



Civil Engineering • Environmental • Land Surveying

2442 Second Avenue
San Diego, California, 92101
(P) 619.232.9200 (F) 619.232.9210

Consultants, Inc.

June 3, 2015

Brendan Thiessen
Sky Terrace, LLC
1000 Pioneer Way
El Cajon, CA 92020

**Subject: Biological Resources Letter Report for the Terrace Hill Drive Project
APN: 400-330-30; Prepared for the County of San Diego**

Dear Mr. Thiessen:

REC Consultants, Inc. has prepared this letter report to address potential impacts of development to biological resources on an approximately 2.84-acre parcel located at the eastern end of Terrace Hill Drive.

SUMMARY

The Terrace Hill Drive Project is a Tentative Map to subdivide APN 400-330-30 into ten single-family residential lots. REC Consultants, Inc. surveyed this parcel to document biological resources on the site. This parcel currently consists of non-native grassland with scattered non-native trees and patches of disturbed habitat. The Project would result in significant impacts to 0.70 acres of non-native grassland and would require mitigation. Mitigation for these impacts will occur at a 0.5:1 ratio and will be achieved through the purchase of 0.35 acres of Tier III habitat credits, either non-native grassland or chaparral, at the Crestridge Conservation Bank.

INTRODUCTION, PROJECT DESCRIPTION, LOCATION, SETTING

Project Description

The proposed project (Project) is a Tentative Map to subdivide APN 400-330-30 into ten (10) single-family residential lots on a 2.84-acre parcel located on Terrace Hill. The proposed project is located within unincorporated San Diego County. The site is located in the Lakeside Community Planning Area and is subject to the General Plan Regional Category Village, Land Use Designation VR-4.3. Zoning for the site is residential. Access to the project would be provided by Terrace Hill Drive, which would connect to Pepper Drive.

The proposed project will have a minimum lot size of 10,729 sq ft and a maximum lot size of 14,115 sq ft. There are two bioretention basins proposed on-site, located in the northwest and southeast corners. There are two (2) masonry retaining walls proposed on-site with a maximum height of 5'-4". The proposed grading quantities included 10,200 cubic yards cut and fill for balanced grading on-site.

The maximum cut and fill slope ratio is 2:1 and the cut maximum height is 14 ft and the fill maximum height is 12 ft. There will be no grading or filling required off-site. At this time no structures are proposed on-site.

Project Location and Setting

The Project site is located immediately east of Terrace Hill Drive, approximately 0.55 miles west of Kumeyaay Highway (State Route 8, in the community of Bostonia in unincorporated San Diego County between the community of Winter Gardens to the north and the City of El Cajon to the south (**Figures 1** and **2**). The site is bordered by residences on all sides except for a section of Terrace Hill Drive along a majority of the western side of the site.

Terrain on-site consists of a gradual slope running north-south from 762 ft (232 meters) above mean sea level in the northeastern corner down to 725 ft (221 meters) AMSL in the southeastern corner. According to the Soil Survey, San Diego Area, California (USDA 1973), soil on the Project site is comprised of Vista coarse sandy loam, 15 to 30 percent slopes. The Vista soils series consists of well-drained, moderately deep and deep coarse sandy loams derived from granodiorite or quartz diorite. These soils are on uplands and have slopes of 5 to 65 percent.

The Project's environmental setting was studied through field surveys and records review. Records review consisted of a search and review of CNDDDB records of rare and special-status plant and animal species within the Project USGS 7.5' quadrangle (El Cajon) recent and historical aerial photographs of the site and surrounding areas, and soil maps and descriptions from the Soil Survey (USDA 1973). Species included in the list of sensitive species provided by the County were also evaluated for potential to occur on-site. One field survey was conducted, as summarized in **Table 1**, below.

Table 1. Surveys Conducted on the Project Site

Date	Time	Temp (°F)	Sky	Wind (MPH)	Survey Type	Personnel
4/15/15	9:30AM - 10:30 AM	Warm	Sunny	0-5	General	Lee BenVau

Biological resources found on-site were limited to three land cover categories and common suburban vegetation and wildlife, described in the following section. Scientific nomenclature and common names for animal species in this letter report follow American Ornithological Union (AOU 2012) for birds, Center for North American Herpetology (CNAH 2014) for reptiles and amphibians, Baker et al. (2003) for mammals, and Powell and Hogue (1979) for insects, as well as the San Diego Natural History Museum butterfly, spider, amphibian, reptile, bird and mammal checklists for subspecies (SDNHM 2002, 2005, and undated). Taxonomy and scientific nomenclature for plants follow the Jepson Manual, second edition (Baldwin et al. 2012) and common names are primarily from Rebman and Simpson (2006), with some rare plant common names from the California Native Plant Society (CNPS) Rare Plant Inventory (CNPS 2014).

HABITATS / VEGETATION COMMUNITIES

During REC's site visit three land cover categories were observed on-site (disturbed habitat, non-native grassland and non-native vegetation) and one off-site (developed land). These are shown in **Figure 3** and discussed below.

Developed land (County Habitat Code 12000) does not occur on-site, but surrounds the site on all sides. According to the County of San Diego, urban and/or developed land consists of “Areas that have been constructed upon or otherwise physically altered to an extent that native vegetation is no longer supported. Developed land is characterized by permanent or semi-permanent structures, pavement or hardscape, and landscaped areas that require irrigation. Areas where no natural lands is evident due to a large amount of debris or other materials being placed upon it may also be considered urban/developed (e.g. car recycling plant, quarry).” (Oberbauer et al. 2008) Additional habitat identification information provided in the County’s “Report Format and Content Requirements” (County of San Diego 2010a) includes “Land that has been constructed upon or otherwise covered with a permanent unnatural surface shall be considered Developed...”

Because the Project is surrounded by existing residences, developed land includes land on-site within 100 ft of an existing residence and/or attached garage. The 100 ft fuel management zone is considered a direct impact resulting from the construction of those residences due to the regular clearing of vegetation in this area. As such, this area is “impact neutral” and habitats occurring in this area that would otherwise require mitigation are not considered when calculating mitigation for Project-related impacts (County of San Diego 2010a). For the purposes of this report, this land is designated as Developed / Impact Neutral to distinguish it from developed land as defined by Oberbauer et al. (2008).

Developed / Impact Neutral land on-site occupies 1.90 acres adjacent to development surrounding the Project site. This area includes elements of all other on-site habitats but is primarily typified by non-native grassland species and non-native trees; see the land cover descriptions below for species observed.

Disturbed habitat (County Habitat Code 11300) occupies approximately 0.05 acres on-site. The County of San Diego describes disturbed habitat as “Areas that have been physically disturbed (by previous legal human activity) and are no longer recognizable as a native or naturalized vegetation association, but continues to retain a soil substrate. Typically vegetation, if present, is nearly exclusively composed of non-native plant species such as ornamentals or ruderal exotic species that take advantage of disturbance, or shows signs of past or present animal usage that removes any capability of providing viable natural habitat for uses other than dispersal. Examples of disturbed habitat include areas that have been graded, repeatedly cleared for fuel management purposes and/or experienced repeated use that prevents natural revegetation (i.e. dirt parking lots, trails that have been present for several decades), recently graded firebreaks, graded construction pads, construction staging areas, off-road vehicle trails, and old homesites.” (Oberbauer et al. 2008) Additional habitat identification information provided in the County’s “Report Format and Content Requirements” (County of San Diego 2010a) specifies that “Disturbed land includes areas in which the vegetative cover comprises less than 10 percent of the surface area (disregarding natural rock outcrops) and where there is evidence of soil surface disturbance and compaction from previously legal human activity; or where the vegetative cover is greater than 10 percent, there is soil surface disturbance and compaction, and the presence of building foundations and debris...resulting from legal activities (as opposed to illegal dumping). Examples include recently graded firebreaks, graded construction pads, construction staging areas, off-road vehicle trails, and old homesites.”

Disturbed habitat on-site consists of patches of bare soil where vehicles appear to have impacted the site. This habitat is singularly dominated by filaree (*Erodium* sp.). The only native species observed

growing in disturbed habitat on-site was doveweed (*Croton setiger*). The only animals observed in disturbed habitat on-site were common invertebrates such as garden snails (*Cornu aspersum*) and grasshoppers (Suborder Caelifera).

