the survey. Temperatures rose slightly during the observation period from 84.5°F at the onset of the visit to 85.3°F at the end of the survey. At 1425 hours, the wind was blowing from the west at speeds < 2.7 mph. By the end of the visit, the winds were still blowing from the west, but had increased and were measured at < 4.1 mph. Butterfly species observed during this visit were:

Apodemia mormo virgulti (5)
Erynnis funeralis (1)
Hylephila phyleus (3)

Nectaring sources observed during this visit included:

Eriogonum fasciculatum
Gutierrezia sarothrae
Corethrogyne filaginifolia
Antirrhinum nuttallianum
Hirschfeldia incana

Other observations included two Western Whiptails (*Aspidoscelis tigris stejnegeri*).

3 July 2014

Today the fourth and final Hermes Copper protocol survey was conducted over the Rancho Sierra property (Cummings and Associates Job #1698.21D). The field visit occurred between 1420 and 1510 hours. The sky was clear throughout the survey. Ambient temperatures were measured at 92.8°F at 1420 hours and at 92.4°F at 1510 hours. At the beginning of the survey, the wind was blowing at speeds ranging between 1.9 - 4.1 mph from the west. By the end of the visit, the winds were blowing at speeds ranging between 0.8 - 4.3 mph from the west. Butterfly species observed during this visit were:

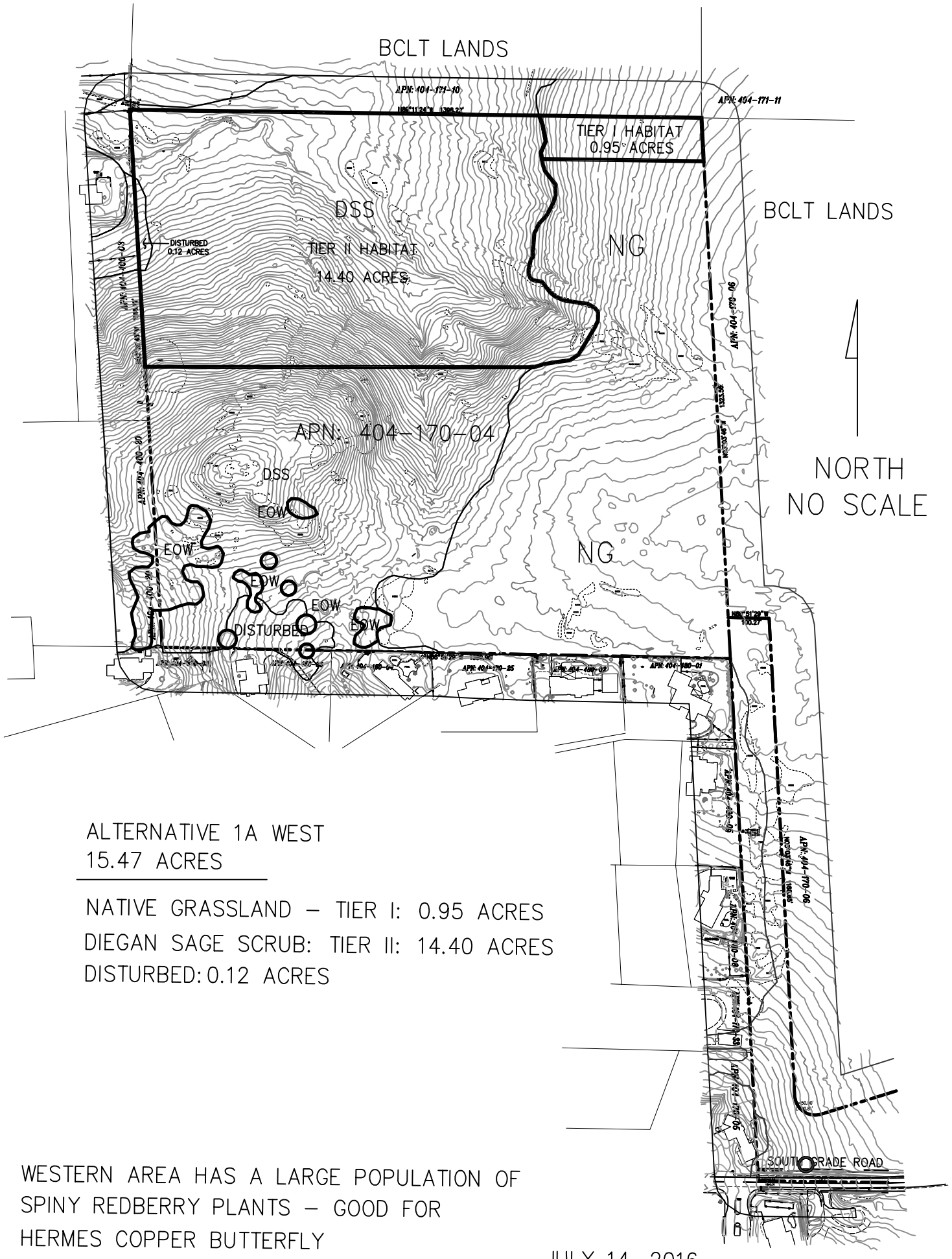
Apodemia mormo virgulti (5)

Nectaring sources observed during this visit included:

