

HARMONY GROVE VILLAGE SOUTH

APPENDIX E

BIOLOGICAL TECHNICAL REPORT

to the

DRAFT ENVIRONMENTAL IMPACT REPORT

PDS2015-GPA-15-002; PDS2015-SP-15-002
PDS2015-TM-5600; PDS2015-REZ-15-003
PDS2015-MUP-15-008; PDS2015-ER-15-08-006

APRIL 2017

Prepared for:
COUNTY OF SAN DIEGO
PLANNING & DEVELOPMENT SERVICES
5510 OVERLAND AVENUE, SUITE 310
SAN DIEGO, CALIFORNIA 92123

Harmony Grove Village South Project

Biological Technical Report

PDS2015-GPA-15-002; PDS2015-SP-15-002

PDS2015-TM-5600; PDS2015-REZ-15-003

PDS2015-MUP-15-008; PDS2015-ER-15-08-006

April 2017

Project Proponent:

RCS Harmony Partners, LLC

2305 Historic Decatur Road, Suite 100
San Diego, CA 92106

Prepared for:

County of San Diego

Planning & Development Services

5510 Overland Avenue, Suite 310
San Diego, CA 92123



Karl Osmundson

County-approved Biological Consultant

Prepared by:

HELIX Environmental Planning, Inc.

7578 El Cajon Boulevard
La Mesa, CA 91942

Harmony Grove Village South Project

Biological Technical Report

PDS2015-GPA-15-002; PDS2015-SP-15-002
PDS2015-TM-5600; PDS2015-REZ-15-003
PDS2015-MUP-15-008; PDS2015-ER-15-08-006

Prepared for:

County of San Diego
Planning & Development Services
5510 Overland Avenue, Suite 310
San Diego, CA 92123

Project Proponent:

RCS Harmony Partners, LLC
2305 Historic Decatur Road, Suite 100
San Diego, CA 92106

Prepared by:

Karl Osmundson
County-approved Biological Consultant
HELIX Environmental Planning, Inc.
7578 El Cajon Boulevard
La Mesa, CA 91942

April 2017

Harmony Grove Village South Project Biological Technical Report

TABLE OF CONTENTS

<u>Section</u>	<u>Title</u>	<u>Page</u>
ES	EXECUTIVE SUMMARY	1
1.0	INTRODUCTION	1
1.1	Purpose of the Report.....	1
1.2	Project Location and Description.....	1
1.2.1	Project Location	1
1.2.2	Project Description	1
1.3	Methods.....	3
1.3.1	Literature Review	3
1.3.2	General Biological Surveys.....	3
1.3.3	Focused Species Surveys.....	5
1.3.4	Jurisdictional Delineation.....	6
1.3.5	Survey Limitations	8
1.3.6	Nomenclature	8
1.4	Environmental Setting	8
1.4.1	Regional Context.....	8
1.4.2	General Land Uses	9
1.4.3	Disturbance.....	9
1.4.4	Topography and Soils.....	9
1.4.5	Vegetation Communities/Habitat Types	10
1.4.6	Flora.....	15
1.4.7	Fauna	15
1.4.8	Sensitive Vegetation Communities/Habitat Types.....	16
1.4.9	Special Status Plant Species	16
1.4.10	Special Status Animal Species	17
1.4.11	Jurisdictional Waters and Wetlands	23
1.4.12	Habitat Connectivity and Wildlife Corridors	26
1.5	Applicable Regulations	31
1.5.1	Federal Government	31
1.5.2	State of California	33
1.5.3	County of San Diego	34

TABLE OF CONTENTS (cont.)