Non-native grassland (County Habitat Code 42200) occupies approximately 0.70 acres on-site. According to the County of San Diego, non-native grassland is described as “A dense to sparse cover of annual grasses with flowering culms 0.2-0.5 (1.0) m high. Often associated with numerous species of showy-flowered, native annual forbs (“wildflowers”), especially in years of favorable rainfall. In San Diego County the presence of *Avena*, *Bromus*, *Erodium*, and *Brassica* are common indicators. In some areas, depending on past disturbance and annual rainfall, annual forbs may be the dominant species; however, it is presumed that grasses will soon dominate. Germination occurs with the onset of the late fall rains; growth, flowering, and seed-set occur from winter through spring. With a few exceptions, the plants are dead through the summer-fall dry, persisting as seeds. Remnant native species are variable. This can include grazed and even dry-farmed (i.e., disked) areas where irrigation is not present.” (Oberbauer et al. 2008) Additional habitat identification information provided in the County’s “Report Format and Content Requirements” (County of San Diego 2010a) specifies that “Non-native grasses typically comprise at least 30 percent of the vegetation [...]. Usually, the annual grasses are less than 1 m (3 ft) in height, and form a continuous or open cover. Emergent shrubs and trees may be present, but do not comprise more than 15 percent of the total vegetative cover. Characteristic non-native grassland species include foxtail chess (*Bromus madritensis* ssp. *rubens*), ripgut grass (*Bromus diandrus*), wild oats (*Avena* spp.), fescues (*Vulpia* spp.), red-stem filaree (*Erodium cicutarium*), mustards (*Brassica* spp.), lupines (*Lupinus* spp.) and goldfields (*Lasthenia* spp.), among others.”

Non-native grassland on-site occurs throughout the entire site wherever the land is not disturbed or heavily shaded by trees. This habitat is dominated by ripgut grass (*Bromus diandrus*) and includes other non-native grasses such as oat (*Avena* sp.) and barley (*Hordeum* sp.) as well as non-native broadleaf species such as filaree, mallow (*Malva* sp.), London rocket (*Sisymbrium irio*) and wild radish (*Raphanus sativus*). The only native species observed in this habitat were California buckwheat (*Eriogonum fasciculatum*), which was limited to a few individuals at the northwestern edge of the site, and some doveweed where the grass was sparse. Animals observed in non-native grassland on-site were a western black widow (*Latrodectus hesperus*), a juvenile common side-blotched lizard (*Uta stansburiana*), Botta’s pocket gopher (*Thomomys bottae*) mounds and California ground squirrel (*Spermophilus beecheyi*) holes.

Non-native vegetation (County Habitat Code 11000) occupies approximately 0.19 acres on-site. Non-native vegetation is “Characterized by predominantly non-native species introduced and established through human action. These areas are not artificially irrigated, but receive water from precipitation or runoff.” (Oberbauer et al. 2008)

Non-native vegetation on-site consists of non-native trees scattered throughout the site. These trees include olive (*Olea europaea*), pine (*Pinus* sp.), Peruvian pepper (*Schinus molle*), and Chinese elm (*Ulmus parvifolia*) individuals. The only animals observed in non-native vegetation on-site were Anna’s hummingbird (*Calypte anna*), northern mockingbird (*Mimus polyglottos*) and mourning dove (*Zenaida macroura*).

SPECIAL-STATUS SPECIES

For the purposes of this report, a sensitive or special-status plant or animal is any taxon (species, subspecies, or variety) that is officially listed by California or the federal government as Endangered, Threatened, or Rare, or a candidate for one of those listings; classified as Fully Protected, Species of Special Concern, or Watch List animal species by the California Department of Fish and Wildlife (CDFW); included in California Rare Plant Ranks (CRPR) 1 through 4; or included in the County of San Diego Sensitive Plant Lists A through D or Sensitive Animals Groups A or B.

Lists of special-status plants and animals with the potential to occur on the Project site were generated from the CNDDDB RareFind5 and BIOS databases (CNDDDB 2014) and the SanBIOS database (County of San Diego 2011). The resulting lists include any special-status species documented within the Project site's USGS 7.5' quadrangle (El Cajon) or surrounding quadrangles (Poway, San Vicente Reservoir, El Cajon Mountain, La Mesa, Alpine, National City, Jamul Mountains and Dulzura). **Attachment A** provides information on these special-status plant taxa, as well as an evaluation of the potential for each to occur onsite, based on CNDDDB and SanBIOS search results, the CNPS Inventory of Rare and Endangered Plants (on-line version, 2014), Reiser's *Rare Plants of San Diego County* (2001) and field observations. **Attachment B** provides information on these animal taxa, and an evaluation of the potential for each to occur onsite, based on species requirements, CNDDDB and SanBIOS search results, and field observations.

Special-status species observed on or adjacent to the Project site

No special-status plants or animals were observed on-site.

Special-status species with moderate to high potential to occur on or adjacent to the site

Based on CNDDDB and SanBIOS records searches and evaluation of current site conditions, no special-status species have moderate to high potential to occur on or adjacent to the site.

Raptor foraging and migratory birds

Raptors are protected under California Fish and Game Code Section 3503.5, which specifically protects all birds in the orders Falconiformes or Strigiformes (raptors, including owls and turkey vultures). It is unlawful to take, possess or destroy any such raptors or their nests and eggs except as otherwise provided in the Fish and Game Code. The County of San Diego (2010) defines raptor foraging habitat as "Land that is a minimum of 5 acres (not limited to project boundaries) of fallow or open areas with any evidence of foraging potential (i.e., burrows, raptor nests, etc.)." Although the site does support burrowing mammals, it is less than 5 acres in size and surrounded by development, so it does not qualify as raptor foraging habitat. Furthermore, there are large areas of MSCP-protected land less than one mile away that would likely be preferentially used for foraging.

California Fish and Game Code Section 3503 makes it unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by the Fish and Game Code or any regulation made pursuant to the Code, and the federal Migratory Bird Treaty Act prohibits the killing or transport of native migratory birds, or any part, nest, or egg or any such bird unless allowed by another regulation (such as for "game" birds). Therefore, all native, non-game birds on the Project site, and the nests and eggs of all native non-game birds, are protected during the nesting season even if these birds are not special-status or otherwise protected. No sign of bird nesting was observed on-site, but the non-native trees on-site have the potential to serve as nesting habitat.

Large mammal use

No evidence of use by large mammals including mule deer (*Odocoileus hemionus*), such as scat or deer laydown areas, was found on-site. The site is surrounded by development, is disturbed and exposed, and has no connection to natural habitats that could support large mammals.

JURISDICTIONAL WETLANDS AND WATERWAYS

No jurisdictional wetlands or waters were found on the Project site, and no signs of jurisdictional wetlands or waters were observed on-site or in a review of historical aerial photographs of the site.

OTHER UNIQUE FEATURES/RESOURCES

The Project site does not include any uncommon soils or rock outcrops. However, the site does contain steep slopes. The site is very unlikely to serve as a wildlife corridor or linkage because it is entirely surrounded by development and the nearest undeveloped land (and part of the MSCP) is approximately 0.43 miles to the northeast with many residences and several streets, including busy Main Street, between them.

SIGNIFICANCE OF PROJECT IMPACTS AND PROPOSED MITIGATION

Impacts to biological resources can be categorized as direct, indirect, or cumulative. Direct impacts are an immediate result of Project implementation, and generally include loss of vegetation, special-status habitats, and plant and animal populations; activity-related wildlife mortality; loss of foraging, nesting, breeding, or burrowing habitat; and fragmentation of wildlife corridors. Indirect impacts occur secondarily and may be less noticeable. Examples include introduction of non-native species which may outcompete and displace native vegetation; damage from increased human encroachment into the natural environment; off-road vehicle use, which impacts special-status plant and animal species; harassment and/or collection of wildlife and plant species; wildlife predation by domestic animals that intrude into open space areas; and increased wildlife mortality along roads. Project direct and indirect impacts to biological resources are discussed in the following sections.

Direct Impacts

The Project's direct impacts to biological resources are shown in **Figure 4**, and habitat impacts resulting from implementation of the Project are summarized in **Table 2**.

Table 2. Habitat/Vegetation Communities and Impacts

Vegetation Community	Existing On-site (acres)	Impacts On-site (acres)	Impacts Off-site (acres)	Mitigation Ratio (acres)	Mitigation Required (acres)
Developed land (County Habitat Code 12000) including DEV/IM	1.90	1.90	0.07	0:1	0.00
Disturbed habitat (County Habitat Code 11300)	0.05	0.05	0.00	0:1	0.00

Non-native grassland (County Habitat Code 42200)	0.70	0.70	0.00	0.5:1	0.35
Non-native vegetation (County Habitat Code 11000)	0.19	0.19	0.00	0:1	0.00
TOTAL	2.84	2.84	0.07		0.35

Impacts to 0.70 acres of non-native grassland is considered significant and will require mitigation at a 0.5:1 ratio. Impacts to DEV/IM land, disturbed habitat and non-native vegetation are not considered significant and will not require mitigation. Off-site impacts consist of improvements to the cul-de-sac of Terrace Hills Drive and do not require mitigation.

Common wildlife such as gophers and ground squirrels could be directly impacted by the Project; however, these impacts are generally not considered significant.

The Project will not directly result in significant impacts to any wildlife corridors, linkages, or wildlife nursery sites.

Indirect Impacts

Because the Project site is located within an area developed with residential land use and is adjacent to a road, no indirect impacts to natural habitat, wildlife, special-status plants or animals, or any wildlife corridors, linkages, or wildlife nursery sites are anticipated. Potential indirect impacts to water quality and air quality in the Project area will be protected by design features such as on-site bio-retention basins, standard Best Management Practices, and Storm Water Pollution Prevention Plan requirements.