Eriogonum fasciculatum
Gutierrezia sarothrae
Antirrhinum nuttallianum

Appendix C

Proposed Mitigation Site on a Portion of APN 404-170-04



ALTERNATIVE 1A WEST
15.47 ACRES

NATIVE GRASSLAND – TIER I: 0.95 ACRES
DIEGAN SAGE SCRUB: TIER II: 14.40 ACRES
DISTURBED: 0.12 ACRES

WESTERN AREA HAS A LARGE POPULATION OF SPINY REDBERRY PLANTS – GOOD FOR HERMES COPPER BUTTERFLY

JULY 14, 2016

Appendix D

Land Management Plan for Wright's Field

Prepared by
Back Country Land Trust
September 25, 2012

Land Management Plan

For

Wright's Field

Multiple Species Conservation Program Preserve

Owned and Managed by the

Back Country Land Trust

Alpine, CA

Prepared by

BCLT Board and Staff

Updated - September 25th, 2012

CONFIDENTIAL

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List of Appendices

1.0 Introduction and Purpose

Wright's Field MSCP Preserve is located in Southern California, in the southeastern part of the County of San Diego, within the unincorporated community of Alpine. The Back Country Land Trust (BCLT) has been working diligently for over 15 years to acquire and protect Wright's Field for perpetuity. Currently, the BCLT owns 230 acres of this exceptional natural, social and cultural resource property (Figure 1 - Phase I, II, III, and Findel Ranch). Plans for acquiring the remaining 133 contiguous Pre-Approved Mitigation Area (PAMA) acres are in progress (Phase IV). The Preserve is a critical component of the County of San Diego's Multiple Species Conservation Program (MSCP) as well as the State of California's Natural Communities Conservation Planning program (NCCP). Both programs ensure biological diversity is maintained on an ecosystem level. In addition to conserving significant biological and cultural resources, BCLT promotes public appreciation and passive use of the Preserve, while engaging in extensive public outreach, community involvement and education activities from kindergarten through graduate school students.

The purpose of this plan is to describe the monitoring, management, and enhancement activities necessary for conserving significant biological, cultural and social resources intrinsic within the Wright's Field MSCP Preserve.

2.0 General Property Description and Improvements

There are three main public entrances to the Preserve. The first is located on the northern perimeter of the field at the end of Olivewood Lane. This entrance has a locked vehicle access gate and a recently re-designed information Kiosk. Minimal parking is available and most users enter on foot or bicycle. A second entrance is located on the western perimeter of the field and can be accessed on foot from Tavern Road. A locked gate is present as well as a new information Kiosk. Parking is available at Joan MacQueen Middle School. The third and most commonly used entrance to the Preserve is located off South Grade Road to the east of the Preserve. Roadside parking is available, but users must walk over a quarter mile on private property to access the Preserve. This private property is included within the Phase IV acquisition goals. There is an older Kiosk located at the entrance to the Preserve on this southeastern perimeter. Fences have been installed and maintained on many boundaries of the property, either by BCLT or private landowners. A restricted access gate has been installed along the South Grade Road. An extensive system of hiking, biking and equestrian trails has been established throughout the Preserve for passive public recreation. Off-road vehicle usage on the Preserve is forbidden. Multiple old home sites/foundations can be found within the Preserve and a fence has been installed around the northern foundation site to mitigate safety concerns. A large rock wall is located within the center of the Preserve and is a significant cultural resource. Other significant cultural resources are located throughout the Preserve. Multiple bird boxes have been installed along the eastern perimeter fence to enhance Western Bluebird nesting habitat.

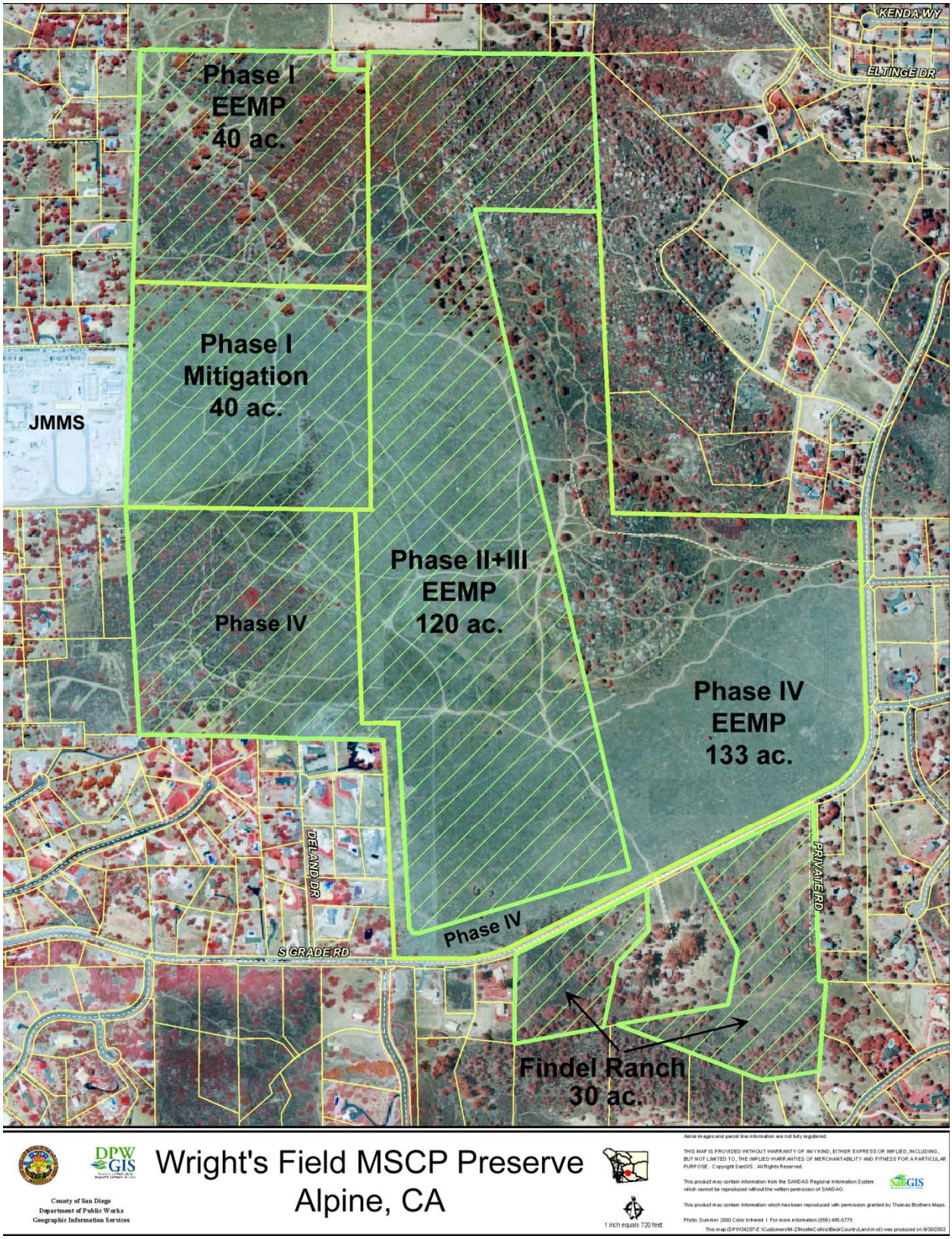

Figure 1 - Wright's Field MSCP Preserve Acquisition Phase I-IV Property Map

3.0 Abiotic Resources Inventory

Located within the upper catchment area of the El Capitan, Sweetwater and Loveland Reservoirs, Wright's Field MSCP Preserve is an important part of the County's public water system. Soils found on site include Fallbrook sandy loams, Cienaba rocky sandy loams, and Bonsanko clays. In part, these soils have made Wright's Field ineligible for development. Elevation of the Preserve ranges from 1775 to 2100 feet MLS. Climate and weather patterns for the Preserve are typical of semi-arid latitudes. Annual average rainfall is approximately 18 inches and average annual temperature is 64 degrees Fahrenheit.

