HARMONY GROVE VILLAGE SOUTH

APPENDIX E

BIOLOGICAL TECHNICAL REPORT

for the

DRAFT FINAL ENVIRONMENTAL IMPACT REPORT

PDS2015-GPA-15-002
PDS2015-SP-15-002
PDS-REZ-15-003
PDS2018-TM-5626
PDS2015-MUP-15-008
Log No.: PDS2015-ER-15-08-006

MAY 2018

Prepared for:
COUNTY OF SAN DIEGO
PLANNING & DEVELOPMENT SERVICES
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FINAL BIOLOGICAL RESOURCES TECHNICAL REPORT
INFORMATION FOR THE READER

This document is the Final Biological Resources Technical Report for the proposed Harmony Grove Village South Project ("Project" or "Proposed Project"). The April 2017 Public Review Draft Biological Resources Technical Report focused on studies completed between 2014 and 2017, adequate to make CEQA findings regarding biological resources impacts associated with the Proposed Project.

Following the 2016/2017 rainy season that ended a drought cycle and to take advantage of optimal environmental conditions, HELIX completed updated botanical inventory and rare plants surveys on May 19 and June 2, 16, and 30, 2017. The May and June 2017 updated rare plant surveys supplemented the previous rare plant surveys completed in April, August, and November 2014, and March and April 2017. On the same days as the May and June 2017 updated rare plant surveys, HELIX completed updated protocol-level surveys for the Hermes copper butterfly (*Lycaena hermes*). The May 19 and June 2, 16, and 30, 2017 updated Hermes surveys supplemented the previous Hermes surveys completed in May, June, and July 2014.

The updated 2017 surveys reconfirmed the findings of previous surveys documented in the April 2017 Public Review Draft Biological Resources Technical Report. The updated survey information has been added to the following sections of the report: Executive Summary on pages ES-1 and ES-2; Section 1.3.2 on page 3; Table 1 on page 4; Section 1.3.3 on pages 5 and 6; Section 1.3.5 on page 8; Section 1.4.6 on page 15; Section 1.4.7 on page 15; Section 1.4.10 on page 21; Section 3.2 on page 67; Appendix A Plant Species Observed; and Appendix B Animal Species Observed or Detected.

In addition to the substantive changes enumerated above, some editorial or clarifying changes also were made. All changes are provided in a track changes format for ease of reader review.

As noted, the updated 2017 survey results are consistent with those made in the circulated document. No changes were identified to less-than-significant, or significant, impact assessements based on these surveys. The focused changes resulted in confirmation of CEQA significance conclusions reached in the Draft EIR. The additional information provides clarification and additional documentation, but does not result in any significant new information requiring recirculation.

HELIX
Environmental Planning

Harmony Grove Village South Project

Biological Technical Report

PDS2015-GPA-15-002; PDS2015-SP-15-002
PDS2018-TM-5626; PDS2015-REZ-15-003
PDS2015-MUP-15-008; PDS2015-ER-15-08-006

October 2017

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Harmony Grove Village South Project

Biological Technical Report

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~~April~~ October 2017

Harmony Grove Village South Project
Biological Technical Report

TABLE OF CONTENTS

TABLE OF CONTENTS (cont.)

TABLE OF CONTENTS (cont.)

LIST OF APPENDICES

TABLE OF CONTENTS (cont.)

LIST OF FIGURES

LIST OF TABLES

EXECUTIVE SUMMARY

At the request of RCS Harmony Partners, LLC (Project Proponent), HELIX Environmental Planning, Inc. (HELIX) has completed this biological resources technical report for the Harmony Grove Village South Project (Project), which is proposed in the unincorporated community of Harmony Grove in San Diego County, California. The Project would generally consist of a residential community with 453 single- and multi-family dwelling units in five neighborhoods, park and recreational uses, open space, a potential on-site wastewater reclamation facility, and related roadway and utility infrastructure improvements within Assessor Parcel Numbers (APNs) 235-011-06-00, 238-021-08-00, 238-021-09-00, and 238-021-10-00. The Project would occur within an approximately 111-acre area, referred to herein as the Project site. Off-site roadway improvements to Country Club Drive are also anticipated, consisting of the addition of a third lane to the segment south of Harmony Grove Road; potential replacement of the Arizona crossing over Escondido Creek with a new bridge, also currently under consideration by the County; and installation of utility lines in paved roadways. The off-site improvements would occur within an approximately 5.0-acre area.

In preparing the biological resources technical study for the Project, HELIX established a 143-acre study area encompassing the 111-acre Project site and approximately 32 acres of off-site areas within 100 feet of the site, including the off-site improvement areas. The purpose of this report is to document the existing biological conditions within the study area and provide an analysis of potential impacts to sensitive biological resources with respect to local, state, and federal policy. This report provides the biological resources technical documentation necessary for review under the California Environmental Quality Act (CEQA) by the County of San Diego (County) Planning & Development Services (PDS).

HELIX conducted general biological surveys, jurisdictional delineations, rare plant surveys, and protocol-level surveys for the Hermes copper butterfly (*Lycaena hermes*), burrowing owl (*Athene cunicularia*), coastal California gnatcatcher (*Polioptila californica californica*), and least Bell's vireo (*Vireo bellii pusillus*) during the period of April to November 2014. In total, 25 surveys were completed in 2014. ~~Another~~ Additional surveys ~~was~~ were performed in September 2015 to verify existing conditions in a general biological survey; January 2016 to obtain additional data on vegetation and jurisdictional waters and wetlands; and March through June 2017 to verify existing conditions and habitat suitability for sensitive species, complete updated rare plant surveys and obtain an updated botanical inventory, and conduct updated Hermes copper butterfly surveys. The study area supports 11 vegetation communities/habitat types: non-native vegetation, disturbed habitat, urban/developed, Diegan coastal sage scrub (including disturbed), coastal sage-chaparral transition, southern mixed chaparral, non-native grassland, southern [willow] riparian scrub, mule fat scrub, coast live oak woodland, and eucalyptus woodland. Sensitive natural communities requiring compensatory mitigation for impacts include Diegan coastal sage scrub, coastal sage-chaparral transition, southern mixed chaparral, non-native grassland, southern riparian scrub, mule fat scrub, and coast live oak woodland.

Five special status plant species were observed within the study area during 2014 rare plant surveys: ashy spike-moss (*Selaginella cinerascens*), San Diego sagewort (*Artemisia palmeri*), southwestern spiny rush (*Juncus acutus* var. *leopoldii*), summer holly (*Comarostaphylis*

diversifolia ssp. *diversifolia*), and wart-stemmed ceanothus (*Ceanothus verrucosus*). No additional rare plant species were observed during any of the other 2015, 2016, or 2017 surveys. The southern portion of the study area supports a substantial population of wart-stemmed ceanothus, consisting of an estimated 20,000 individuals. In addition, the study area supports five individual coast live oak (*Quercus agrifolia*) trees that are not associated with areas mapped as oak woodland habitat.

Thirteen special status animal species were observed within the study area during the 2014 and 2016 surveys: American peregrine falcon (*Falco peregrinus anatum*), barn owl (*Tyto alba*), coastal California gnatcatcher, great blue heron (*Ardea herodias*), green heron (*Butorides virescens*), least Bell's vireo, northern harrier (*Circus cyaneus*), red-shouldered hawk (*Buteo lineatus*), turkey vulture (*Cathartes aura*), western bluebird (*Sialia mexicana*), white-tailed kite (*Elanus leucurus*), yellow-breasted chat (*Icteria virens*), and yellow warbler (*Setophaga petechia*). Of these, four species were determined to use the study area for breeding and/or roosting: barn owl, coastal California gnatcatcher, yellow warbler, and yellow-breasted chat. The remaining eight species were observed on occasion flying over, foraging, and/or perching within various portions of the study area during 2014 and 2016 surveys. No additional special-status animal species were observed during any of the 2014, 2015, 2016, or 2017 surveys.