<u>Section</u>	<u>Title</u>	<u>Page</u>
2.0	PROJECT EFFECTS	39
2.1	Special Status Species	41
2.1.1	Special Status Plant Species	41
2.1.2	Special Status Animal Species	42
2.2	Riparian Habitat or Sensitive Natural Community	46
2.3	Jurisdictional Wetlands and Waterways	53
2.4	Wildlife Movement and Nursery Sites	54
2.5	Indirect Impacts	57
3.0	SPECIAL STATUS SPECIES	58
3.1	Guidelines for Determining Significance	58
3.2	Analysis of Project Effects	59
3.3	Cumulative Impact Analysis	67
3.4	Mitigation Measures and Design Considerations	72
3.5	Conclusion	75
4.0	RIPARIAN HABITAT OR SENSITIVE NATURAL COMMUNITY	76
4.1	Guidelines for Determining Significance	76
4.2	Analysis of Project Effects	76
4.3	Cumulative Impact Analysis	79
4.4	Mitigation Measures and Design Considerations	80
4.5	Conclusion	82
5.0	JURISDICTIONAL WETLANDS AND WATERWAYS	82
5.1	Guidelines for Determining Significance	82
5.2	Analysis of Project Effects	82
5.3	Cumulative Impact Analysis	83
5.4	Mitigation Measures and Design Considerations	83
5.5	Conclusion	83
6.0	WILDLIFE MOVEMENT AND NURSERY SITES	83
6.1	Guidelines for Determining Significance	83
6.2	Analysis of Project Effects	84
6.3	Cumulative Impact Analysis	90
6.4	Mitigation Measures and Design Considerations	91
6.5	Conclusion	91

TABLE OF CONTENTS (cont.)

<u>Section</u>	<u>Title</u>	<u>Page</u>
7.0	LOCAL POLICIES, ORDINANCES, AND ADOPTED PLANS	91
	7.1 Guidelines for Determining Significance	91
	7.2 Analysis of Project Effects.....	92
	7.3 Cumulative Impact Analysis.....	104
	7.4 Mitigation Measures and Design Considerations	104
	7.5 Conclusion	104
8.0	SUMMARY OF PROJECT IMPACTS AND MITIGATION	104
9.0	LIST OF PREPARERS AND PERSONS/ORGANIZATIONS CONTACTED ..	120
10.0	REFERENCES	121

LIST OF APPENDICES

A	Plant Species Observed
B	Animal Species Observed or Detected
C	Sensitive Plant Species with Potential to Occur
D	Sensitive Animal Species with Potential to Occur
E	Explanation of Status Codes for Plant and Animal Species
F	Site Photographs
G	Summary of Consistency with 2009 Draft MSCP North County Plan Goals for Harmony Grove Core Area
H	Least Bell's Vireo Survey Report
I	Burrowing Owl Survey Report
J	California Gnatcatcher Survey Report
K	Jurisdictional Delineation Report
L	Coast Live Oak Woodland Soil Pit Data Sheet
M	Chaparral Vegetation Assessment Data Sheets

TABLE OF CONTENTS (cont.)

LIST OF FIGURES

<u>No.</u>	<u>Title</u>	<u>Follows Page No.</u>
1	Regional Location Map.....	2
2	Project Vicinity Map (Aerial Photograph).....	2
3	Project Vicinity Map (USGS Topography)	2
4	Draft MSCP North County Plan Designations	2
5	Proposed Project Site Plan	2
6	Biologically Superior Alternative Site Plan.....	4
7	Soils.....	10
8	Vegetation and Sensitive Resources	10
9	Hermes Copper Butterfly Survey Results.....	22
10	Waters of the U.S./State.....	24
11	CDFW Jurisdiction	24
12	RPO Wetlands.....	24
13	Project Impacts.....	40
14	Proposed Project Vegetation and Sensitive Resources/Impacts	40
15	Biologically Superior Alternative Vegetation and Sensitive Resources/Impacts	40
16	Escondido Creek Bridge Schematic.....	40
17	Proposed Project Biological Open Space	40
18	Biologically Superior Alternative Biological Open Space	40
19	Regional Preserve Lands/Wildlife Movement.....	40
20	Biological Cumulative Study Area	68

LIST OF TABLES

<u>No.</u>	<u>Title</u>	<u>Page No.</u>
1	Biological Surveys	4
2	Waters of the U.S./State.....	23
3	Streambed and Riparian Habitat	24
4	RPO Wetlands.....	24
5	Impacts to Vegetation Communities/Habitat Types	47
6	Habitat Reported within Draft MSCP North County Plan.....	48
7	Project Habitat Comparison against Draft MSCP North County Plan	49
8	Project Consistency with Conservation Goals for the Harmony Grove Core Area.....	51
9	Impacts to Jurisdictional Wetlands and Waterways	53
10	Cumulative Impacts on Biological Resources	70
11	Summary of Vegetation Communities, Impact, and Mitigation for the Harmony Grove Village South Project	105
12	Summary of Biological Resources Mitigation Measures for the Harmony Grove Village South Project	106

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 survey was performed in January 2016 to obtain additional data on vegetation and jurisdictional waters and wetlands. 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*). 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.