4.0 Biotic Resources Inventory

Extensive field surveys for biological resources have been conducted on Wright's Field MSCP Preserve for many decades. The volume of data compiled from these surveys is valuable to not only the BCLT, but potentially to local, state and federal governments as well as non-government organizations, academics, naturalists, and conservationists.

4.1.1 Vegetation Communities

Wright's Field MSCP Preserve supports numerous overlapping vegetation communities including:

- Southern California Native Grasslands (40000)
- Open Engelmann Oak Woodland (71181)
- Riparian Scrub (63000)
- Diegan Coastal Sage Scrub (32500)
- Chamise Chaparral (37200)
- Eucalyptus Woodland (79100)
- Disturbed Non-native Vegetation (11000)

Vegetation communities are classified using the county approved Holland code system and identified by the dominant plants in the area or by the growth patterns of those plants. The first four communities are considered sensitive plant associations. These high value habitats generally consist of endemic, threatened or endangered species. Examples of such species found within the Preserve include: *Quercus engelmannii* (Engelmann Oak), *Acanthomintha ilicifolia* (San Diego Thornmint), *Harpagonella palmeri* (Palmer's Grappling-Hook), *Fritillaria biflora* (Chocolate Lily), and *Brodiaea sps.* (Field Brodiaea). See Appendix A for a yearly updated list of observed plant species at Wright's Field Preserve.

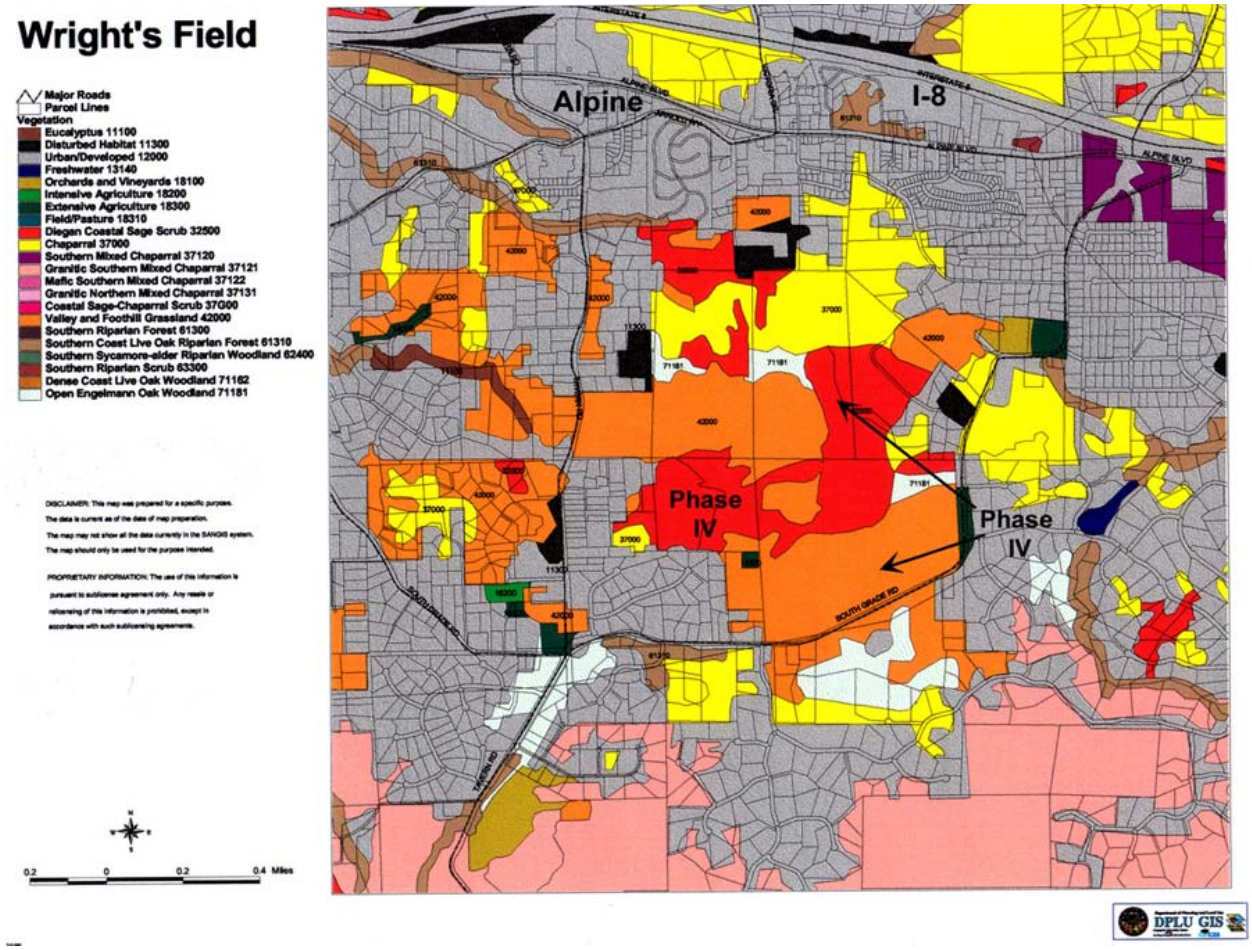

Figure 2 - Wright's Field San Diego County MSCP Habitats Map

4.1.2 Animal Surveys

The numerous vegetation communities of the Preserve provides habitat necessary for supporting a significant diversity of animal species. Observations of those animals can be found very easily on a walk through the Preserve at nearly any time of the day. One of the invertebrates species found on the field, when weather conditions are right, is *Euphydryas editha quino* (Quino Checkerspot Butterfly). Initially listed by the USFWS in 1997 as an Endangered Species, the Quino Checkerspot Butterfly was last observed on the field in 2010. *Lycaena hermes* (Hermes Copper), a candidate species for listing under the Endangered Species Act has also been observed on the field in recent years. Additionally, 6 species of concern specifically addressed in the MSCP South County Sub Area Plan have been observed on the Preserve including: *Cnemidophorus hyperythrus* (Orange-throated Whiptail), *Accipiter cooperii* (Cooper's Hawk), *Aquila chrysaetos canadensis* (Golden Eagle), *Athene cunicularia hypugaea* (Burrowing Owl),