Proposed mitigation

The Project will result in significant impacts to non-native grassland. Mitigation will be achieved off-site within the MSCP at the Crestridge Conservation Bank. Because non-native grassland is a Tier III habitat and does not require in-kind mitigation, any Tier III habitat may be used to achieve mitigation. Therefore, the purchase of 0.35 acres of either non-native grassland or chaparral (except southern maritime, mafic chamise or mafic southern mixed chaparral) credits would be sufficient.

Avoidance measures

In addition to the mitigation for Project-related impacts proposed above, the Project would incorporate avoidance measures to prevent additional impacts, such as:

- If native or naturalized habitat is present on-site at the time of grading, all clearing and grubbing of vegetation and/or grading will occur outside the avian breeding season (February 1 to September 15, or sooner if a qualified biologist demonstrates to the satisfaction of the wildlife agencies that all nesting is complete).
- If construction (other than vegetation clearing and grubbing) must occur during the breeding season, pre-construction surveys should be performed by a qualified biologist within 10 calendar days prior to the start of construction to determine the presence or absence of nesting birds on-site and burrowing owls and other special-status birds within 300 ft of the impact area. If nesting birds are detected, the County and Wildlife Agencies should be contacted to discuss the potential impact minimization measures to be implemented.

- Project-related landscaping shall not include exotic plant species that may be invasive to native habitats. Invasive exotic plant species not to be used include those listed on the California Invasive Plant Council's Invasive Plant Inventory.
- Best management practices and the SWPPP will specifically include mandatory measures to prevent any movement of water, soils, or any material from the Site into off-site areas.

CUMULATIVE IMPACTS

Cumulative impacts occur as a result of ongoing direct and indirect impacts for unrelated projects within a geographic area, and are assessed on a regional basis to determine the overall effect of numerous activities on biological resources or a special-status resource over a larger area. However, because this Project is small, surrounded by developed land and will only result in minor direct impacts to biological resources, cumulative impacts for the Project can be determined to be below a level of significance even without a review of other projects in the area.

CONCLUSION

This concludes REC's biological letter report for the Terrace Hill Project. Please do not hesitate to contact REC with any questions.

Sincerely,



Elyssa Robertson
Principal, County QCL Biologist

PREPARERS

This report has been prepared by REC Consultants, Inc. staff:

Elyssa Robertson – County QCL Biologist
Lee BenVau – Primary Author, Field Biologist
Erin Crouthers – Project Manager, Editor
Brendan McGill – GIS Analyst

ATTACHMENTS

- Figure 1. Regional Location Map
- Figure 2. Vicinity Map
- Figure 3. Biological Resources
- Figure 4. Project Impacts

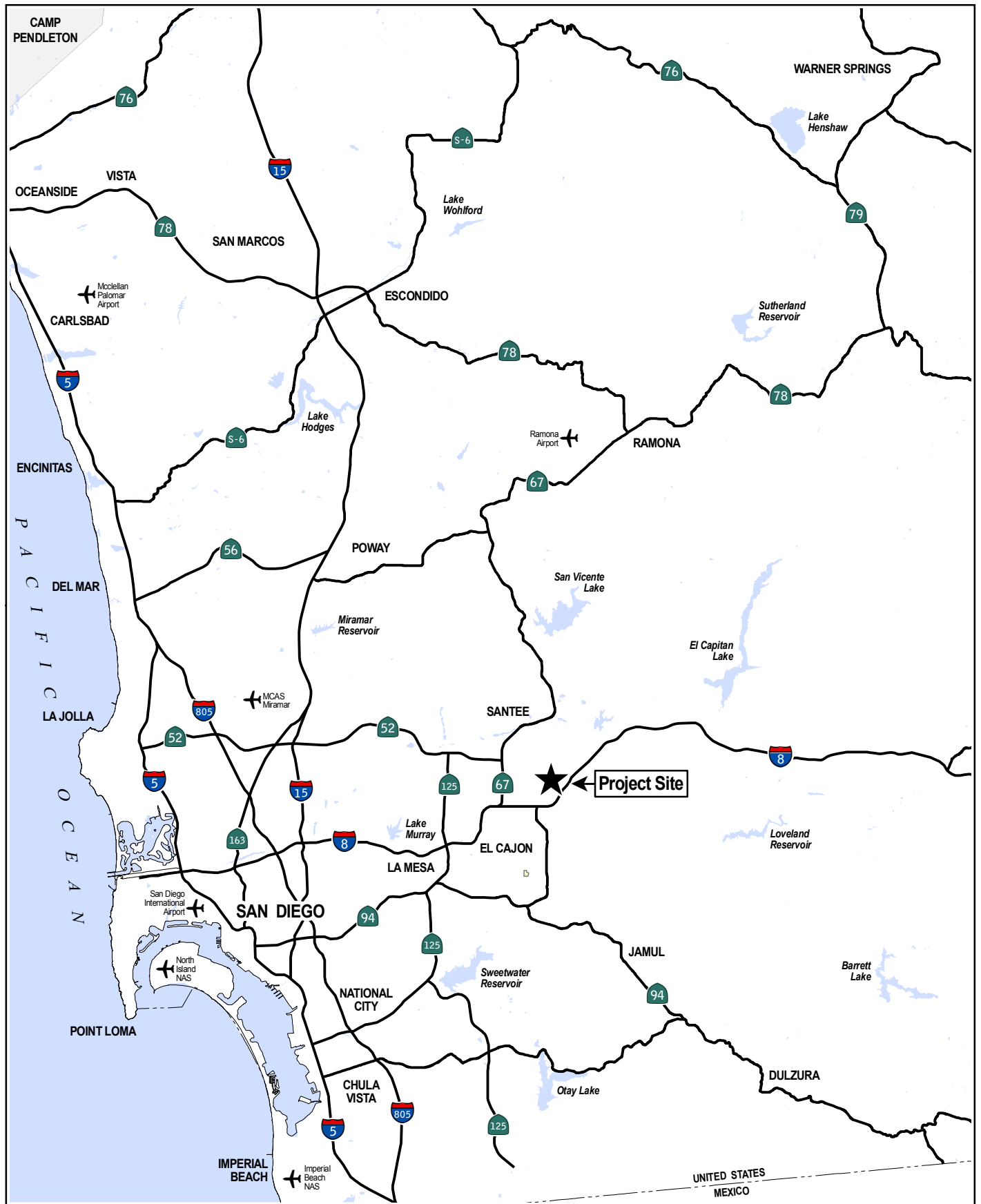
- Appendix A. Special-Status Plants with the Potential to Occur on the Terrace Hill Drive Project Site
- Appendix B. Special-Status Animals with the Potential to Occur on the Terrace Hill Drive Project Site