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.

THIS PAGE INTENTIONALLY LEFT BLANK

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

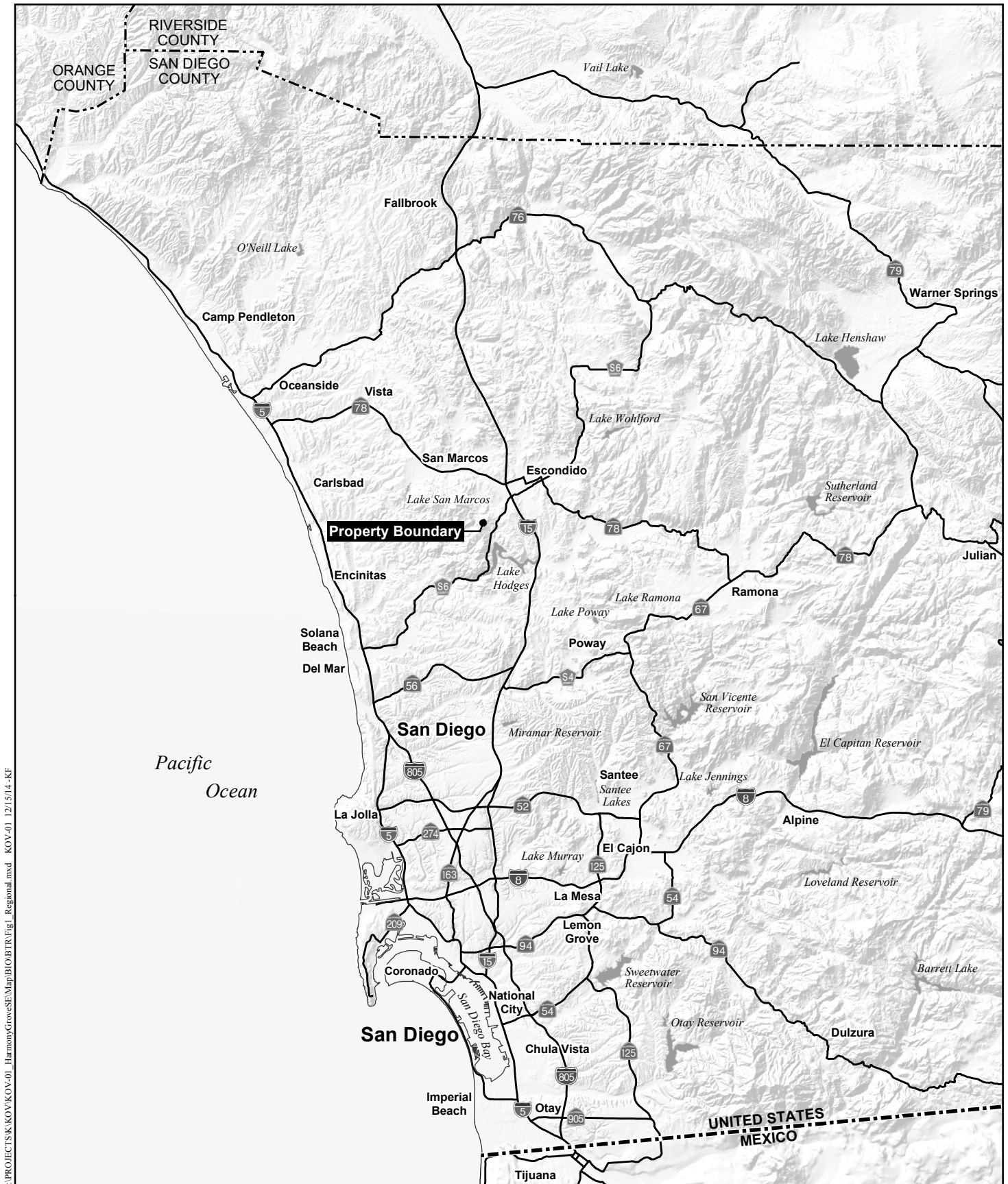
The proposed Project would contain 453 residential units and a small commercial area with limited retail/commercial uses (the Center House). In addition to on-site uses, the proposed Project would require the construction of on- and off-site infrastructure improvements associated with roads, water, and 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 site¹. 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.