The study area supports a reach of Escondido Creek, where an existing low-water crossing occurs for Country Club Drive, in addition to several unnamed ephemeral drainage features that are tributary to Escondido Creek. These features would qualify as wetland and non-wetland waters of the U.S. subject to the regulatory jurisdiction of the U.S. Army Corps of Engineers (USACE) pursuant to Section 404 of the federal Clean Water Act (CWA); wetland and non-wetland waters of the State subject to the regulatory jurisdiction of the Regional Water Quality Control Board (RWQCB) pursuant to Section 401 of the CWA; riparian-vegetated and unvegetated streambed subject to the regulatory jurisdiction of the California Department of Fish and Wildlife (CDFW) pursuant to Sections 1600 *et seq*. of California Fish and Game Code (CFG Code); and wetlands subject to the regulatory jurisdiction of the County pursuant to the Resource Protection Ordinance (RPO).

The study area occurs within the boundaries of the Draft Multiple Species Conservation Program (MSCP) North County Plan (Draft North County Plan), which has not yet been approved or adopted. Within the Draft North County Plan, the study area occurs within lands identified as Pre-Approved Mitigation Area (PAMA) and supporting habitat values of Low to Very High on the Habitat Evaluation Model. The Del Dios Highlands Preserve abuts the study area to the south. Expansive open space continues beyond the Del Dios Preserve into the Elfin Forest Recreational Reserve and other undeveloped lands to the south, east and west as part of a large, regional core area. The majority of the study area is characterized by non-native grassland and chaparral. Scrub and chaparral habitat in the southern and southeastern portions of the study area are contiguous with off-site habitat associated with this core area.

Potential significant impacts were identified for special-status species, sensitive natural communities, jurisdictional waters and wetlands, and wildlife corridors and linkages. Following County Guidelines, a total of 77.9 acres of on-site impacts would occur either by direct physical removal of the habitat or by habitat fragmenting, isolating, and degradation. An additional 0.1

acre on site would be considered impact neutral due to location within an existing easement that would remain in place. Approximately 34.8 acres (31 percent) would be placed in biological open space which would protect the resources in perpetuity, including recordation of a biological open space easement, preparation of an Resource Management Plan (RMP) approved by the County and Wildlife Agencies (U.S. Fish and Wildlife Service [USFWS] and CDFW, collectively), and long-term management by a qualified entity approved by the County and Wildlife Agencies.. The proposed Project would also restore and create an additional 1.8 acres of Diegan coastal sage scrub within the biological open space, which would help minimize the overall impact on the habitat. Approximately 4.6 acres of off-site impacts would occur, a portion of which would include a new bridge over Escondido Creek, thereby enhancing hydrologic and biological conditions, including wildlife movement functions. Mitigation measures are proposed to fully mitigate potential significant impacts on special status species, sensitive vegetation communities/habitats, jurisdictional waters and wetlands, and wildlife corridors and linkages. Implementation of these mitigation measures would mitigate the potential impacts to below a level of significance.

In addition to the 34.8 acres of on-site preservation in biological open space, mitigation will include 51.5 acres of off-site preservation of biological open space, to also include recordation of a biological open space easement, preparation of an RMP approved by the County and Wildlife Agencies, and long-term management by a qualified entity approved by the County and Wildlife Agencies. To the extent available, off-site mitigation shall occur within land designated as PAMA in the Draft North County Plan and located in the Elfin Forest-Harmony Grove Planning Area, northern coastal foothills ecoregion, or other location deemed acceptable by the County and Wildlife Agencies. Mitigation may also include purchase of conservation and mitigation credits at approved conservation and mitigation banks, as deemed acceptable by the County, Wildlife Agencies, USACE, and/or RWQCB.

Based on feedback from the Wildlife Agencies and County, this report analyzes both the proposed project and an alternative, referred to herein as the "Biologically Superior Alternative," that provides for increased avoidance and conservation of Diegan coastal sage scrub. The Biologically Superior Alternative would result in a wider habitat connection and avoidance of additional coastal sage scrub on the east side of the project site, including habitat supporting a breeding pair of coastal California gnatcatchers. Approximately 46.5 acres (42 percent) would be placed in on-site biological open space under the Biologically Superior Alternative. No on-site restoration or creation of Diegan coastal sage scrub would occur under the Biologically Superior Alternative. The alternative is only discussed under those subject areas and guidelines where the impact would be different from that of the proposed project.

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1.0 INTRODUCTION

1.1 PURPOSE OF THE REPORT

At the request of RCS Harmony Partners, LLC, HELIX Environmental Planning, Inc. (HELIX) has completed this biological resources technical report for the proposed Harmony Grove Village South Project (Project). The purpose of this report is to document the existing biological conditions within an approximately 143-acre study area and provide an analysis of potential impacts to sensitive biological resources with respect to local, state, and federal policy. This report provides the biological resources technical documentation necessary for review under California Environmental Quality Act (CEQA) by County of San Diego (County) Planning and Development Services (PDS).

1.2 PROJECT LOCATION AND DESCRIPTION

The approximately 143-acre study area for the biological resources technical study described in this report includes the Project site and areas within 100 feet of the site and potential off-site improvements.

1.2.1 Project Location

The property that encompasses the approximately 111-acre Project site is generally located northwest of County Route S6, south of State Route (SR) 78, east of Interstate (I-) 5, and west of I-15 in the unincorporated community of Harmony Grove in north San Diego County, California (Figure 1). More specifically, the site occurs immediately south of Harmony Grove Road and east of Country Club Drive, just outside and west of the City of Escondido (Figure 2). The site is depicted within Sections 30 and 31 of Township 12 South, Range 2 West of the Rancho Santa Fe, California U.S. Geological Survey (USGS) 7.5-minute topographic quadrangle map (Figure 3). Primary access to the site is provided by Country Club Drive. The Project site occurs within Assessor Parcel Numbers (APNs) 235-011-06-00, 238-021-08-00, 238-021-09-00 and 238-021-10-00.

The study area occurs within the boundaries of the Draft Multiple Species Conservation Program (MSCP) North County Plan, which has not yet been approved or adopted. Within the Draft MSCP North County Plan, the study area occurs within areas identified as Pre-Approved Mitigation Area (PAMA; Figure 4).

1.2.2 Project Description

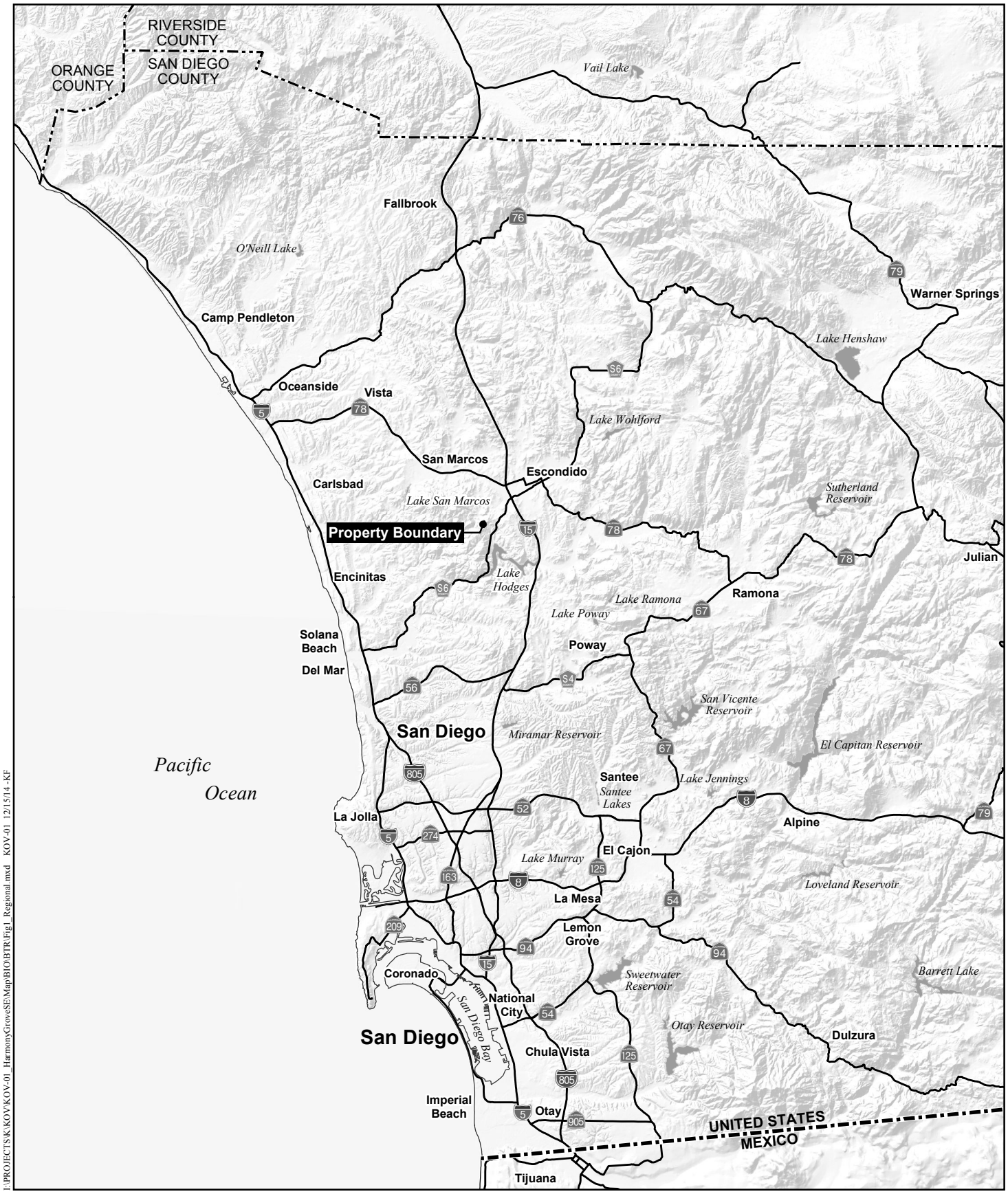
The proposed Project would contain 453 residential units and a small commercial area with limited retail/commercial uses (the Center House). In addition to on-site uses, the proposed Project would require the construction of on- and off-site infrastructure improvements associated with roads, water, and sewer. Refer to Figure 5, Proposed Project Site Plan, for the location of proposed uses. The total square footage of structures associated with the Center House use would be approximately 5,000 square feet, with a minimum of 500 square feet of commercial use. The residential units would be a mix of multi- and single-family units.