Circus cyaneus hudsonius (Northern Harrier), and *Sialia mexicana* (Western Bluebird). See Appendix B for a yearly updated list of observed animal species at Wright's Field MSCP Preserve.

Figure 3 - Known Locations of USFWS Threatened *Acanthomintha ilicifolia* (San Diego Thornmint) and Sightings of USFWS Endangered *Euphydryas editha Quino* (Quino Checkerspot Butterfly) and Candidate Species *Lycaena hermes* (Hermes Copper Butterfly)

5.0 Cultural, Social and Recreational Resources Inventory

This Cultural portion of this section will build upon cultural surveys conducted during these periods:

1. The successful 1994 Superior Court case against the residential subdivision map application
2. The cultural survey of Findel Ranch by Dr. Susan Hector
3. The cultural surveys of the main field funded by the 2008 & 2009 SANDAG EMP Grants

Consultation and collaboration with the Kumeyaay Diegueno Land Conservancy will be sought.

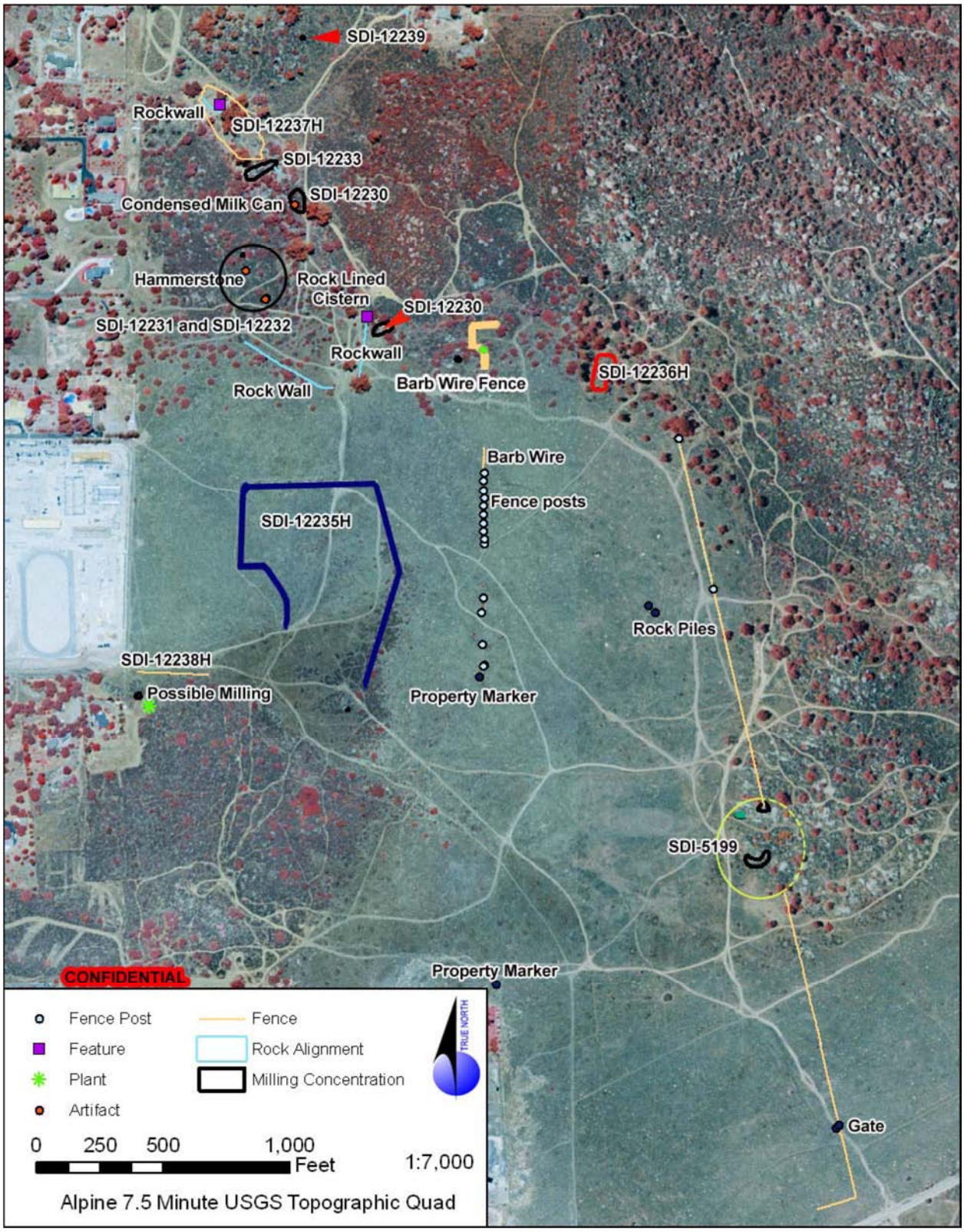

Figure 4 - Wright's Field Cultural Resources Map (Confidential)

6.0 Land Management Goals

There are seven main goals for management of Wright's Field MSCP Preserve. They are:

1. Inventory, monitoring, maintenance and/or enhancement of native vegetation communities, vernal pool/riparian habitat, and sensitive plant populations
2. Inventory, monitoring, maintenance and/or enhancement of wildlife populations
3. Monitoring, maintenance and enhancement activities related to the local watershed
4. Cultural Resource monitoring, protection and mitigation as needed
5. Property management
6. Public Outreach and information
7. Program administration, reporting, and record keeping

Clearly defined strategies, methods, and direction for achieving these goals will be outlined in the Board Approved Annual Work Plan (AWP), completed in September of each year. The AWP will be in accordance with yearly budgetary restrictions and other pertinent factors.