¹As 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.



Regional Location Map

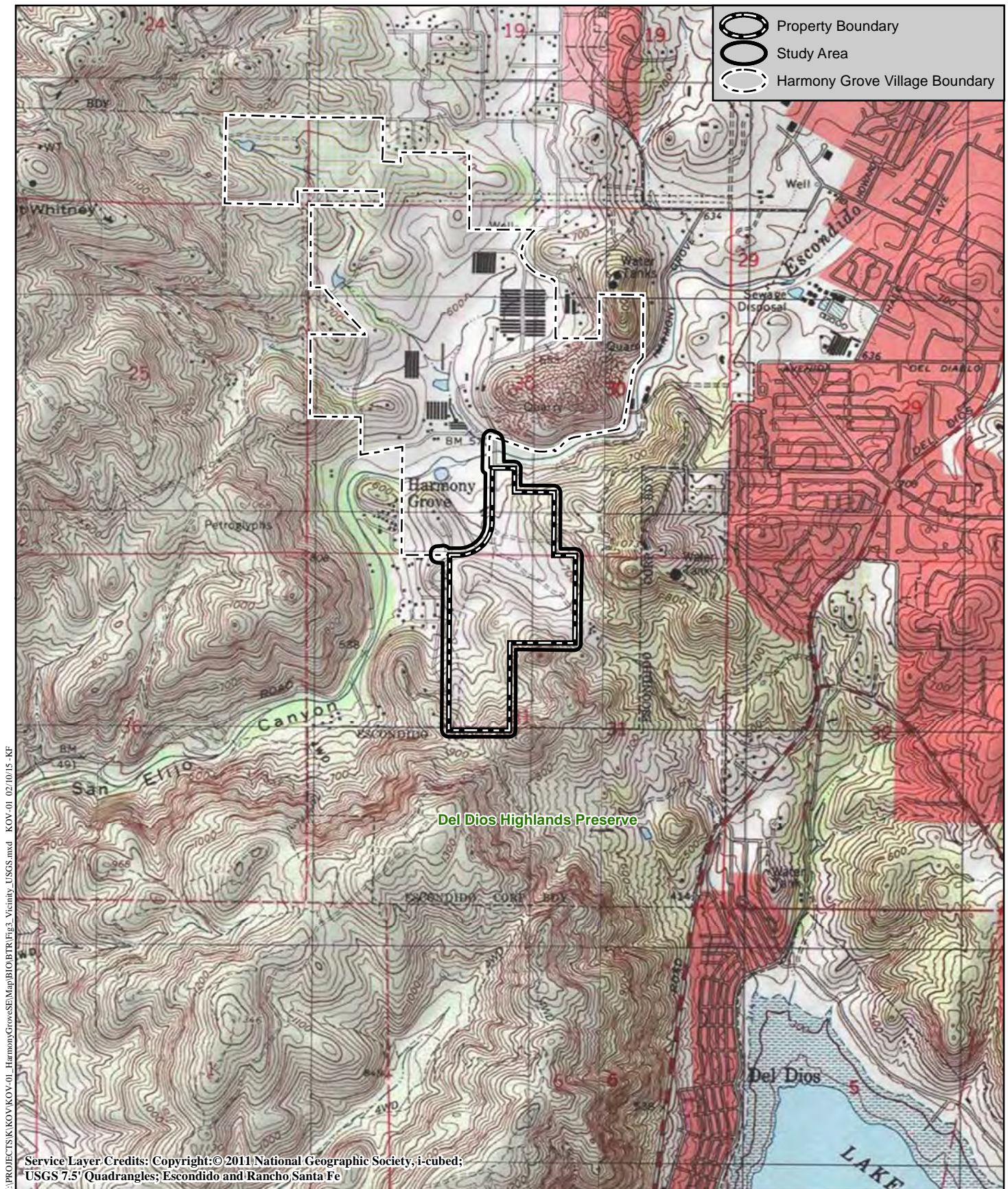
HARMONY GROVE VILLAGE SOUTH

Figure 1



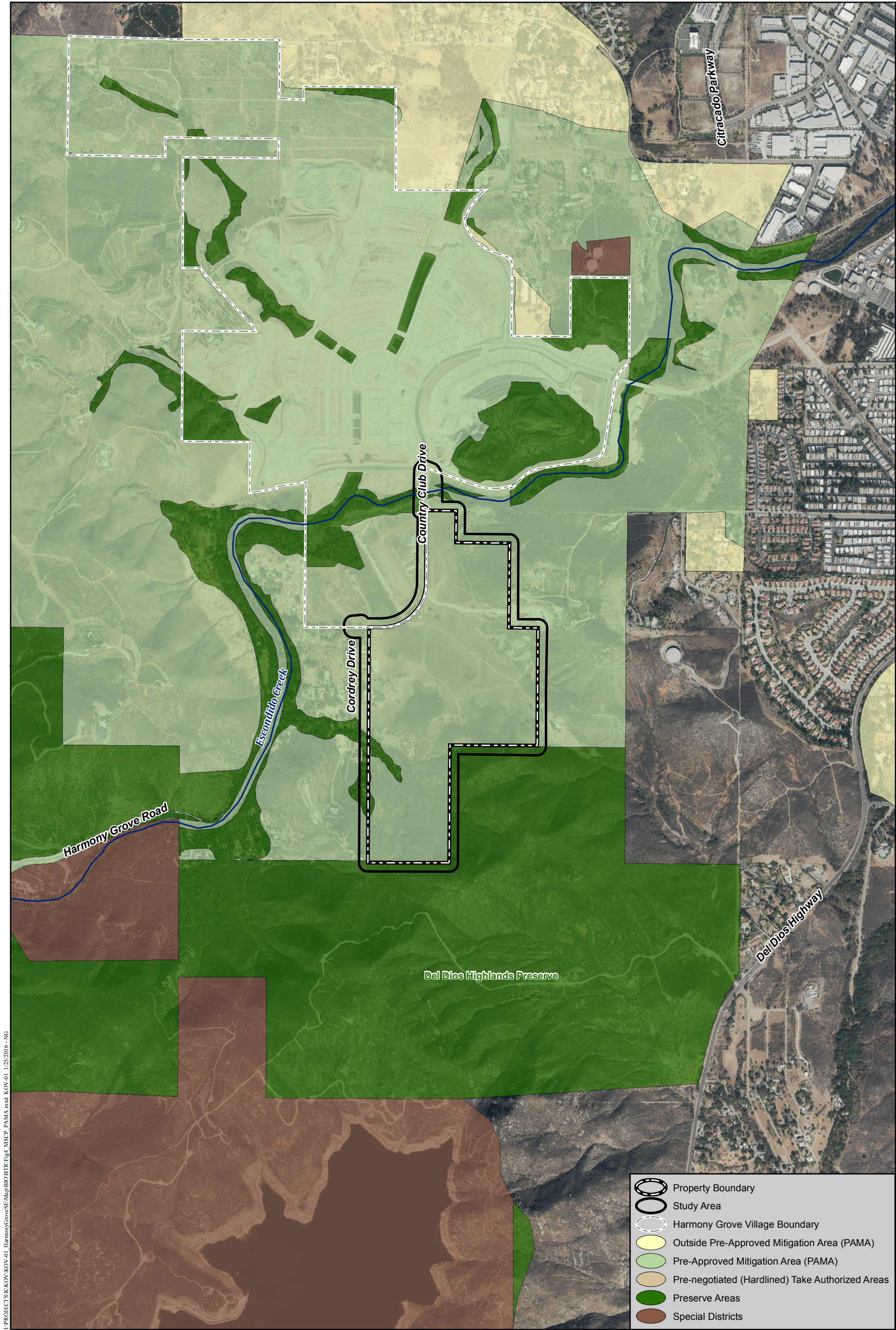
Project Vicinity Map (Aerial Photograph)

HARMONY GROVE VILLAGE SOUTH



Project Vicinity Map (USGS Topography)

HARMONY GROVE VILLAGE SOUTH



Draft MSCP North County Plan

HARMONY GROVE VILLAGE SOUTH



I:\PROJECTS\K\KOV\KOV-01_HarmonyGroveSE\Map\BIO\BTR\Figs_Site_Plan.mxd KOV-01 4/26/2016 - NG