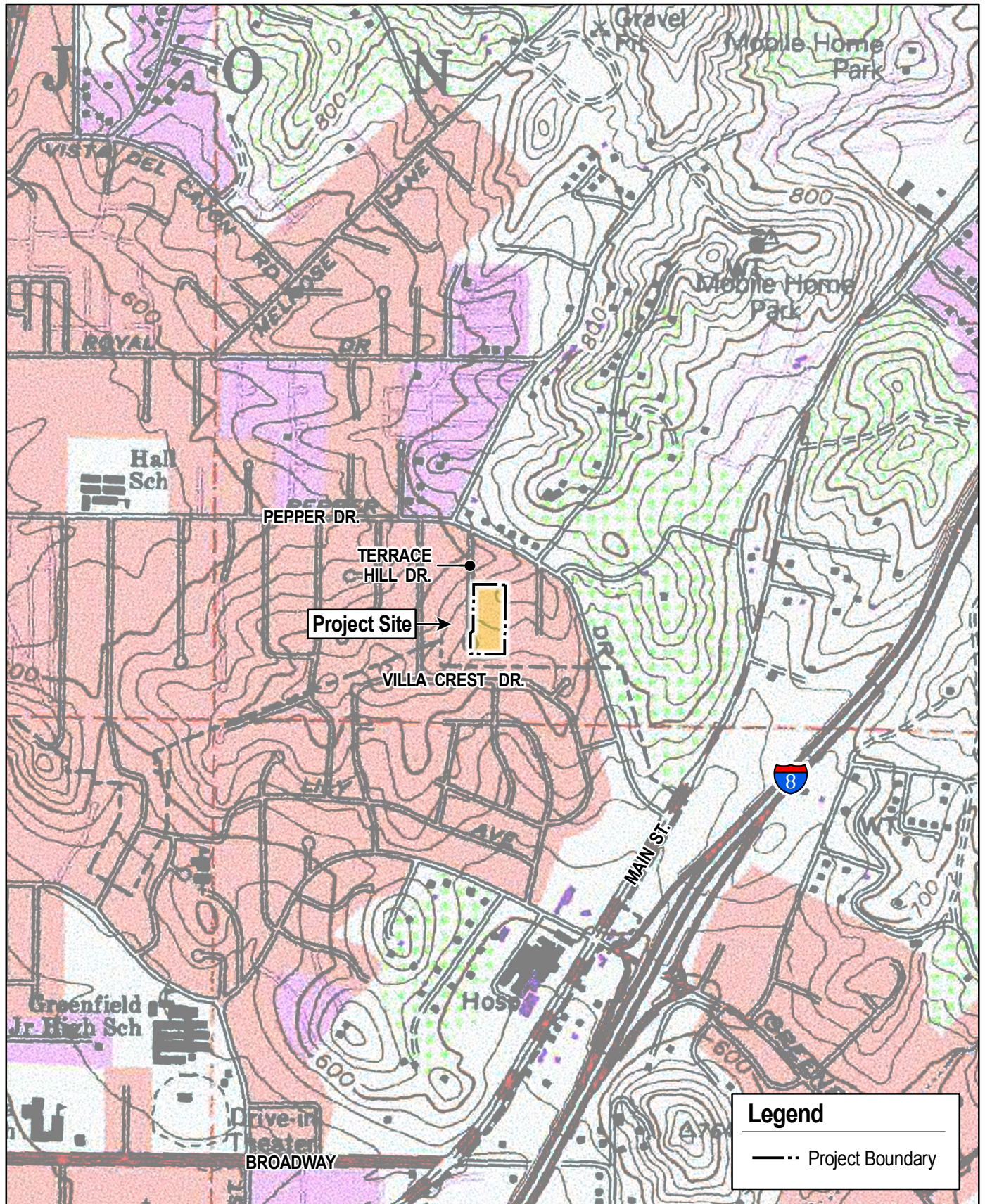
REFERENCES

- AOU (American Ornithologists' Union). 2012. AOU Checklist of North and Middle American Birds (searchable online version). <http://checklist.aou.org/taxa>. Accessed September 2014.
- Baker, R. J., L. Bradley, R. Bradley, J. Dragoo, M. Engstrom, R. Hoffmann, C. Jones, R. Reid, D. Rice, and C. Jones. 2003. "Revised Checklist of North American Mammals North of Mexico, 2003," Occasional Papers 229, December 2003. Lubbock, Texas: Museum of Texas Tech University.
- Baldwin, B. G., D. H. Goldman, D. J. Keil, R. Patterson, T. J. Rosatti, and D. H. Wilken, editors. 2012. *The Jepson Manual: Vascular Plants of California*, second edition. Berkeley and Los Angeles: University of California Press.
- CDFW (California Department of Fish and Wildlife). 2014. "Special Vascular Plants, Bryophytes, and Lichens List." California Department of Fish and Wildlife, Natural Diversity Database, September 2014. <http://www.dfg.ca.gov/biogeodata/cnddb/pdfs/SPPlants.pdf>. Accessed September 2014.
- CDFW. 2014a. "State and Federally Listed Endangered and Threatened Animals of California." State of California Natural Resources Agency, Biogeographic Data Branch, California Natural Diversity Database. Sacramento. September 2014.
- CDFW. 2014b. "State and Federally Listed Endangered, Threatened and Rare Plants of California." State of California Natural Resources Agency, Biogeographic Data Branch, California Natural Diversity Database. Sacramento. September 2014.
- CDFW. 2011. "Special Animals." California Department of Fish and Game, Biogeographic Data Branch, California Natural Diversity Database, January 2011. <http://www.dfg.ca.gov/biogeodata/cnddb/pdfs/SPAnimals.pdf>.
- CNDDDB. 2014. California Natural Diversity Data Base RareFind5 searchable database, California Department of Fish and Wildlife, Accessed September 2014.
- CNPS (California Native Plant Society). 2014. Inventory of Rare and Endangered Plants (online edition, v8-02). Sacramento: California Native Plant Society. <http://www.rareplants.cnps.org>. Accessed September 2014.
- County of San Diego. 2010. County of San Diego Guidelines for Determining Significance, Biological Resources. Department of Planning and Land Use, County of San Diego. September 15, 2010.
- County of San Diego. 2010a. County of San Diego Report Format and Content Requirements, Biological Resources. Department of Planning and Land Use, County of San Diego. September 15, 2010.
- County of San Diego. 2011. County of San Diego: Multiple Species Conservation Programs http://www.sandiegocounty.gov/content/dam/sdc/dplu/mscp/docs/mscp_areas.pdf. Accessed October 2014.
- CNAH (Center for North American Herpetology). 2014. "State herpetofauna: California." <http://www.cnah.org/stateList.aspx>. Accessed September 2014.
- Holland, R. F. 1986. *Preliminary Descriptions of the Terrestrial Natural Communities of California*. Non-game Heritage Program, State of California Department of Fish and Game, Sacramento.
- Oberbauer, T., M. Kelly, and J. Buegge. 2008. Draft Vegetation Communities of San Diego County. Based on "Preliminary Descriptions of the Terrestrial Natural Communities of California", Robert F. Holland, Ph.D., October 1986.
- Powell, J. A., and C. L. Hogue. 1979. *California Insects*. Berkeley: University of California Press.
- Rebman, J. P. and M. G. Simpson. 2006. *Checklist of the Vascular Plants of San Diego County*, fourth edition. San Diego: San Diego Natural History Museum. <http://www.sdnhm.org/archive/research/botany/sdplants/index.html>. Accessed September 2014.

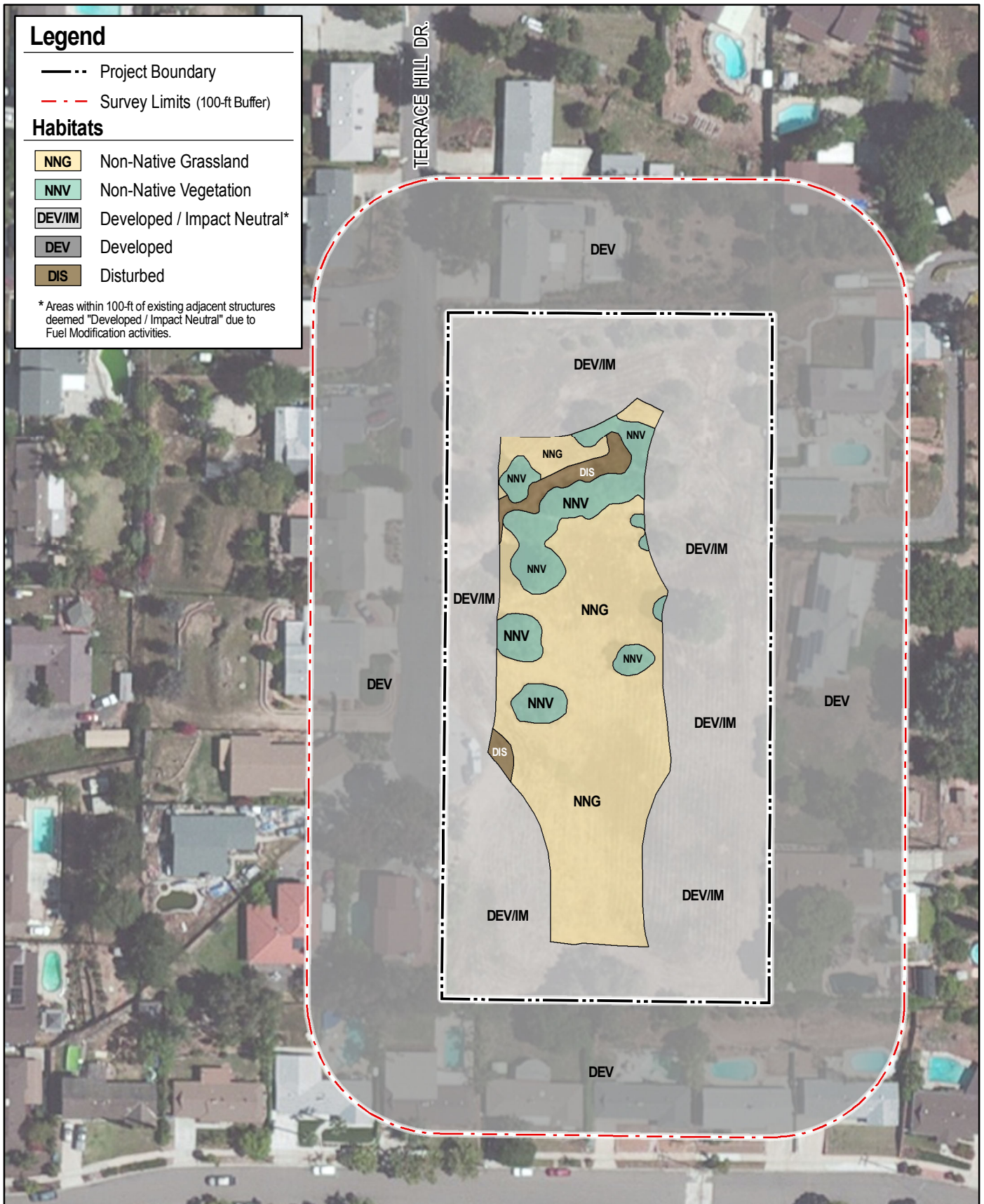
- SDNHM (San Diego Natural History Museum). 2002. Butterflies of San Diego County. <http://www.sdnhm.org/archive/research/entomology/sdbutterflies.html>. Accessed September 2014.
- SDNHM. 2005. Spiders of San Diego County. <http://www.sdnhm.org/archive/research/entomology/sdspider.html>. Accessed September 2014.
- SDNHM. (Undated) Amphibians of San Diego County. <http://www.sdnhm.org/archive/research/herpetology/sdamphib.html>. Accessed September 2014.
- SDNHM. (Undated) Reptiles of San Diego County. <http://www.sdnhm.org/archive/research/herpetology/sdreptil.html>. Accessed September 2014.
- SDNHM. (Undated) Checklist of Birds Recorded in San Diego County, California. <http://www.sdnhm.org/archive/research/birds/sdbirds.html>. Accessed September 2014.
- SDNHM. (Undated) Checklist of Mammal Species Recorded in San Diego County. <http://www.sdnhm.org/archive/research/birds/sdmamm.html>. Accessed September 2014.
- Stebbins, R. C. 2003. *Field Guide to Western Reptiles and Amphibian*. Houghton Mifflin Co., Boston.
- Unitt, P. 2004. *San Diego County Bird Atlas*. San Diego Natural History Museum: San Diego, CA.
- USDA (United States Department of Agriculture). 2014. Natural Resource Conservation Service Web Soil Survey. <http://websoilsurvey.sc.egov.usda.gov/app/Home Page.htm>. Accessed September 2014.
- USFWS. 2014. United States Fish and Wildlife Service Endangered Species Database, <http://www.fws.gov/endangered>. Accessed September 2014.