7.0 Objectives for Each Land Management Goal

Multiple objectives can be prescribed to each of the seven land management goals. The intent of these objectives is to further the knowledge of and enhance the value inherent within Wright's Field MSCP Preserve. These objectives can be expanded or reduced as necessary due to the dynamic nature of such a resource.

Goal 1

- Complete survey, inventory, assessment and/or mapping of vegetation communities with a focus on endemic, sensitive, or invasive/non-native populations
- Complete survey, inventory, assessment and/or mapping of vernal pools and riparian habitat
- Yearly monitoring surveys of known USFWS listed vegetation species and endemic species
- Maintenance and enhancement of native vegetation communities by thinning or elimination of invasive and non-native species, with focused efforts on high value habitat like riparian/vernal pool areas or on particular plant species that pose the most risk to native communities (ex. Eucalyptus and olive trees)

Goal 2

- Establish monitoring protocol and database for recording all animal observations on site
- Maintain and/or improve existing wildlife cameras, and add new cameras as practical
- Maintain existing bird nesting boxes on site and install appropriate new bird boxes/platforms to enhance nesting habitat for but not limited to: Bluebirds, Burrowing owls, and Raptors

- Monitor for non-native and/or problematic animal species and eliminate as needed

Goal 3

- Minimize and/or eliminate erosion problems throughout the Preserve that effect local watershed resources
- Inventory and map trails system, provide recommendations on which trails to close, maintain existing trails, minimize erosion concerns relating to trail usage, and perform re-vegetation projects as applicable
- Remove non-native and invasive plant species that affect watershed volume and re-vegetate with native species

Goal 4

- Establish a cultural resources monitoring protocol and photo-documentation database
- Protect and mitigate existing sites should significant human encroachment and damage occur

Goal 5

- Maintain all existing facilities on the Preserve as needed including but not limited to: BCLT owned fences and gates, informational kiosks, bird boxes, wildlife cameras, signs, and other facilities
- Establish and perform perimeter and field surveys to monitor encroachment, trash dumping, vandalism, etc.
- Remove garbage, graffiti, and other obstacles as needed or directed
- Perform mandatory fire abatement activities as directed

Goal 6

- Interface with the users of the Preserve and relay pertinent information concerning the BCLT and Wright's Field MSCP Preserve
- Continue docent lead Nature Walk series
- Continue volunteer monitoring network
- Continue with tri-yearly community volunteer days
- Maintain relevant information on kiosks, websites, and with local news sources

Goal 7

- Establish and maintain a database for reports, records and photo-documentation related to the Preserve
- Assist in budget development or other administrative tasks as needed

8.0 Development and Implementation of Annual Work Plan

Development of the Wright's Field MSCP Preserve AWP will occur during the summer time of each year. It will be developed with input from BCLT Directors and Staff in accordance with budgetary restrictions, land management needs, and organizational direction. Implementation of the AWP relating to biological resources will be in concurrence with applicable seasonal variations or as predetermined. Implementation of the AWP associated with cultural, social, or recreational resources and administration/reporting activities will be throughout the year as needed and/or during pre-defined intervals. Property management activities will also be implemented as needed or during pre-defined intervals.

9.0 Record Keeping, Evaluation, and Adjustment of Annual Work Plan

For activities related to the AWP, all pertinent records will be maintained by the appropriate staff member. Records can be used to evaluate and adjust the goals, objectives, and strategies of the AWP accordingly.

10.0 References

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Appendix A. Observed Plant Species at Wright's Field MSCP Preserve

Adoxaceae (Moschatel)	*Helianthus annus* (Western sunflower)
Sambucus nigra caerulea (Blue elderberry)	*Helianthus gracilentus* (Slender sunflower)
	Isocoma menziesii (Coastal goldenbush)
Agavaceae (Agave)	*Lessingia filaginifolia* (California-aster)
Agave Americana (Century plant)	*Mycropus californicus* (Slender cottonweed)
Hesperyucca whipplei (Chaparral yucca)	*Osmadenia tenella* (*F*alse rosinweed)
	Silybum marianum (*M*ilk thistle)
Alliaceae (Onion)	*Sonchus asper* ssp. *Asper* (Prickly sow thistle)
Allium haematochiton (Red skin onion)	*Uropappus lindleyi* (Silver puffs)
	Wyethia ovata (Southern mule's ear)
Anacardiaceae (Sumac)	
Malosma laurina (Laurel sumac)	***Boraginaceae*** (Borage)
Rhus ovata (Sugar bush)	*Emmenanthe penduflora* (Whispering bells)
Schinus molle (Peruvian pepper tree)	*Eucrypta chrysanthemifolia* (Eucrypta)
Toxicodendron diversilobum (Poison oak)	*Harpagonella palmerii* (Palmer's Grapplinghook)
	Phacelia cicutaria (Caterpillar phacelia)
Apiaceae (Carrot)	
Foeniculum vulgare (Sweet fennel)	**Brassicaceae** (Mustard)
Daucus pusillus (Rattlesnake weed)	*Brassica nigra* (Black mustard)
Sanicula bipinnatifida (Purple sanicle)	*Brassica rapa* (Field mustard)
Sanicula arguta (Sharp-tooth sanicle)	*Hirschfeldia incana* (Short-podded mustard)
	Sisymbrium irio (London rocket)
Asteraceae (Sunflower)	*Sisymbrium offininale* (Hedge mustard)
Acourtia microcephala (Sacapellote)	
Artemisia californica (Coastal sagebrush)	***Cactaceae*** (Cactus)
Baccharis pilularis (Coyote brush)	*Opuntia ficus-indica* (Indian fig)
Baccharis salicifolia (Mulefat)	
Baccharis sarothroides (Broom baccharis)	***Caryophyllaceae***
Carduus pycnocephalus (Italian thistle)	*Cerastium glomeratum* (Mouse-ear chickweed)
Centaurea melitensis (Tocalote)	*Silene* sps. (Catchfly)
Chamomilla suaveolens (Pineapple weed)	
Cynara cardunculus (Cardoon)	***Convolvulaceae*** (Morning glory)
Eriophyllum confertiflorum (*G*olden-yarrow)	*Calystegia macrostegia* (Morning glory)
Gnaphalium californicum (California everlasting)	*Convolvulus simulans* (Bindweed)
Grindelia camporum (Gumplant)	*Cuscuta californica* (California dodder)
Gutierrezia californica (California matchweed)	
Hazardia squarrosa (Saw-toothed goldenbush)	***Crassulaceae*** (Stonecrop)
Hedypnois cretica (Crete hedypnois)	*Crassula connata* (Pygmy weed)