Roadways would be improved off site to accommodate access into the Project site. The current crossing of Escondido Creek would be substantially upgraded. When the creek floods, flood waters have historically been high enough that existing residents south of the creek cannot cross it. The existing at-grade, concrete pavement crossing, underlain by culverts and supported by substantial rip-rap, would be removed and replaced with a bridge. In addition, Country Club Drive, from Harmony Grove Road to the southern Project entrance, is planned to be widened to three lanes.

The Project design includes an on-site wastewater treatment and water reclamation facility (WTWRF) located in the northwestern portion of the site[1]. This facility would provide treatment for all wastewater generated on site, and would produce reclaimed effluent per applicable regulatory standards for irrigation of on-site landscaping. Based on the loading and design criteria used in the 180,000 gallons per day (gpd) Harmony Grove plant design, a scaled-down version could be constructed to serve the Proposed Project.

There is an existing unimproved trail across the southwestern portion of the project site. The Elfin Forest Trail starts from the Del Dios Highlands Trail in the Del Dios Highlands Preserve and runs along the western edge of the site from the southwestern corner of the property to Country Club Drive. The portion of the trail within the development footprint would be improved as a 6- to 8-foot-wide public rural trail. The portion within proposed biological open space would utilize the existing alignment as much as possible; however, some sections would have to be improved to meet the County requirement for a trail that is 4 to 6 feet wide and slopes outward 2 to 5 percent. A 20-foot-wide trail easement will be dedicated to the County along the entire trail length. Because the actual footprint of trail improvements has not been determined, the full area of the 20-foot trail easement is counted as an impact where it crosses chaparral. The actual impacts will be minimized by designing the trail improvements to avoid removing wart-stemmed ceanothus to the maximum extent practicable, in consultation with the County. The existing trail alignment crosses an ephemeral streambed qualifying as non-wetland waters of the U.S./State, and the surrounding coast live oak woodland is California Department of Fish and Wildlife (CDFW)-jurisdictional riparian habitat. The improved trail through this area will be designed to avoid any fill, discharge, or dredging of jurisdictional waters and removal of coast live oak trees or their roots; therefore, no impacts would occur to jurisdictional waters or coast live oak woodland from trail improvements in that area.

[1]As described in the Project EIR Chapter 4.0, Alternatives, alternative design scenarios were evaluated for the treatment of wastewater. Of the possible scenarios, the full on-site WTWRF proposed for the Project would result in the greatest biological impacts, and was therefore included in this analysis as a worst case.



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Regional Location Map

HARMONY GROVE VILLAGE SOUTH

HELIX Environmental Planning

N 0 8 Miles

Figure 1

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Project Vicinity Map (Aerial Photograph)