FIGURES

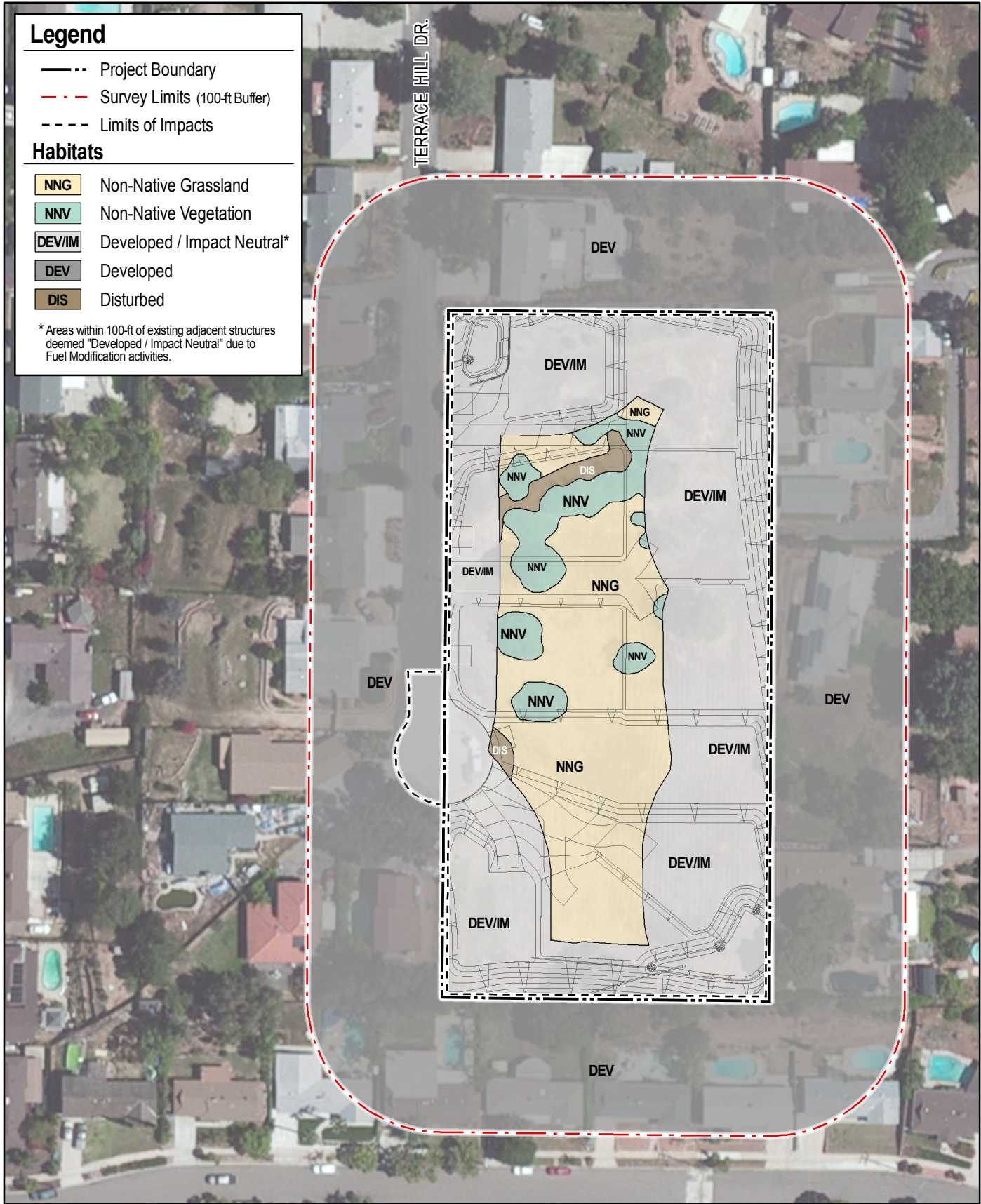




T:\Project_Data\Terrace_Hill\Final_Maps\Biological_Memo_May2015\TH_Fig-02_VicinityMap_042315.mxd



T:\Project_Data\Terrace_Hill\Final_Maps\Biological_Memo_May2015\TH_Fig-03_HabitatMap_052615.mxd



T:\Project_Data\Terrace_Hill\Final_Maps\Biological_Memo_May2015\TH_Fig-04_ImpactsMap_052615.mxd

ATTACHMENT A

SPECIAL-STATUS PLANTS WITH THE POTENTIAL TO OCCUR ON THE TERRACE HILL SITE (USGS EL CAJON QUAD, 221 - 232 METERS [725 - 762 FT])										
Species Name	Common Name	Family	CRPR	State/ Federal	Cnty NE	MSC P	Cnty List	Growth form, bloom time	Habitat	Potential to Occur Onsite
<i>Acanthomintha ilicifolia</i>	thornmint, San Diego thorn-mint	Lamiaceae	1B.1	SE/FT	X	X	A	Annual herb, Apr-Jun	Clay soil, openings in chaparral, coastal scrub, valley & foothill grassland, vernal pools; 10-960 m	Low; known to occur in Project quad but suitable habitat does not occur on- site.
<i>Ambrosia pumila</i>	San Diego ambrosia	Asteraceae	1B.1	-/FE	X	X	A	Perennial herb (rhizomatous), Apr-Oct	Sandy loam or clay, often disturbed areas, sometimes alkaline areas, in chaparral, coastal scrub, valley & foothill grassland, near vernal pools; 20-415 m	Low; known to occur in Project quad but suitable habitat does not occur on- site.
<i>Artemisia palmeri</i>	Palmer's sagewort, San Diego sagewort	Asteraceae	4.2	-/-			D	Biennial to perennial herb to subshrub, Feb- Sep	Sandy, mesic soils in chaparral, coastal scrub, riparian forest, riparian scrub, riparian woodland; 15-915 m	Low; known to occur in Project quad but suitable habitat does not occur on- site.
<i>Asplenium vespertinum</i>	western spleenwort	Aspleniaceae	4.2	-/-			D	Perennial herb (rhizomatous), Feb-Jun	Rocky chaparral, cismontane woodland, coastal scrub; 180-1000 m	Low; known to occur in Project quad but suitable habitat does not occur on- site.
<i>Astragalus deanei</i>	Deane's locoweed/milkvetch	Fabaceae	1B.1	-/-			A	Perennial herb, Feb-May	Chaparral, cismontane woodland, coastal scrub, riparian forest; 75- 695 m	Low; known to occur in Project quad but suitable habitat does not occur on- site.
<i>Bahiopsis laciniata</i> (<i>Viguiera l.</i>)	San Diego sunflower, San Diego County viguiera	Asteraceae	4.2	-/-			D	Shrub, Feb-Aug	Chaparral, coastal scrub; 60-750 m	Low; known to occur in Project quad but suitable habitat does not occur on- site.
<i>Bloomeria clevelandii</i> (<i>Muilla c.</i>)	San Diego goldenstar	Themidaceae	1B.1	-/-		X	A	Perennial herb (bulbiferous), Apr-May	Clay soil in chaparral, coastal scrub, valley & foothill grassland, near vernal pools; 50-465 m	Low; known to occur in Project quad but suitable soil does not occur on-site.
<i>Brodiaea orcuttii</i>	Orcutt's brodiaea	Themidaceae	1B.1	-/-		X	A	Perennial herb (deciduous, bulbiferous), May-Jul	Mesic, clay, serpentinite soils in closed-cone coniferous forest, chaparral, cismontane woodland, meadows & seeps, valley & foothill grassland, and near vernal pools; 30-1692 m	Low; known to occur in Project quad but suitable soil does not occur on-site.
<i>Calandrinia breweri</i>	Brewer's calandrinia	Montiaceae	4.2	-/-			D	Annual herb, Mar-Jun	Sandy or loamy disturbed or burned areas in chaparral, coastal scrub; 10-1220 m	Low; known to occur in Project quad but suitable habitat does not occur on- site.