Cyperaceae (Sedge)	*Fritillaria biflora* (Chocolate lily)
Carex triquetra (Triangular-fruit sedge)	
	Malvaceae (Mallow)
Euphorbiaceae (Spurge)	*Malva parviflora* (Cheeseweed)
Eremocarpus setigerus (Doveweed)	
Euphorbia peplus (Petty spurge)	***Myrtaceae*** (Myrtle)
	Eucalyptus sp. (Gum tree)
Fabaceae (Pea)	
Acmispon glaber (Common deerweed)	***Nyctaginaceae*** (Four o'clock)
Astragalus didymocarpus (White dwarf Locoweed)	*Mirabilis laevis* var. *crassifolia* (Coastal wishbone plant)
Lathyrus odoratus (Garden sweetpea)	
Lupinus truncata (Collar lupine)	***Oleaceae*** (Olive)
Medicago polymorpha (California burclover)	*Olea europaea* (Olive tree)
Parkinsonia aculeate (Mexican paloverde)	
	Onagraceae (Evening-Primrose)
Fagaceae (Oak)	*Clarkia purpurea* (Four-spot Clarkia)
Quercus agrifolia (Coast live oak)	
Quercus berberidifolia (California scrub oak)	***Oxalidaceae*** (Oxalis)
Quercus engelmannii (Engelmann oak)	*Oxalis pes-caprae* (Bermuda buttercup)
Gentianaceae (Gentian)	***Paeoniaceae*** (Peony)
Centaurium venustum (Canchalagua)	*Paeonia californica* (California peony)
Geraniaceae (Geranium)	***Pinaceae*** (Pine)
Erodium cicutarium (Red-stem filaree)	*Pinus radiate* (Monterrey Pine)
Erodium botrys (Broad-lobed filaree)	
Erodium moschatum (White-stem filaree)	***Plantaginaceae*** (Plantain)
	Plantago erecta (Erect plantain)
Ericaceae (Heath)	
Xylococcus bicolor (Mission manzanita)	***Polemoniaceae*** (Phlox)
	Eriastrum sps. (Eriastrum)
Iridaceae (Iris)	*Linanthus dianthiflorus* (Fairnose ground Pink)
Sisyrinchium bellum (Blue eyed grass)	
	Poaceae (Grass)
Lamiaceae (Mint)	*Avena fatua* (Wild oat)
Acanthomintha ilicifolia (SD thornmint)	*Bromus diandrus* (Ripgut grass)
Marrubium vulgare (Horehound)	*Bromus madritensis* (Foxtail chess)
Salvia apiana (White sage)	*Hordeum murinum* (Wild barley)
Salvia columbariae (Chia)	*Lolium temulentum* (Darnel)
	Melica imperfecta (Coast range melic)
Liliaceae (Lily)	*Muhlenbergia rigens* (Deergrass)
Calochortus splendens (Splendid mariposa lily)	*Nassella pulchra* (Purple needlegrass)

Vulpia sps.	***Themidaceae*** (Brodiaea)
	Brodiaea jolonensis (Mesa brodiaea)
Polygonaceae (Buckwheat)	*Brodiaea terrestris* (Dwarf brodiaea)
Eriogonum fasciculatum (California buckwheat)	*Dichelostemma capitatum* (Blue dicks)
Chorizanthe staticoides (Turkish rugging)	
Polygonum arenastrum (Common knotweed)	***Urticaceae*** (Nettle)
Pterostegia drymarioides (Granny's hairnet)	*Parietaria hespera* (Western pellitory)
Portulacaceae (Montia)	***Vitaceae*** (Grape)
Claytonia perfoliata (Miner's lettuce)	*Vitis girdiana* (Wild grape)
Primulaceae (Myrsine)	
Anagallis arvensis (Scarlet pimpernel)	
Pteridaceae (Brake)	
Pentagramma triangularis (California goldenback fern)	
Ranunculaceae (Buttercup)	
Delphinium parryi parryi (Parry's larkspur)	
Rhamnaceae (Buckthorn)	
Rhamnus crocea (Spiny redberry)	
Rosaceae (Rose)	
Adenostoma fasciculatum (Chamise)	
Heteromeles arbutifolia (*T*oyon)	
Malus domestica (Apple)	
Potentilla glandulosa (Sticky cinquefoil)	
Prunus persica (Peach)	
Salicaceae (Willow)	
Salix lasiolepis (Arroyo willow)	
Scrophulariaceae (Orobanche)	
Castilleja exserta (Owl's clover)	
Castilleja foliolosa (Wooly Indian paintbrush)	
Linaria Canadensis (Large blue toadflax)	
Mimulus aurantiacus (Monkeyflower)	
Scrophularia californica (California bee plant)	
Tamaricaceae (Tamarix)	
Tamarix sp. (Tamarisk)	

Appendix B. Observed Animal Species at Wright's Field MSCP Preserve

Mammals	**Insects**
Canis latrans (Coyote)	*Euphydryas editha quino* (Quino Checkerspot Butterfly)
Neotoma fuscipes (Dusky-footed woodrat)	*Lycaena hermes* (Hermes Copper Butterfly)
Procyon lotor (Common raccoon)	*Apodemia virgulti* (Behr's Metalmark)
Spermophilus beecheyi (California ground squirrel)	
Sylvilagus auduboni (Desert Cottontail)	
Tamius sps. (Chipmunk)	
Thomomys bottae (Botta's pocket gopher)	
Urocyon cinereoargenteus (Gray fox)	
Reptiles	
Aspidoscelis hyperythrus beldingi (Orange throated whiptail)	
Aspidoscelis tigris (Western whiptail)	
Crotalus oreganus helleri (Southern Pacific Rattlesnake	
Elgaria multicarinata (Southern alligator lizard)	
Lampropeltis getula (Common Kingsnake)	
Plestiodon skiltonianus (Western skink)	
Sceloporus occidentalis (Western fence lizard)	
Uta stansburiana (Common side-blotched lizard)	
Amphibians	
Anaxyrus boreas (Western toad)	
Pseudocris regilla (Western chorus frog)	