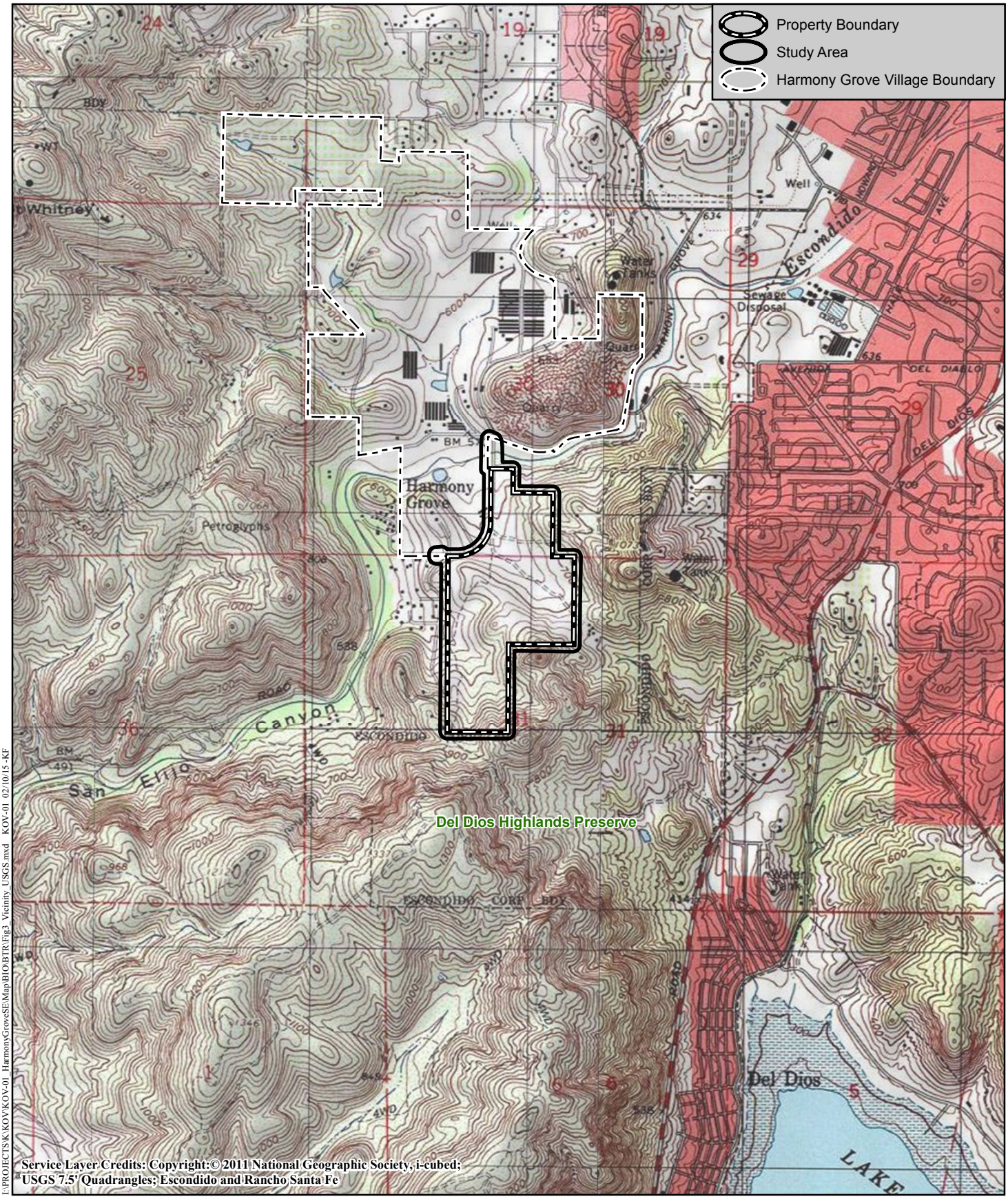
HARMONY GROVE VILLAGE SOUTH

HELIX Environmental Planning

N

0 2,000 Feet

Figure 2



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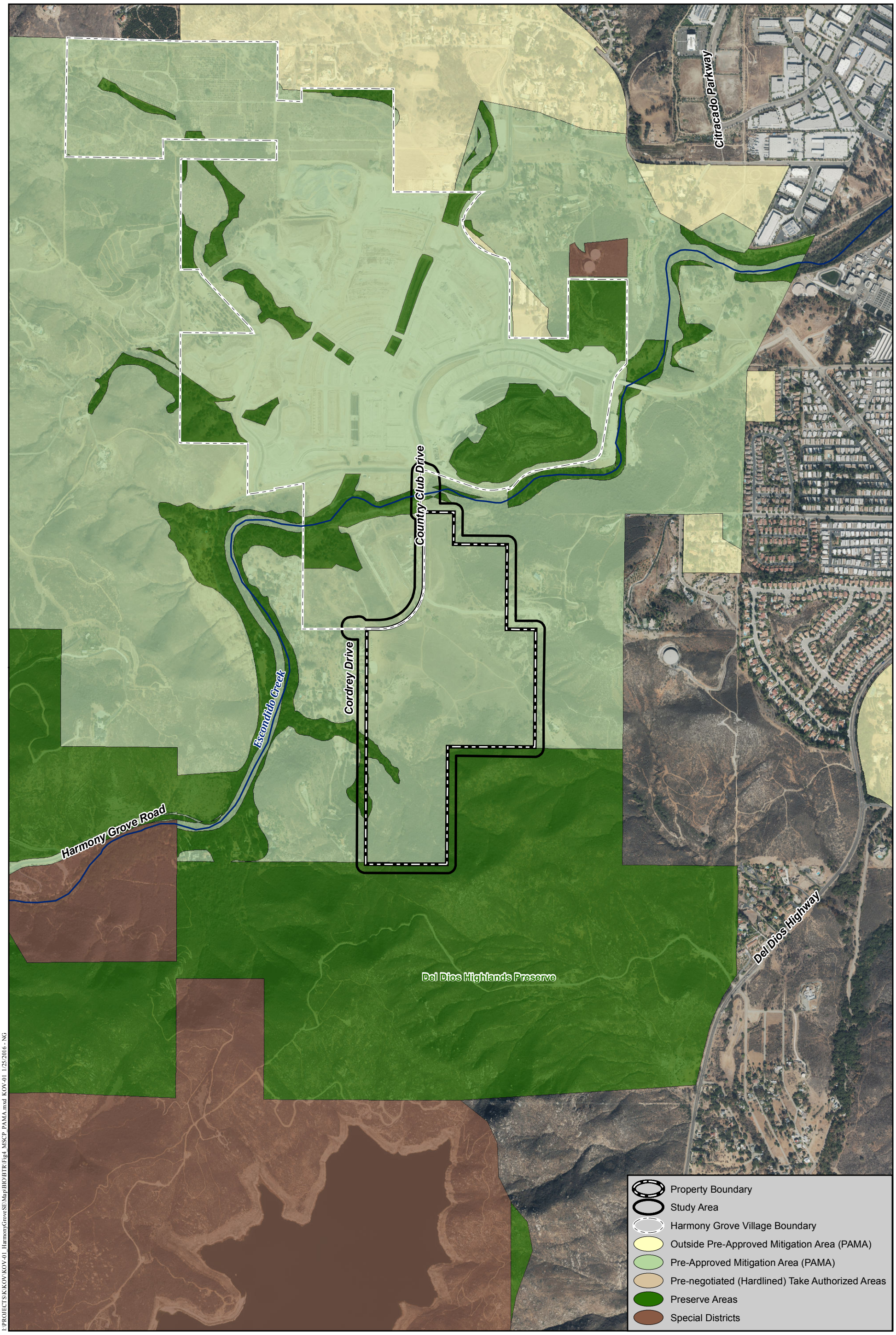
Project Vicinity Map (USGS Topography)

HARMONY GROVE VILLAGE SOUTH

HELIX Environmental Planning

N 0 2,000 Feet

Figure 3



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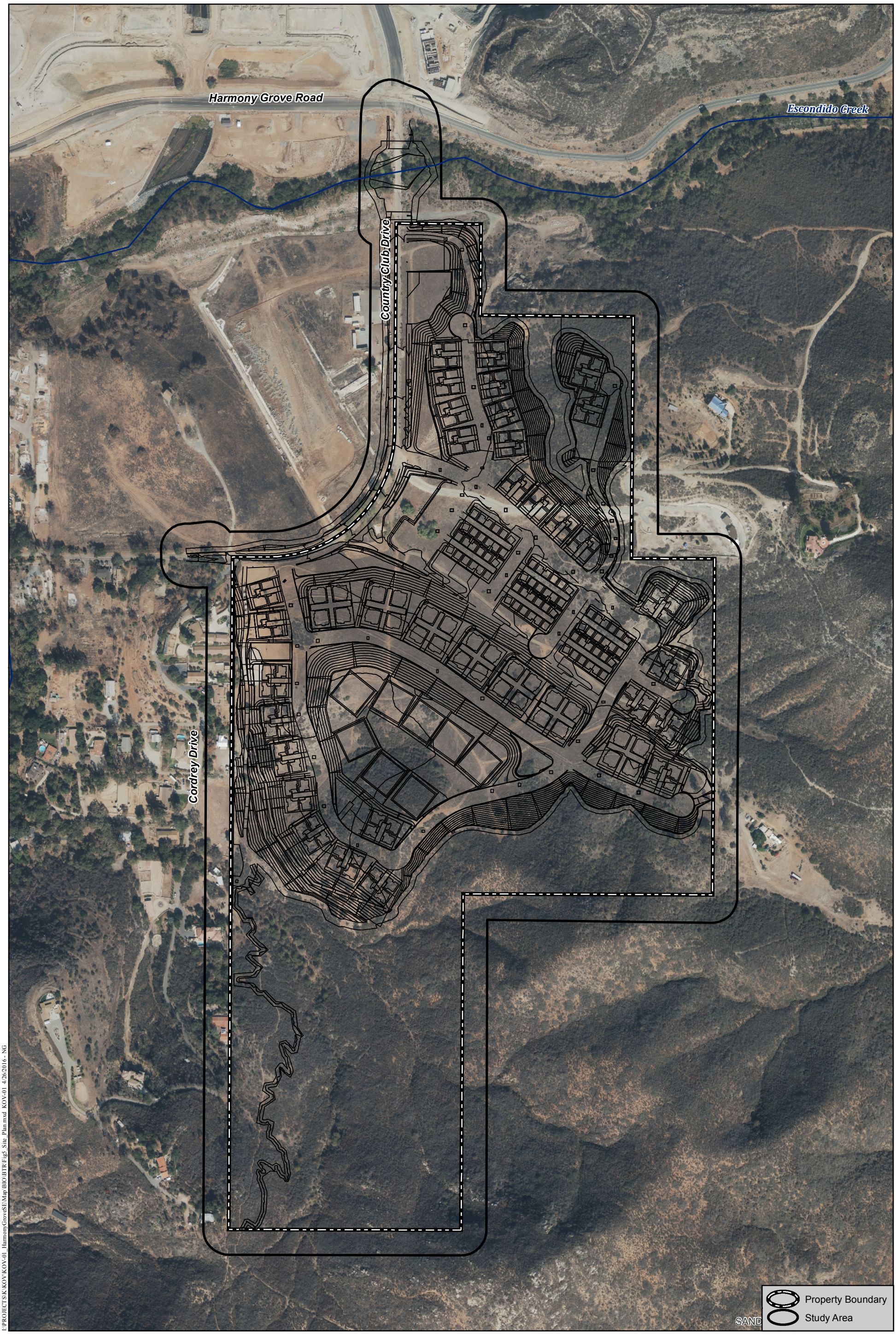
Draft MSCP North County Plan

HARMONY GROVE VILLAGE SOUTH

HELIX Environmental Planning

N 0 1,000 Feet

Figure 4



Site Plan

HARMONY GROVE VILLAGE SOUTH

HELIX Environmental Planning

0 350 Feet

Figure 5

This report also analyzes a Biologically Superior Alternative (alternative) that was developed based on input from the CDFW, U.S. Fish and Wildlife Service (USFWS), and County during batching meetings held in 2015. The alternative would avoid the highest quality, intact coastal sage scrub habitat on the site; increase the total coastal sage scrub preservation on site from 2.3 to 6.9 acres; include the gnatcatcher nest location from 2014 in open space; and improve overall wildlife movement along the east side of the project. Refer to Figure 6 for the layout of the alternative.