ATTACHMENT A

<i>Acanthomintha ilicifolia</i>	thormmint, San Diego thorn-mint	Lamiaceae	1B.1	SE/FT	X	X	A	Annual herb, Apr-Jun	Clay soil, openings in chaparral, coastal scrub, valley & foothill grassland, vernal pools; 10-960 m	Low; known to occur in Project quad but suitable habitat does not occur on-site.
<i>Centromadia pungens</i> subsp. <i>laevis</i>	smooth tarplant	Asteraceae	1B.1	-			A	Annual herb, Apr-Sep	Alkaline soils in chenopod scrub, meadows and seeps, playas, riparian woodland, valley & foothill grassland; 0-640 m	Low; known to occur in Project quad but suitable habitat does not occur on-site.
<i>Clarkia delicata</i>	delicate clarkia, Campo clarkia	Onagraceae	1B.2	-/-			A	Annual herb, Apr-Jun	Often gabbroic soil in chaparral, cismontane woodland; 235-1000 m	Low; known to occur in Project quad but suitable soil does not occur on-site.
<i>Convolvulus simulans</i>	small-flower bindweed, small-flowered morning-glory	Convolvulaceae	4.2	-/-			D	Annual herb, Mar-Jul	Clay soils and serpentinite seeps in chaparral openings, coastal scrub, valley & foothill grassland; 30-700 m	Low; known to occur in Project quad but suitable soil does not occur on-site.
<i>Dudleya variegata</i>	variegated dudleya	Crassulaceae	1B.2	-/-	X	X	A	Perennial herb, Apr-Jun	Clay soils in chaparral, cismontane woodland, coastal scrub, valley & foothill grassland, near vernal pools; 3-580 m	Low; known to occur in Project quad but suitable soil does not occur on-site.
<i>Ericameria palmeri</i> var. <i>palmeri</i>	Palmer's goldenbush	Asteraceae	1B.1	-/-	X	X	B	Shrub (evergreen), Jul-Nov	Mesic chaparral, coastal scrub; 30-600 m	Low; known to occur in Project quad but suitable habitat does not occur on-site.
<i>Ferocactus viridescens</i>	coast barrel cactus, San Diego barrel cactus	Cactaceae	2B.1	-/-		X	B	Perennial (stem succulent), May-Jun	Chaparral, coastal scrub, valley & foothill grassland, near vernal pools; 3-450 m	Low; known to occur in Project quad and very marginally suitable habitat occurs on-site, but would have been detectable and was not observed.
<i>Grindelia hallii</i> (<i>G. hirsutula</i> var. <i>hallii</i>)	San Diego gumplant	Asteraceae	1B.2	-/-			A	Perennial herb, Jul-Oct	Chaparral, lower montane coniferous forest, meadows & seeps, valley & foothill grassland; 185-1745 m	Low; known to occur in Project quad and very marginally suitable habitat occurs on-site, but would have been detectable and was not observed.
<i>Harpagonella palmeri</i>	Palmer's grappling-hook	Boraginaceae	4.2	-/-			D	Annual herb, Mar-May	Clay soils in chaparral, coastal scrub, valley & foothill grassland; 20-955 m	Low; known to occur in Project quad but suitable soil does not occur on-site.
<i>Holocarpha virgata</i> subsp. <i>elongata</i>	graceful tarplant	Asteraceae	4.2	-/-			D	Annual herb, May-Nov	Chaparral, cismontane woodland, coastal scrub, valley & foothill grassland; 60-1100 m	Low; not known to occur in Project quad and only very marginally suitable habitat occurs on-site.
<i>Horkelia truncata</i>	Ramona horkelia	Rosaceae	1B.3	-/-			A	Perennial herb, May-Jun	Clay or gabbroic soils in chaparral, cismontane woodland; 400-1300 m	Low; known to occur in Project quad but suitable soil does not occur on-site.

ATTACHMENT A

<i>Acanthomintha ilicifolia</i>	thormmint, San Diego thorn-mint	Lamiaceae	1B.1	SE/FT	X	X	A	Annual herb, Apr-Jun	Clay soil, openings in chaparral, coastal scrub, valley & foothill grassland, vernal pools; 10-960 m	Low; known to occur in Project quad but suitable habitat does not occur on-site.
<i>Isocoma menziesii</i> var. <i>decumbens</i>	decumbent goldenbush	Asteraceae	1B.2	-/-			A	Shrub, Apr-Nov	Sandy, often disturbed areas in chaparral, coastal scrub; 10-135 m	Low; known to occur in Project quad but suitable habitat does not occur on-site.
<i>Juncus acutus</i> subsp. <i>leopoldii</i>	southwestern spiny rush	Juncaceae	4.2	-/-			D	Perennial herb, Mar-Jun	Coastal dunes (mesic), meadows & seeps (alkaline seeps), marshes and swamps (coastal salt); 3-900 m	Low; known to occur in Project quad but suitable habitat does not occur on-site.
<i>Lepidium virginicum</i> var. <i>robinsonii</i> (not recognized in TJM2)	Robinson's peppergrass	Brassicaceae	4.3	-/-			A	Annual herb, Jan-Jul	Chaparral, coastal scrub; 1-885 m	Low; not known to occur in Project quad and suitable habitat does not occur on-site.
<i>Pentachaeta aurea</i> subsp. <i>aurea</i>	golden-ray pentachaeta	Asteraceae	4.2	-			D	Annual herb, Mar-Jul	Chaparral, cismontane woodland, coastal scrub, lower montane coniferous forest, riparian woodland, valley & foothill grassland; 80-1850 m	Low; known to occur in Project quad but suitable habitat does not occur on-site.
<i>Piperia cooperi</i>	Cooper's rein orchid, chaparral rein orchid	Orchidaceae	4.2	-/-			D	Perennial herb, Mar-Jun	Chaparral, cismontane woodland, valley & foothill grassland; 15-1585 m	Low; known to occur in Project quad and very marginally suitable habitat occurs on-site, but would have been detectable and was not observed.
<i>Quercus dumosa</i>	Nuttall's scrub oak	Fagaceae	1B.1	-/-			A	Shrub (evergreen), Feb-Aug	Sandy, clay loam soils in closed-cone coniferous forest, chaparral, coastal scrub; 15-400 m	Low; known to occur in Project quad but suitable habitat does not occur on-site.
<i>Quercus engelmannii</i>	Engelmann/mesa blue oak	Fagaceae	4.2	-			D	Tree (deciduous), Mar-May	Chaparral, cismontane woodland, riparian woodland, valley & foothill grassland; 120-1300 m	Low; known to occur in Project quad and very marginally suitable habitat occurs on-site, but would have been detectable and was not observed.
<i>Stipa diegoensis</i> (<i>Achnatherum diegoense</i>)	San Diego needlegrass, San Diego County needle grass	Poaceae	4.2	-/-			D	Perennial herb, Feb-Jun	Rocky, often mesic areas in chaparral, coastal scrub; 10-800 m	Low; known to occur in Project quad but suitable habitat does not occur on-site.
<i>Xanthisma junceum</i> (<i>Machaeranthera juncea</i>)	rush chaparral-star, rush-like bristleweed	Asteraceae	4.3	-/-			D	Perennial herb, Jun-Jan	Chaparral, coastal scrub; 240-1000 m	Low; known to occur in Project quad but suitable habitat does not occur on-site.