Birds	
	Calypte anna (Anna's Hummingbird)
Anatidae (Dabbling Ducks)	*Calypte costae* (Costa's Hummingbird)
Anus platyrhynchos (Mallard)	*Selasphorus rufus* (Rufous Hummingbird)
	Selasphorus sasin (Allen's Hummingbird)
Accipitridae, Cathartidae, Falconidae (Diurnal Raptors)	*Selasphorus sasin* (Allen's Hummingbird)
Accipiter cooperii (Cooper's Hawk)	
Accipiter striatus (Sharp-shinned Hawk)	***Picidae*** (Woodpeckers)
Aquila chrysaetos (Golden Eagle)	*Colaptes auratus* (Northern Flicker)
Buteo jamaicensis (Red-tailed Hawk)	*Picoides nuttallii* (Nuttall's Woodpecker)
Buteo lineatus (Red-shouldered Hawk)	*Melanerpes formicivorus* (Acorn Woodpecker)
Cathartes aura (Turkey Vulture)	
Circus cyaneus (Northern Harrier)	***Tyrannidae*** (Tyrant Flycatchers)
Elanus leucurus (White-tailed Kite)	*Contopus sordidulus* (Western Wood-pewee)
Falco sparverius (American Kestrel)	*Empidonax difficillis* (Pacific-slope Flycatcher)
	Empidonax traillii (Willow Flycatcher)
Odontophoridae (Upland Game Birds)	*Myiarchus cinerascens* (Ash-throated Flycatcher)
Callipepla californica (California Quail)	*Sayornis nigricans* (Black Phoebe)
	Sayornis saya (Say's Phoebe)
Charadriidae (Plovers)	*Tyrannus verticalis* (Western Kingbird)
Charadrius vociferous (Killdeer)	*Tyrannus vociferans* (Cassin's Kingbird)
Columbidae (Pigeons and Doves)	***Laniidae, Vireonidae*** (Shrikes and Vireos)
Columba livia (Rock Dove)	*Lanius ludovicianus* (Loggerhead Shrike)
Zenaida macroura (Mourning Dove)	*Vireo gilvus* (Warbling Vireo)
	Vireo huttoni (Hutton's Vireo)
Cuculidae (Cuckoos)	
Geococcyx californianus (Greater Roadrunner)	***Corvidae*** (Jays, Crows and Allies)
	Aphelocoma californica (Western Scrub-jay)
Strigidae, Tytonidae (Owls)	*Corvus brachyrhynchos* (American Crow)
Athene cunicularia (Burrowing Owl)	*Corvus corax* (Common Raven)
Bubo virginianus (Great Horned Owl)	
Tyto alba (Barn Owl)	***Alaudidae*** (Larks)
	Eremophila alpestris (Horned Lark)
Caprimulgidae (Goatsuckers)	
Phalaenoptilus nuttallii (Common Poorwill)	
Trochilidae (Hummingbirds)	
Archilochus alexandri (Black-chinned	

Hummingbird)	
Hirundinidae (Swallows)	***Motacillidae*** (Wagtails and Pipits)
Hirundo rustica (Barn Swallow)	*Anthus rubescens* (American Pipit)
Petrochelidon pyrrhonota (Cliff Swallow)	
Stelgidopteryx serripennis (Northern rough-winged Swallow)	***Bombycillidae, Ptilogonatidae*** (Waxwings, Silky-flycatchers, and Starlings)
Tachycineta bicolor (Tree Swallow)	*Bombycilla cedrorum* (Cedar Waxwing)
Tachycineta thalassina (Violet-green Swallow)	*Phainopepla nitens* (Phainopepla)
	Sturnus vulgaris (European Starling)
Aegithalidae (Chickadee, Nuthatches, and Allies)	
Psaltriparus minimus (Bushtit)	***Parulidae, Peucedramidae*** (Wood-warblers)
	Dendroica coronate (Yellow-rumped Warbler)
Paridae	*Dendroica occidentalis* (Hermit Warbler)
Baeolophus inornatus (Oak Titmouse)	*Dendroica townsendi* (Townsend's Warbler)
Poecile gambeli (Mountain Chickadee)	*Geothlypis trichas* (Common Yellowthroat)
Sittidae	*Icteria virens* (Yellow-breasted Chat)
Sitta carolinenis (White-breasted Nuthatch)	*Vermivora celata* (Orange-crowned Warbler)
	Wilsonia pusilla (Wilson's Warbler)
Troglodytidae (Wrens)	
Thryomanes bewickii (Bewick's Wren)	***Cardinalidae, Thraupidae*** (Tanagers, Cardinals, and Allies)
Troglodytes aedon (House Wren)	*Passerina amoena* (Lazuli Bunting)
	Passerina caerulea (Blue Grosbeak)
Timaliidae (Wrentit)	*Pheacticus melanocephalus* (Black-headed Grosbeak)
Chamaea fasciata (Wrentit)	*Piranga ludoviciana* (Western Tanager)
Regulidae (Kinglets, Old World Warblers, and Gnatcatchers)	
Regulus calendula (Ruby-crowned Kinglet)	
Turdidae (Thrushes)	
Catharus guttatus (Hermit Thrush)	
Catharus ustulatus (Swainson's Thrush)	
Sialia currucoides (Mountain Bluebird)	
Sialia mexicana (Western Bluebird)	
Turdus migratorius (American Robin)	
Mimidae (Mimids)	
Mimus polyglottos (Northern Mockingbird)	
Toxostoma redivivum (California Thrasher)	