1.3 METHODS

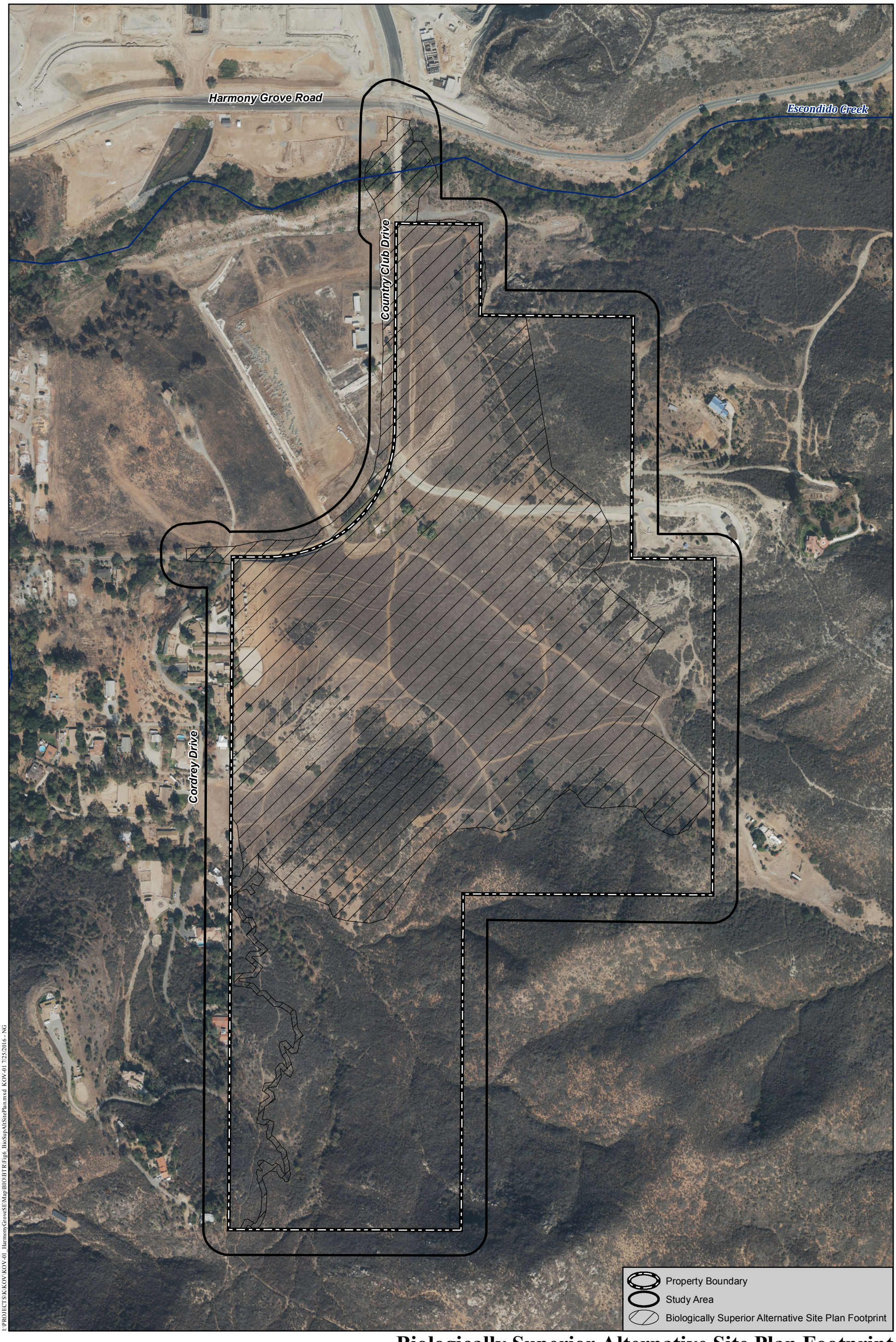
1.3.1 Literature Review

Prior to conducting biological field surveys in 2014, HELIX conducted a search of the California Natural Diversity Database (CNDDB) for information regarding sensitive species known to occur within 2 miles of the study area, as well as a review of USFWS, SanBIOS, and MSCP sensitive species databases. A search of the San Diego Plant Atlas (SDNHM 2010) was also conducted.

1.3.2 General Biological Surveys

General biological surveys of the study area were conducted by HELIX on March 7 and August 26, 2014. Updated surveys were conducted by HELIX on September 4, 2015 and March 31 and April 3, 2017 to confirm existing conditions. Vegetation was mapped on a 1"=100' scale aerial of the site. A minimum mapping unit size of 0.10 acre was used when mapping upland habitat; 0.01 acre was used when mapping wetland and riparian habitat. The study area was surveyed on foot and with the aid of binoculars and spotting scopes. Representative photographs of the site were taken, with select photographs included in this report as Appendix F. Plant and animal species observed or otherwise detected were recorded in field notebooks. Animal identifications were made in the field by direct, visual observation or indirectly by detection of calls, burrows, tracks, or scat. Plant identifications were made in the field or in the lab through comparison with voucher specimens or photographs. The locations of special status plant and animal species incidentally observed or otherwise detected were mapped. The study area was examined for evidence of potential jurisdictional waters and wetlands, including vernal pools. In addition to the general biological surveys, HELIX conducted a formal jurisdictional delineation, rare plant surveys, and year 2014 protocol-level surveys for Hermes copper butterfly (*Lycaena hermes*), burrowing owl (*Athene cunicularia*), coastal California gnatcatcher (*Polioptila californica californica*), and least Bell's vireo (*Vireo bellii pusillus*). Additional surveys were completed in 2015, 2016, and 2017, including updated rare plant surveys and Hermes copper surveys in 2017. Table 1 provides a summary of biological surveys conducted for the Project.

Table 1 BIOLOGICAL SURVEYS		
SURVEY TYPE	**DATE**	**HELIX PERSONNEL**
2014		
General biological survey, vegetation community/habitat type mapping, habitat assessment, and basic wetland delineation	March 7	Stacy Nigro, Benjamin Rosenbaum
	July 24	Karl Osmundson
	August 26	Karl Osmundson
Formal jurisdictional delineation	March 14	Larry Sward, Benjamin Rosenbaum
Rare plant	April 30	Amy Mattson
	August 26	Karl Osmundson
	November 3	Erica Harris
Hermes copper butterfly	May 21	Amy Mattson, Laura Moreton
	June 4	Amy Mattson, Jenna Hartsook
	June 13	Amy Mattson, Jenna Hartsook
	July 7	Amy Mattson, Benjamin Rosenbaum
Burrowing owl	April 9	Tara Baxter, Benjamin Rosenbaum
	May 14	Tara Baxter, Benjamin Rosenbaum
	June 5	Benjamin Rosenbaum, Jesse Miller
	July 3	Tara Baxter, Jenna Hartsook
Coastal California gnatcatcher	May 13	Erica Harris
	May 20	Erica Harris, Tara Baxter
	May 29	Erica Harris
Least Bell's vireo	April 25	Tara Baxter
	May 6	Stacy Nigro
	May 21	Tara Baxter, Jenna Hartsook
	June 2	Stacy Nigro
	June 12	Tara Baxter
	June 23	Tara Baxter
	July 2	Laura Moreton
	July 14	Tara Baxter
2015		
Site visit, general biological survey	September 4	Karl Osmundson
2016		
Chaparral assessment, jurisdictional delineation	January 13	Larry Sward, Beth Ehsan
2017		
Site visit, general biological survey, rare plant survey	March 31	Karl Osmundson
	April 3	
Hermes copper butterfly, rare plant survey	May 19	Erica Harris
	June 2	Erica Harris
	June 16	Erica Harris, Hannah Lo
	June 30	Erica Harris