ATTACHMENT A

<i>Acanthomintha ilicifolia</i>	thorrmint, San Diego thorn-mint	Lamiaceae	1B.1	SE/FT	X	X	A	Annual herb, Apr-Jun	Clay soil, openings in chaparral, coastal scrub, valley & foothill grassland, vernal pools; 10-960 m	Low; known to occur in Project quad but suitable habitat does not occur on- site.
---------------------------------	------------------------------------	-----------	------	-------	---	---	---	-------------------------	--	---

Listing Designations

CRPR - California Rare Plant Rank (from Rare Plant Status Review Group, jointly managed by California Department of Fish and Wildlife [CDFW] and California Native Plant Society [CNPS])

- | | |
|---|--|
| 1A - Plants presumed extirpated in California and either rare or extinct elsewhere | .1 - Seriously endangered in California (over 80% of occurrences threatened / high degree and immediacy of threat) |
| 1B - Plants rare, threatened or endangered in California AND elsewhere | .2 - Moderately threatened in California (20-80% occurrences threatened / moderate degree and immediacy of threat) |
| 2A - Presumed extirpated or extinct in California, but more common elsewhere | .3 - Not very threatened in California (<20% of occurrences threatened / low degree and immediacy of threat |
| 2B - Plants rare, threatened or endangered in California, but more common elsewhere | or no current threats known) |
| 3 - Plants about which more information is needed - a review list | |
| 4 - Plants of limited distribution - a watch list | |

State of California species designations (CDFW April 2013)

SE - State-listed Endangered

ST - State-listed Threatened

SR - State-listed Rare

Federal species designations (CDFW April 2013, USFWS 2013)

FE - Federally-listed Endangered

FT - Federally-listed Threatened

FC - Federal candidate for listing

Cnty NE - an X in this column indicates the species is considered a Narrow Endemic by the County of San Diego (MSCP County of San Diego Subarea Plan 1997)

Cnty List - County Sensitive Plant List (County of San Diego 2010)

- A - County List A: plants rare, threatened or endangered in California and elsewhere
 B - County List B: plants rare, threatened or endangered in California but more common elsewhere
 C - County List C: plants which may be rare, but need more information to determine their true rarity status
 D - County List D: plants of limited distribution and are uncommon, but not presently rare or endangered

MSCP - an X in this column indicates the species is included in the Multiple Species Conservation Program (MSCP Plan 1998)

Other abbreviations:

TJM2 - The Jepson Manual, 2nd edition (2012) (taxonomic authority for this report except where it conflicts with special-status plant recognition)

(Common names are primarily from *The Checklist of Vascular Plants of San Diego County* [Rebman and Simpson 2006], and secondarily from CNPS's Inventory of Rare and Endangered Plants [CNPS 2010,

ATTACHMENT B

SPECIAL-STATUS ANIMALS WITH THE POTENTIAL TO OCCUR ON THE TERRACE HILL SITE (USGS EL CAJON QUAD, 221 - 232 METERS [725 - 762 FT])							
Species Name	Common Name	State/Federal	Cnty	MSCP	Cnty	Habitat	Potential to Occur Onsite
INVERTEBRATES							
<i>Danaus plexippus</i>	monarch butterfly	-/-			2	Land with host plant milkweeds (<i>Asclepias</i> spp.) or nectar plants.	Low; neither milkweed nor nectar plants were observed on-site.
<i>Euphydryas editha quino</i>	Quino checkerspot butterfly	-/FE	X		1	Open grassy areas, interior foothills, host-plant is <i>Plantago erecta</i> , <i>Plantago ovata</i> , <i>Castilleja exserta</i> ; 0-1000ft.	Low; not known to occur in Project quad and host plants were not observed.
<i>Lycaena hermes</i>	Hermes copper	-/-			1	Coastal sage scrub, mixed chaparral and chamise chaparral; 0-3000ft. Host plant is <i>Rhamnus crocea</i> .	Low; known to occur in Project quad but suitable habitat does not occur on-site.
AMPHIBIANS							
<i>Spea hammondi</i>	western spadefoot	SSC/BLM-S			2	Open areas with sandy or gravelly soils, in mixed woodlands, grasslands, coastal sage scrub, chaparral, sandy washes, lowlands, river floodplains, alluvial fans, playas, alkali flats, foothills, and mountains; rainpools free of bullfrogs, fish, or crayfish needed for breeding. Activity limited to wet season, summer storms or during evenings with elevated substrate moisture levels. Nocturnal. 0-4,500 ft	Low; not known to occur in Project quad and suitable habitat does not occur on-site.
REPTILES							
<i>Anniella stebbinsi</i> (formerly <i>A. pulchra pulchra</i>)	Southern California legless lizard (formerly silvery legless lizard)	SSC/-			2	Loose soil and leaf litter with plant cover in sparsely vegetated areas of beach dunes, chaparral, pine-oak woodlands, desert scrub, sandy washes, and stream terraces with sycamores, cottonwoods, or oaks; often under surface objects such as rocks, boards, driftwood, and logs; sometimes found in suburban gardens in southern California; lives mostly underground.	Low; known to occur in Project quad but suitable habitat does not occur on-site.
<i>Aspidoscelis hyperythra</i> (<i>Cnemidophorus hyperythrus</i>)	orange-throated whiptail	SSC/-		X	2	Coastal sage scrub, mixed chaparral, grassland, riparian, and chamise chaparral habitats. Open hillsides with brush and rock, well drained soils; 1-1000ft.	Low; known to occur in Project quad but only very marginally suitable habitat occurs on-site.
<i>Aspidoscelis tigris stejnegeri</i> (<i>Cnemidophorus t. s.</i>)	coastal whiptail	-/-			2	Found in hot, dry open areas with sparse foliage such as chaparral, woodland, and riparian areas mostly west of the Peninsular Ranges.	Low; known to occur in Project quad but only very marginally suitable habitat occurs on-site.
<i>Coleonyx variegatus abbotti</i>	San Diego banded gecko	-/-			1	Interior coastal region, west of Peninsular ranges, prefers rocky areas in coastal sage and chaparral, nocturnal, hibernates in winter	Low; not known to occur in Project quad and suitable habitat does not occur on-site.

ATTACHMENT B

INVERTEBRATES							
<i>Crotalus ruber</i>	red diamond rattlesnake	SSC/-			2	Coastal sage scrub, mixed chaparral, open grassy areas and agricultural areas, chamise chaparral, pinon juniper and desert scrub; 0-3000ft.	Low; known to occur in Project quad but only very marginally suitable habitat occurs on-site.
<i>Phrynosoma blainvillii</i> (<i>Anota coronatum</i> , <i>P. c.</i>)	Blainville's horned lizard, coast horned lizard	SSC/BLM-S, USFS-S		X	2	Coastal sage scrub with harvester ants (<i>Pogonomyrmex</i> spp.).	Low; known to occur in Project quad but suitable habitat does not occur on-site.
<i>Plestiodon skiltonianus interparietalis</i> (<i>Eumeces s. i.</i>)	Coronado skink	SSC/BLM-S			2	Coastal sage scrub, grassland, riparian, near vernal pools, oak woodlands, chamise chaparral, mixed conifer, closed cone forests, and freshwater marshes.	Low; known to occur in Project quad but only very marginally suitable habitat occurs on-site.
<i>Thamnophis hammondi</i>	two-striped garter snake	SSC/BLM-S, USFS-S			1	In or near permanent fresh water, often along streams with rocky beds bordered by willows or other streamside growth. Sometimes near vernal pools; 0-1000ft.	Low; known to occur in Project quad but suitable habitat does not occur on-site.
BIRDS							
<i>Accipiter cooperii</i>	Cooper's hawk	WL/-		X	1	Riparian and oak woodlands, eucalyptus groves and other forested areas; 500-3000ft.	Low; known to occur in Project quad but suitable habitat does not occur on-site.
<i>Aimophila ruficeps canescens</i>	Southern California rufous-crowned sparrow	WL/-		X	1	Sparse, mixed chaparral and coastal scrub habitats (especially coastal sage). Frequents relatively steep, often rocky hillsides with grass and forb patches; 0-3000ft.	Low; known to occur in Project quad but only very marginally suitable habitat occurs on-site.
<i>Ammodramus savannarum</i>	grasshopper sparrow	SSC/-		X	1	Short- to middle-height, moderately open grasslands with scattered shrubs, native bunchgrasses preferred; hard to identify except when singing (Mar-Jul).	Low; known to occur in Project quad but only very marginally suitable habitat occurs on-site.
<i>Aquila chrysaetos</i>	golden eagle	FP, WL, CDF-S/BLM-S, BCC	X	X	1	Mountains, foothills, and adjacent grassland, open areas and canyons; 0-3000ft. (nesting/wintering)	Low; not known to occur in Project quad and suitable habitat does not occur on-site.
<i>Ardea herodias</i>	great blue heron	CDF-S/-			2	Year-round in wetlands of all kinds, also forages in uplands for gophers and rats, nests in tall trees.	Low; not known to occur in Project quad and only very marginally suitable habitat occurs on-site.
<i>Athene cunicularia</i>	burrowing owl	SSC/BCC, BLM-S	X	X	1	Open, dry grasslands, agricultural and range lands, shrub and desert habitats of low-growing open vegetation (associated with burrowing animals).	Low; not known to occur in Project quad and only very marginally suitable habitat occurs on-site.
<i>Buteo swainsoni</i>	Swainson's hawk	ST/BCC, USFS-S		X	1	Winters in desert scrub; 0-500ft.	Low; known to occur in Project quad but suitable habitat does not occur on-site.
<i>Campylorhynchus brunneicapillus sandiegensis</i>	coastal cactus wren, San Diego cactus wren	SSC/BCC, USFS-S	X	X	1	Open coastal sage scrub with thickets of chollas (<i>Cylindropuntia</i> sp.), south- and west-facing slopes below 1,500 ft, usually within quarter mile of river valleys.	Low; known to occur in Project quad but suitable habitat does not occur on-site.