- Property Boundary
- Study Area

Site Plan

HARMONY GROVE VILLAGE SOUTH

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

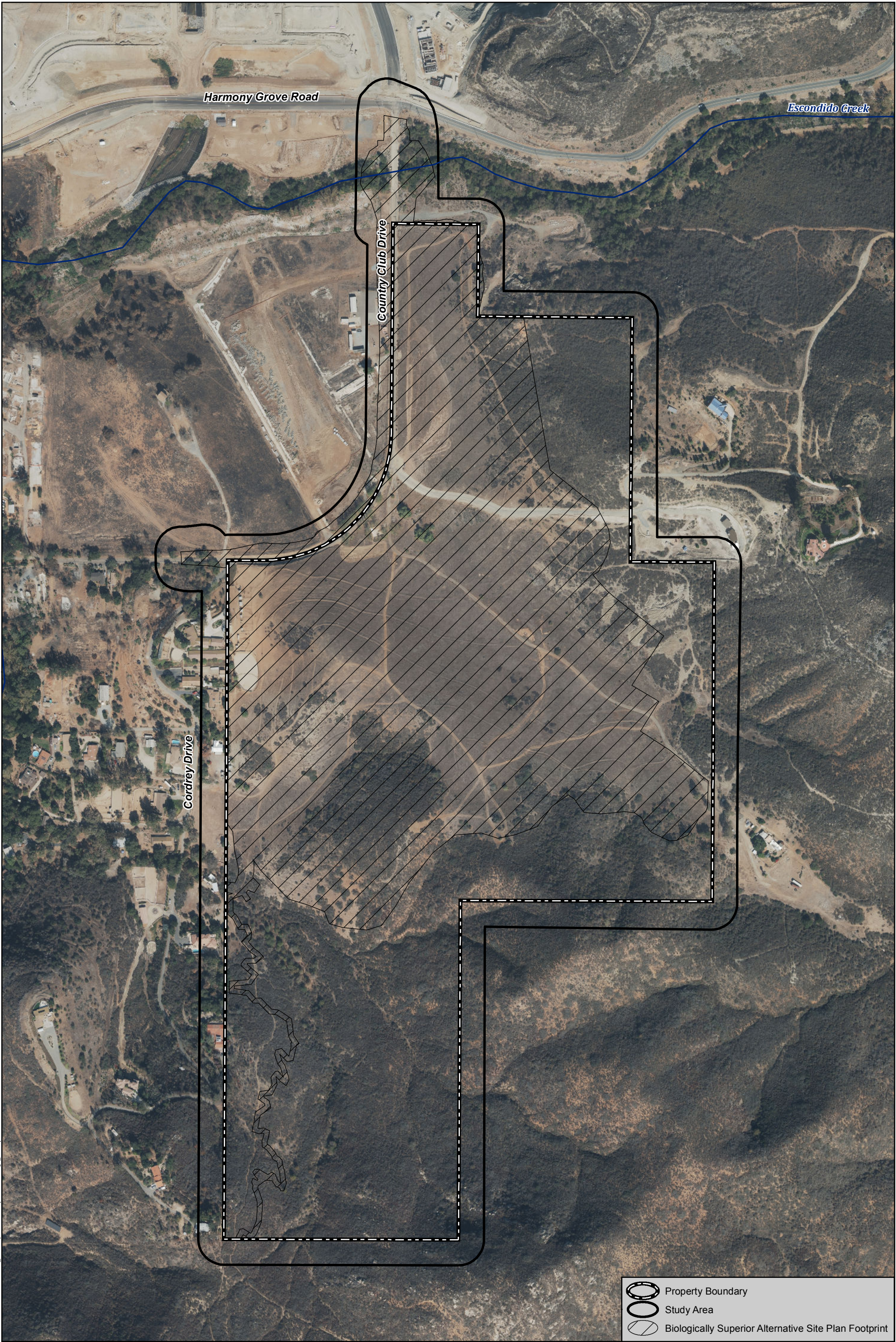
Prior to conducting biological field surveys in 2014, HELIX conducted a search of the California Natural Diversity Database (CNDDB) for information regarding sensitive species known to occur within 2 miles of the study area, as well as a review of USFWS, SanBIOS, and MSCP sensitive species databases. 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 (*Poliophtila californica californica*), and least Bell's vireo (*Vireo bellii pusillus*). 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	



Biologically Superior Alternative Site Plan Footprint

HARMONY GROVE VILLAGE SOUTH