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Biologically Superior Alternative Site Plan Footprint

HARMONY GROVE VILLAGE SOUTH

HELIX Environmental Planning

N 0 350 Feet

Figure 6

1.3.3 Focused Species Surveys

Rare Plant Surveys

An initial rare plant survey was conducted in the study area by HELIX on April 30, 2014 (Table 1). A focused inventory of wart-stemmed ceanothus (*Ceanothus verrucosus*) and follow-up survey for Encinitas baccharis (*Baccharis vanessae*) was conducted on November 3. ~~An u~~Updated rare plant surveys ~~was~~ were conducted by HELIX on March 31, ~~and~~ April 3, May 19, June 2, June 16, and June 30, 2017, concurrent with the updated general biological survey and Hermes copper surveys. Opportunistic inspections for target rare plant species were also made during the other biological surveys performed in 2014, 2015, and 2016 (Table 1). Searches were made for those species that are listed as threatened or endangered by the USFWS or the CDFW; those with a Rare Plant Rank 1 through 4 designated by the California Native Plant Society (CNPS); and those that are on the County Sensitive Plant List (County 2010a). The surveys were conducted on foot and included 100 percent visual coverage of the study area. Impenetrable stands of dense chaparral, such as those that occur in the southern portions of the study area, were viewed using binoculars and spotting scopes from perimeter areas, trails, and higher elevation vantage points. Special status plant species encountered were mapped using a hand-held Global Positioning System (GPS) unit and/or on an aerial photograph.

Hermes Copper Butterfly

HELIX biologists conducted ~~a~~ surveys for the Hermes copper butterfly according to the *County's Guidelines for Hermes Copper* (2010b). ~~Four~~ During each survey effort completed in 2014 and 2017, four site visits, ~~8~~ eight to 14 days apart, were made beginning during the third full week of May and ending with the last site visit made during the first full week of July ~~of 2014~~ (Table 1). Prior to the 2014 survey, HELIX had mapped the species' larval host plant (spiny redberry [*Rhamnus crocea*]), and the survey focused on the areas around those plants and particularly where California buckwheat (*Eriogonum fasciculatum*), the species' favored nectar plant, was present.

Least Bell's Vireo

HELIX biologists conducted a survey for the least Bell's vireo in accordance with *Least Bell's Vireo Survey Guidelines* (USFWS 2001). The survey consisted of eight site visits made from April 25 through July 14, 2014 (Table 1). The survey area consisted of potential least Bell's vireo riparian habitat (i.e., southern willow riparian forest and patches of associated coast live oak woodland and mule fat scrub) within a section of Escondido Creek upstream and downstream of the Country Club Drive crossing of the creek. The survey was conducted by walking along the edges of, as well as within, potential least Bell's vireo habitat while listening for least Bell's vireo vocalizations and while viewing birds with the aid of binoculars. All least Bell's vireo locations, along with other special status riparian bird species locations (and those of the brown-headed cowbird [*Molothrus ater*; a nest parasite] were mapped on an aerial photograph. The report of findings for the least Bell's vireo survey is included as Appendix H.

Coastal California Gnatcatcher

HELIX biologists conducted a survey for the coastal California gnatcatcher in accordance with the *Coastal California Gnatcatcher Presence/Absence Survey Protocol* (USFWS 1997). The survey consisted of three site visits made from May 13 through May 29, 2014 (Table 1). Non-protocol, opportunistic surveys for gnatcatcher were also made during the other biological surveys performed in 2014, 2015, 2016, and 2017. The survey area consisted of potential coastal California gnatcatcher habitat in the study area (i.e., Diegan coastal sage scrub, Diegan coastal sage scrub-disturbed, and coastal sage-chaparral scrub). The survey was conducted by walking through the vegetation or on adjacent paths, and birds were viewed with the aid of binoculars, where necessary. If the coastal California gnatcatcher was not detected passively, a digital coastal California gnatcatcher call-prompt was briefly played. Coastal California gnatcatcher locations were mapped on an aerial photograph. The report of findings for the coastal California gnatcatcher survey is included as Appendix J.

Burrowing Owl

HELIX biologists conducted a nesting season survey for the burrowing owl in accordance with the survey guidelines in the *CDFW 2012 Staff Report on Burrowing Owl Mitigation* (CDFW 2012) and consistent with *Strategy for Mitigating Impacts to Burrowing Owls in the Unincorporated County* (Attachment A to County 2010b). Four site visits were made from April 9 through July 3, 2014 by teams of two biologists (Table 1) to survey potential burrowing owl habitat (i.e., non-native grassland, disturbed habitat, and scrub communities where the shrub cover was sparse) where it occurs in the study area and 500 feet beyond. Some of the potential burrowing owl habitat in the survey area was inspected with the aid of binoculars due to restricted access to private property.

The biologists slowly walked meandering transects through areas of potential habitat where it was legally accessible. Fence posts, rocks, and other possible perching locations, as well as mammal burrows (especially those of California ground squirrel [*Otospermophilus beecheyi*]) potentially suitable for use by burrowing owls were inspected and mapped with a hand-held GPS unit. These burrows were specifically searched for sign of recent burrowing owl occupation including pellets with regurgitated fur, bones, and insect parts; white wash (excrement); and feathers. In addition, structures such as concrete culverts/piles, wood debris piles, trash piles, and openings beneath cement or asphalt pavement that were present were checked for burrowing owl sign. The report of findings for the burrowing owl survey is included as Appendix I.

1.3.4 Jurisdictional Delineation

Prior to beginning fieldwork, aerial photographs (1"=200' scale), topographic maps (1"=200' scale), and National Wetland Inventory (NWI) maps were reviewed to assist in determining the location of potential jurisdictional areas in the study area. HELIX biologists performed the formal jurisdictional delineation on March 14, 2014 (Table 1). A follow-up delineation was conducted on January 13, 2016 to obtain additional information at a wetland sampling point in a western portion of the site. The delineation was conducted to identify and map potential waters of the U.S. subject to U.S. Army Corps of Engineers (USACE) jurisdiction

pursuant to Section 404 of the Clean Water Act (CWA; 33 USC 1344), waters of the State subject to Regional Water Quality Control Board (RWQCB) jurisdiction pursuant to CWA Section 401 and State Porter-Cologne Water Quality Control Act (Porter-Cologne), and streambed and riparian habitat subject to CDFW jurisdiction pursuant to Sections 1600 *et seq.* of the California Fish and Game Code (CFG Code). The delineation was also conducted to determine the presence or absence of County Resource Protection Ordinance (RPO) wetlands. Areas generally characterized by depressions, drainage features, and riparian and wetland vegetation were evaluated. The jurisdictional delineation is included as Appendix K.

Waters of the U.S. (USACE Jurisdiction)

Potential USACE-jurisdictional waters of the U.S. were delineated in accordance with the Wetlands Delineation Manual (Environmental Laboratory 1987) and Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (USACE 2008). Sampling points were located within representative uplands and wetlands, and mapping of drainage features was performed in the field based on the ordinary high water mark (OHWM) and surface indications of hydrology. Areas were determined to be potential wetland waters of the U.S. if there was a dominance of hydrophytic vegetation, hydric soils, and wetland hydrology indicators. Areas were determined to be non-wetland waters of the U.S. if there was evidence of regular surface flow within an OHWM, but the vegetation and/or soils criterion were not met.

Waters of the State (RWQCB Jurisdiction)

In the context of this assessment, potential RWQCB-jurisdictional waters of the State include the same areas delineated as potential USACE-jurisdictional waters of the U.S.; there are no geographically isolated waters subject to Porter-Cologne. Waters of the State were delineated on the site consistent with the methods used for waters of the U.S.

Streambed and Riparian Habitat (CDFW Jurisdiction)

Potential CDFW-jurisdictional streambed and riparian habitat was determined based on the presence of riparian vegetation or regular surface flow within a definable bed and bank. Streambeds within CDFW jurisdiction were delineated based on the definition of streambed as "a body of water that flows at least periodically or intermittently through a bed or channel having banks and supporting fish or other aquatic life. This includes watercourses having a surface or subsurface flow that supports riparian vegetation" (Title 14, Section 1.72). Potential CDFW jurisdictional unvegetated-streambed encompasses the top-of-slope to top-of-slope width for the ephemeral streams within the study area. Vegetated-streambed includes all riparian shrub or tree canopy extending beyond the banks of Escondido Creek and the ephemeral streams within the study area.