ATTACHMENT B

INVERTEBRATES							
<i>Cathartes aura</i>	turkey vulture	-/-			1	Dry open country or along roadsides; coastal sage scrub, mixed and chamise chaparral, grassland, riparian, mixed conifer and closed cone forest; 0 to over 3000ft.	Low; suitable habitat does not occur on-site.
<i>Circus cyaneus</i>	northern harrier	SSC/-		X	1	Year-round resident but more common in winter; nests on ground in marsh or other dense vegetation, forages over grasslands.	Low; not known to occur in Project quad and only very marginally suitable foraging habitat occurs on-site.
<i>Elanus leucurus</i>	white-tailed kite	FP/-			1	Widespread over coastal slope, prefers riparian woodlands, oak groves, or sycamore groves adjacent to grassland; feeds almost exclusively on California vole.	Low; not known to occur in Project quad and suitable habitat does not occur on-site.
<i>Eremophila alpestris actia</i>	California horned lark	WL/-			2	Open patches of bare land alternating with low vegetation in grasslands, montane meadows, and sagebrush plains.	Low; not known to occur in Project quad and only very marginally suitable foraging habitat occurs on-site.
<i>Falco mexicanus</i>	prairie falcon	WL/BCC			1	Mountainous grasslands, open hills, open plains; 0 to over 3000ft.	Low; not known to occur in Project quad and only very marginally suitable foraging habitat occurs on-site.
<i>Icteria virens</i>	yellow-breasted chat	SSC/-			1	Summer visitor in dense riparian woodland, most common in coastal lowland, strongly concentrated in NW corner of County; usually return to SD second week in April and start to leave by early August.	Low; known to occur in Project quad but suitable habitat does not occur on-site.
<i>Lanius ludovicianus</i>	loggerhead shrike	SSC/BCC			1	Open fields with scattered trees, open woodland, scrub, agricultural land, desert wash, desert-edge scrub, beach areas, broken chaparral.	Low; not known to occur in Project quad and only very marginally suitable foraging habitat occurs on-site.
<i>Larus californicus</i>	California gull	WL/-			2	In winter at beaches, bays, estuaries, and lakes/reservoirs through coastal lowland, and occasionally at higher elevation lakes; uncommon to rare in summer	Low; not known to occur in Project quad and suitable habitat does not occur on-site.
<i>Poliophtila californica californica</i>	coastal California gnatcatcher	SSC/FT		X	1	Coastal sagebrush scrub especially where California sage (<i>Artemisia californica</i>) is dominant plant; up to 3000 ft but 90% at 1000 ft or lower.	Low; known to occur in Project quad but suitable habitat does not occur on-site.
<i>Vireo bellii pusillus</i>	least Bell's vireo	SE/FE	X	X	1	Riparian vegetation along rivers and larger creeks, with both riparian canopy and somewhat a dense or shrubby understory for nesting.	Low; known to occur in Project quad but suitable habitat does not occur on-site.
MAMMALS							
<i>Antrozous pallidus</i>	pallid bat	SSC/BLM-S, USFS-S			2	Coastal sage scrub, mixed chaparral, oak woodlands, chamise chaparral, desert wash and desert scrub. Prefers rocky outcrops, cliffs and crevices with access to open habitats for foraging.	Low; known to occur in Project quad but suitable habitat does not occur on-site.

ATTACHMENT B

INVERTEBRATES							
<i>Chaetodipus californicus femoralis</i>	Dulzura California pocket mouse	SSC/-			2	Coastal sage scrub, mixed chaparral, oak woodland, chamise chaparral, and mixed conifer habitats; 0 to over 3000ft.	Low; known to occur in Project quad but suitable habitat does not occur on-site.
<i>Chaetodipus fallax fallax</i>	northwestern San Diego pocket mouse	SSC/-			2	Sandy, herbaceous areas, usually associated with rocks or coarse gravel, in coastal scrub, chaparral, grasslands, sagebrush in western San Diego County; nocturnal.	Low; known to occur in Project quad but only very marginally suitable habitat occurs on-site.
<i>Choeronycteris mexicana</i>	Mexican long-tongued bat	SSC/-			2	In CA, found in residential areas, roosts in garages, sheds, porches, and under houses on stilts; feeds on pollen and nectar, especially of agaves and columnar cacti, and will visit hummingbird feeders and possibly avocado flowers; seen in fall and winter, presumed to not breed in CA.	Low; known to occur in Project quad but suitable food plants do not occur on-site.
<i>Corynorhinus townsendii</i> (<i>Plecotus t. pallascens</i>)	Townsend's big-eared bat	SSC/BLM-S, USFS-S			2	Variety of habitats, most common at mesic sites. Roosts in the open, extremely sensitive to human disturbance.	Low; known to occur in Project quad but site is too close to development.
<i>Eumops perotis californicus</i>	western mastiff bat	SSC/BLM-S			2	Open semi-arid to arid habitats, including conifer and deciduous woodlands, coastal scrub, annual and perennial grasslands, palm oases, chaparral, desert scrub, and urban. Crevices in cliff faces, high buildings, trees, and tunnels are required for roosting; 500-3000ft.	Low; known to occur in Project quad but only very marginally suitable habitat occurs on-site.
<i>Lepus californicus bennettii</i>	San Diego black-tailed jackrabbit	SSC/-			2	Coastal sage scrub, mixed chaparral, oak woodlands, chamise chaparral, mixed conifer, and closed cone forest and open areas. Common in irrigated pastures and row crops; 0 to over 3000ft.	Low; known to occur in Project quad but only very marginally suitable habitat occurs on-site.
<i>Myotis yumanensis</i>	Yuma myotis	-/BLM-S			2	Open forests and woodlands with water bodies over which to forage, roosts in caves, mines, buildings, bridges, and tree cavities.	Low; not known to occur in Project quad and suitable habitat does not occur on-site.
<i>Neotoma lepida intermedia</i>	San Diego desert woodrat	SSC/-			2	Coastal sage scrub, oak woodlands and chamise chaparral and rocky outcrops. Nocturnal. Typically associated with cacti; 500-3000ft.	Low; known to occur in Project quad but suitable habitat does not occur on-site.
<i>Nyctinomops femorosaccus</i>	pocketed free-tailed bat	SSC/-			2	Variety of arid areas in southern California; pine-juniper woodlands, desert scrub, palm oases, desert wash, desert riparian; rocky areas with high cliffs.	Low; known to occur in Project quad but suitable habitat does not occur on-site.
<i>Nyctinomops macrotis</i>	big free-tailed bat	SSC/-			2	Dry high elevation forests.	Low; known to occur in Project quad but suitable habitat does not occur on-site.
<i>Odocoileus hemionus (fuliginata)</i>	mule deer, southern mule deer	-/-		X	2	Woodlands, riparian areas, margins of meadows and grasslands, and open shrublands.	Low; not known to occur in Project quad and suitable habitat does not occur on-site.

ATTACHMENT B

INVERTEBRATES							
<i>Onychomys torridus ramona</i>	southern grasshopper mouse	SSC/-			2	Semi-arid to arid scrub with friable soils and low to moderate shrub cover. Carnivorous, preferred food of preference is grasshoppers but will consume seeds, other insects and lizards.	Low; not known to occur in Project quad and suitable habitat does not occur on-site.
<i>Taxidea taxus</i>	American badger	SSC/-		X	2	Most common in drier open stages of most shrub, forest, and herbaceous habitats with friable soils.	Low; known to occur in Project quad but only very marginally suitable habitat occurs on-site.

Listing Designations

Federal Listing (USFWS 2013, CDFW 2011)

FE - Federal-listed Endangered

FT - Federal-listed Threatened

FC - Federal candidate for listing

BCC - US Fish and Wildlife Service Bird of Conservation Concern

BLM-S - Bureau of Land Management Sensitive

USFS-S - US Forest Service Sensitive

State Listing (CDFW 2011, 2013)

SE - State-listed Endangered

ST - State-listed Threatened

SEC - State Endangered Candidate

FP - CA Dept. of Fish and Wildlife Fully Protected

SSC - State Species of Special Concern

WL - CA Dept. of Fish and Wildlife Watch List

CDF-S - CA Dept. of Forestry Sensitive

Cnty Group - County of San Diego Sensitive Animal Group (County of San Diego 2010)

1 - County of SD Sensitive Animal List Group 1

2 - County of SD Sensitive Animal List Group 2

MSCP - an X in this column indicates the species is included in the Multiple Species Conservation Program (MSCP Plan 1998)