Emberizidae (Emberizine Sparrows and Allies)	
Aimophila ruficeps (Rufous-crowned Sparrow)	
Ammodramus savannarum (Grasshopper Sparrow)	
Chondestes grammacus (Lark Sparrow)	
Junco hyemalis (Dark-eyed Junco)	
Melospiza lincolnii (Lincoln's Sparrow)	
Melospiza melodia (Song Sparrow)	
Passerculus sandwichensis (Savannah Sparrow)	
Passerella iliaca (Fox Sparrow)	
Pipilo crissalis (California Towhee)	
Pipilo maculates (Spotted Towhee)	
Pooecetes gramineus (Vesper Sparrow)	
Spizella atrogularis (Black-chinned Sparrow)	
Zonotrichia atricapilla (Golden-crowned Sparrow)	
Zonotrichia leucophrys (White-crowned Sparrow)	
Icterids (Icterids)	
Agelaius phoeniceus (Red-winged Blackbird)	
Euphagus cyanocephalus (Brewer's Blackbird)	
Icterus bullockii (Bullock's Oriole)	
Icterus cucullatus (Hooded Oriole)	
Icterus parisorum (Scott's Oriole)	
Molothrus ater (Brown-headed Cowbird)	
Sturnella neglecta (Western Meadowlark)	
Fringillidae, Passeridae (Finches and Old World Sparrows)	
Carduelis lawrencei (Lawrence's Goldfinch)	
Carduelis pinus (Pine Siskin)	
Carduelis psaltria (Lesser Goldfinch)	
Carpodacus mexicanus (House Finch)	
Carpodacus purpureus (Purple Finch)	
Passer domesticus (House Sparrow)	

Appendix E

PAR for the Proposed Mitigation Site

Rancho Sierra Annual Cost In-Perpetuity

Biological Monitoring

	Specification	Unit	No. Units	Cost/Unit	Frequency	Total Cost	Assumptions
Land Manager	General condition monitoring and wildlife habitat assessment	Hours	2	$85.00	1	$170.00	One visit annually to identify threats to habitat and species (comprehensive). Total acreage = 15.47ac.; 8 acres/hour for assessment.
Biologist	Update of vegetation communities, invasive species, and general wildlife and botany resources.	Hours	4	$85.00	1	$340.00	One visit annually to update biological resources and threats. Total acreage = 15.47ac.; 4 acres/hour for assessment. Includes 4 hours to update all biological inventories. Assumes that this data will be inlcuded in the annual report
SUBTOTAL BIOLOGICAL MONITORING						***$510.00***	

Habitat/Land Management

	Specification	Unit	No. Units	Labor Rate	Frequency	Total Cost	Assumptions
Exotic Plant Control (hard woods)	Difficult to remove hard wood species (Eucalyptus trees, olive trees, etc.)	Hours	4	$65.00	1	$260.00	Assume that 2% (0.3 acre) of the property will need hardwood removal each year. 1 acre/day for hardwood removal. Does not include materials.
Exotic Plant Control (hard woods) - Materials	Herbicide, chainsaw, etc.	Acres	0.3	$50.00	1	$15.00	Assume that 2% (0.3 acre) of the property will need hardwood removal each year. Material cost $50/acre of hardwood removal
Exotic Plant Control (herbaceous)	Removal of herbaceous species (star thistle, non-native grasses, etc.)	Hours	4	$65.00	1	$260.00	Assume that 5% (0.75 acre) of the property will need herbaceous weed control each year. 1 acre/day for herbaceous removal. Does not include materials.
Exotic Plant Control (herbaceous) - Materials	Herbicide, line trimmer, etc.	Acres	1	$25.00	1	$25.00	Material cost $25/acre of herbaceous removal
Erosion Control- Labor	Labor for erosion repair/improvement	Hours	8	$65.00	1	$520.00	Labor is 8 hours for erosion control of the trails
Erosion Control - Materials	Materials for erosion control	Acres	1	$250.00	1	$250.00	$250 for materials for erosion control of the trails
SUBTOTAL HABITAT/LAND MANAGEMENT						***$1,330.00***	

Annual Reporting

	Specification	Unit	No. Units	Labor Rate	Frequency	Total Cost	Assumptions
Land Manager	Annual Reporting and Coordination	Hours	2	$85.00	1	$170.00	Assumes that data from the Biological Monitoring is used to prepare a simple letter report with updated inventories and recommendations.
Biologist	Annual Reporting and Coordination	Hours	4	$85.00	1	$170.00	Assumes that data from the Biological Monitoring is used to prepare a simple letter report with updated inventories and recommendations.
SUBTOTAL ANNUAL REPORTING						***$340.00***	

Insurances & Administration

	Specification	Unit	No. Units	Rate	Frequency	Total Cost	Assumptions
	General Liability	$/acre	15	$1.10	1	$16.50	Assumes pro-rata per-acre portion of actual insurances costs.
	Directors & Officers	$/acre	15	$1.15	1	$17.25	ditto
	Workers Compensation	$/acre	15	$0.45	1	$6.75	ditto
	Blanket Volunteer	$/acre	15	$0.24	1	$3.60	ditto
	Excess Umbrella	$/acre	15	$1.32	1	$19.80	ditto
	Subtotal Insurances					$63.90	
	County Tax-Exempt Status Filings	$/acre	15	$2.00	1	$30.00	Assumes pro-rata per-acre portion of assessed costs.
	Board Due Dilligence Monitoring	$/acre	15	$0.80	1	$12.00	ditto
	CalFire & Alpine Fire PD Fees	$/acre	15	$3.44	1	$51.56	$150 per 80 acre parcel AFPD plus $125 per parcel CalFire
	Disease Vector Control Fees	$/acre	15	$1.00	1	$15.00	Assumes pro-rata per-acre portion of assessed costs.
	State/Federal NPO Filings	$/acre	15	$0.42	1	$6.30	ditto
	Subtotal Administration					$114.86	
SUBTOTAL ANNUAL INSURANCES & ADMINISTRATION OVERHEADS						***$178.76***	
TOTAL						$2,358.76	

Contingencies	**Total costs**	**% of Total**				**Total Cost**	**Assumptions**
Contingencies	$2,358.76	10				$235.88	
SUBTOTAL CONTINGENCIES						***$235.88***	

GRAND TOTAL	**$2,594.64**

Assuming a 4.25% interest rate, then an endowment of $61,050.35 would be required.