County Resource Protection Ordinance Wetlands

Areas were considered County wetlands if they met one of the three following attributes pursuant to the County RPO (County 2011): (1) at least periodically, the land supports a predominance of hydrophytes (plants whose habitat is water or very wet places); (2) the substratum is

predominantly undrained hydric soil; or (3) an ephemeral or perennial stream is present, whose substratum is predominately non-soil and such lands contribute substantially to the biological functions or values of wetlands in the drainage system.

1.3.5 Survey Limitations

While 2014 was a year of low rainfall, most of the special status plant species with potential to occur in the study area (based on geographic range, habitat and soil requirements, and database records) are perennial species (and many are shrubs), and as such, are readily identifiable year-round and in low rainfall years. Therefore, the low rainfall in 2014 is not considered to have adversely affected the results of the 2014 rare plant surveys. Nevertheless, updated rare plant surveys were completed in 2017 during optimal conditions following the relatively high rainfall levels recorded in the region during the 2016/2017 rainy season.

Noted animal species were identified by direct observation, vocalizations, or the observance of scat, tracks, or other signs. However, the lists of species identified are not necessarily comprehensive accounts of all species that utilize the study area as species that are nocturnal, secretive, or seasonally restricted may not have been observed. Those species that are of special status and have potential to occur in the study area, however, are still addressed in this report.

1.3.6 Nomenclature

Nomenclature used in this report generally comes from Holland (1986) and Oberbauer (2008) for vegetation; Baldwin et al. (2012) for plants; Glassberg (2001) for butterflies; Collins and Taggart (2006) for reptiles and amphibians; American Ornithologists' Union (2013) for birds; and Baker et al. (2003) for mammals. Plant species status is from the CNPS (2014), CDFW (2014a), and County (2010a). Animal species status is from CDFW (2011 and 2014b) and County (2010a).

1.4 ENVIRONMENTAL SETTING

1.4.1 Regional Context

The study area is generally located within the northern coastal foothills ecoregion of north San Diego County. It occurs within the northeastern portion of the Elfin Forest – Harmony Grove Planning Area. Generalized climate in the region is regarded as dry, subhumid mesothermal, with warm dry summers and cold moist winters. Mean annual precipitation is between 14 and 18 inches, and the mean annual temperature is between 60 and 62 degrees Fahrenheit. The frost-free season is 260 to 300 days.

Important biological resources in the region generally include core blocks of chaparral in the Harmony Grove hills and coastal sage scrub in the Elfin Forest area, in addition to perennial waters and riparian habitat associated with Escondido Creek and San Dieguito River corridors. Oak woodlands and chaparral typify the biological character of much of the area. The region hosts core populations of sensitive plants, including Encinitas baccharis, wart-stemmed ceanothus, and summer holly (*Comarostaphylis diversifolia* ssp. *diversifolia*), in addition to

important habitat for several sensitive animals, including coastal California gnatcatcher and least Bell's vireo, among others.

In the context of the Draft North County MSCP Plan, the study area occurs within PAMA, north of Preserve Areas associated with the Del Dios Highlands Preserve and Elfin Forest Recreational Reserve, south and east of Pre-negotiated (Hardlined) Take Authorized Areas associated with Harmony Grove Village, and west of PAMA and undesignated City of Escondido lands. The dominant habitat type within the study area is southern mixed chaparral, which covers approximately 46.8 acres; the next highest habitat type is non-native grassland, which covers approximately 42.5 acres of the site.

1.4.2 General Land Uses

General land uses in the study area include undeveloped land, portions of which were previously in active agriculture and homestead use. A private driveway currently traverses the study area providing access to rural residences to the east. Native chaparral and non-native grassland are the dominant vegetation communities within the study area. Surrounding land uses generally include the Harmony Grove Village development to the north and west, open space to the south, rural residences and undeveloped land to the east, and semi-rural residences to the west (Figure 3). The properties supporting rural residences within County jurisdiction to the east are currently built out to their allowed zoning and density designations.

1.4.3 Disturbance

The northern and north-central portions of the study area have been disturbed in the past by human activities, which have resulted in those areas now supporting disturbed habitat, non-native grassland, and scattered non-native trees and shrubs. Additionally, there is disturbed habitat south of Country Club Drive that was once a dairy facility and disturbed habitat adjacent to residences and Country Club Drive. Numerous dirt roads traverse the study area, some of which lead to off-site residences, in addition to several patches of eroded land on hillsides where previous land disturbance has occurred. The non-native vegetation within the study area occurs primarily adjacent to Country Club Drive and is comprised of species such as Peruvian peppertree (*Schinus molle*) and tree of heaven (*Ailanthus altissima*). It appears that these trees were purposely planted around a former home site.

1.4.4 Topography and Soils

Elevations in the study area range from approximately 938 feet above mean sea level (amsl) to 570 feet amsl. Elevation generally increases from north to south across the site. The study area generally contains a southeast to northwest trending valley surrounded by hills and steep ridgelines to the east, south, and west. Escondido Creek flows through the northern portion of the study area and generally trends east-west to San Elijo Lagoon (Figure 2). The ephemeral tributaries identified in the southern portions of the study area converge and drain off site to the west, through rural residential properties, before discharging into a reach of Escondido Creek located further to the west of the study area.

Nine soil types have been mapped in the study area (Natural Resource Conservation Service [NRCS] 2014a; Figure 7). Those soils types covering the most area included Cieneba-Fallbrook rocky sandy loams, 30 to 65 percent slopes, eroded; Escondido very fine sandy loam, 15 to 30 percent slopes, eroded; Las Posas fine sandy loam, 15 to 30 percent slopes, eroded; Las Posas fine sandy loam, 9 to 15 percent slopes, eroded; Las Posas stony fine sandy loam, 30 to 65 percent slopes; Wyman loam 2 to 5 percent slopes; and Wyman loam, 5 to 9 percent slopes. Less common in the study area were Huerhuero loam, 2 to 9 percent slopes and Visalia sandy loam, 2 to 5 percent slopes. Wyman loams are known to be associated with alluvial fans. However, no alluvial fans or surface water features occur in the areas mapped as Wyman loam; none are evident from review of historical imagery and topographic maps of the site (NETR Online 2017). None of the named soils mapped in the study area are listed as hydric; however, there are unnamed inclusions in these soil types that may be hydric based on landscape position and hydrology (NRCS 2014b).

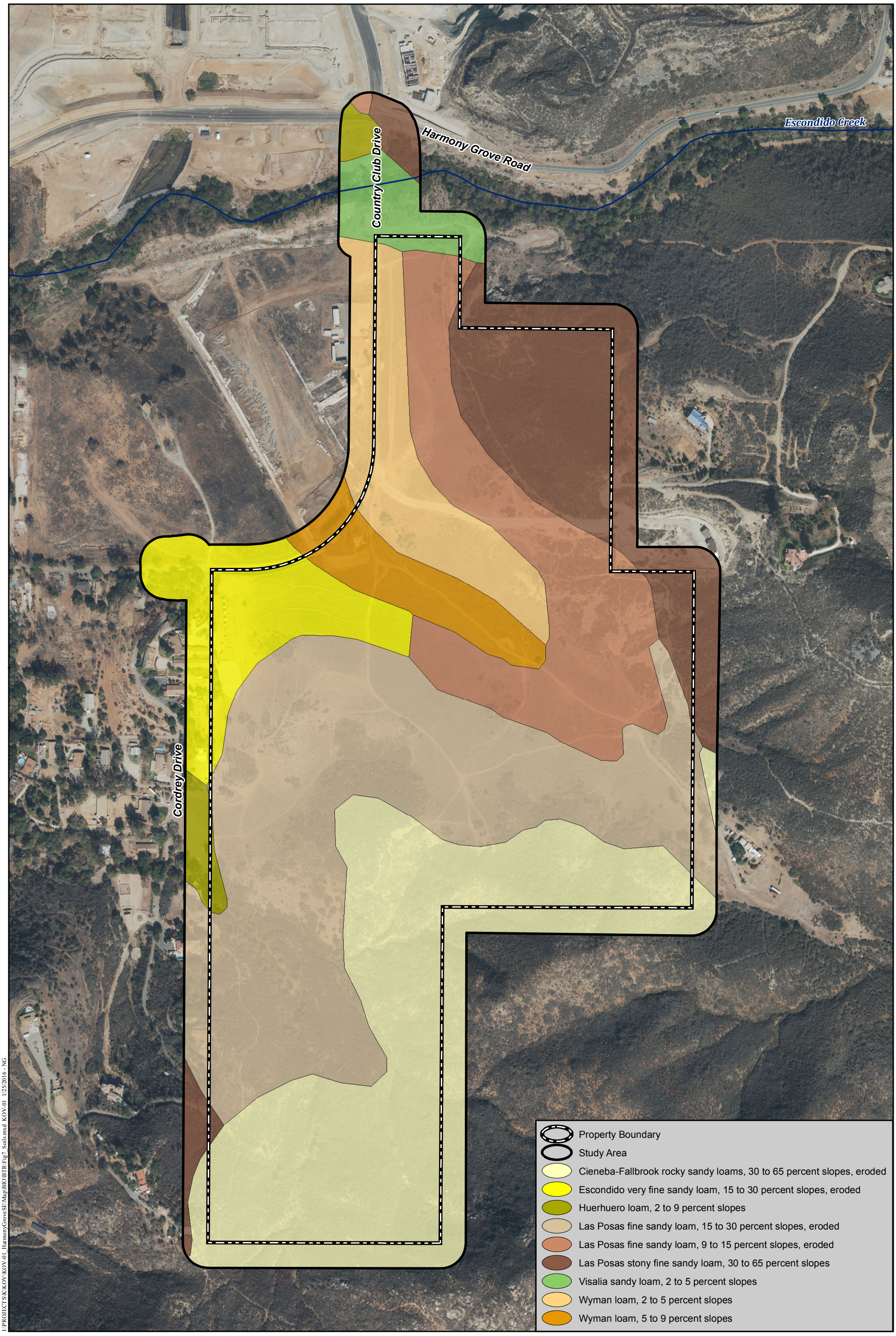
The mapped soil types were compared against the actual soils encountered during geotechnical investigations for the Project. The actual soils information would provide further guidance in evaluating suitability for rare plants and, in combination with vegetation composition, whether mafic or metavolcanic (gabbro) derived substrate is present. Four surficial soil types and one geologic formation were encountered during the previous field investigation. The surficial deposits consist of undocumented fill, topsoil, alluvium, and colluvium. The formational unit includes the Cretaceous-age granitic rocks commonly referred to as Escondido Creek Granodiorite. Three relatively small undocumented fill embankments occur on the site. Topsoils characterized as loose, damp, brown, silty sands blanket the majority of the site and vary from approximately ½ to 1 foot thick. Alluvial deposits were found over a relatively large portion of the property within the drainage and tributary channels throughout the site. These deposits generally consist of relatively loose to medium dense, silty sands with varying amounts of gravel and cobble. Colluvial deposits were encountered along the hillsides above the alluvial drainages overlying the granitic rock. In limited areas, cemented colluvium was encountered at grade and at depth in exploratory trenches and borings. Cretaceous-age Escondido Creek Granodiorite (granitic rock) underlies the surficial deposits ranging from highly weathered, decomposed rock to outcrops of slightly weathered, extremely strong rock that may require blasting to excavate. The soils derived from excavations within the decomposed granitic rock are anticipated to consist of low-expansive, silty, medium- to coarse-grained sands.

1.4.5 Vegetation Communities/Habitat Types

Eleven vegetation communities/habitat types occur in the study area, as shown on Figure 8. The numeric codes in parentheses following each community/habitat type name are from the Holland classification system (Holland 1986) and as added to by Oberbauer (2008) as presented in the County's Biology Guidelines (County 2010a). The communities/habitat types are described below in order by Holland code.

Non-native Vegetation

Non-native vegetation is a category describing stands of naturalized trees and shrubs (e.g., acacia [*Acacia* sp.], peppertree [*Schinus* sp.]), many of which are also used in landscaping. As described



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Soils

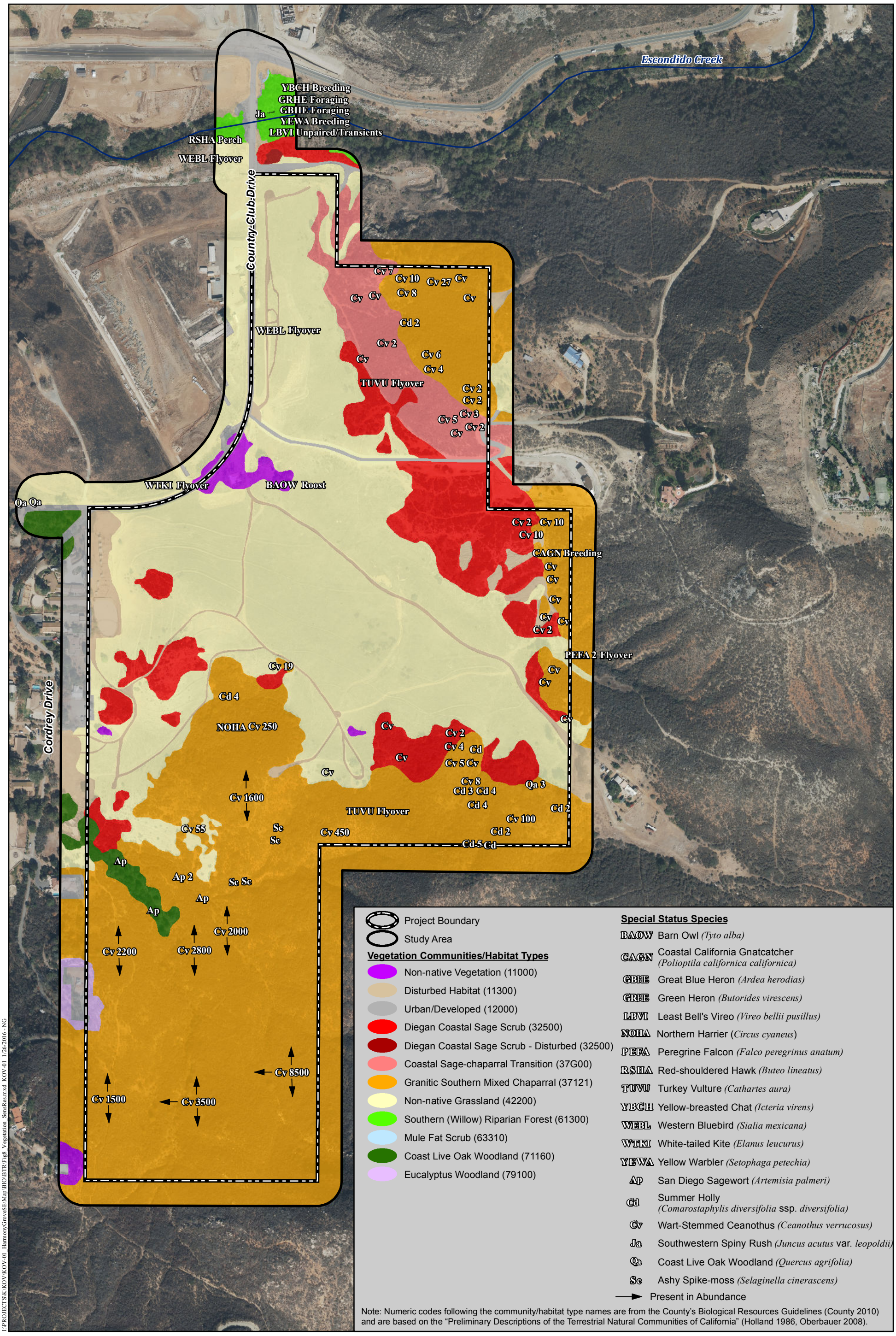
HARMONY GROVE VILLAGE SOUTH

HELIX Environmental Planning

N

0 350 Feet

Figure 7



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Vegetation and Sensitive Resources

HARMONY GROVE VILLAGE SOUTH

HELIX Environmental Planning

N 0 350 Feet

Figure 8