Hallmark-Barham Specific Plan EIR

Technical Appendices

Appendix E.1

Biological Technical Report

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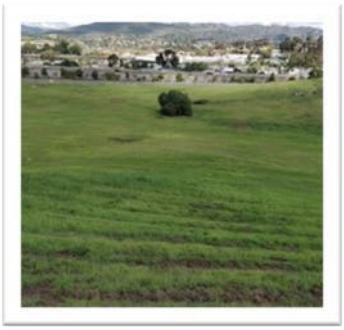

BARHAM DRIVE RESIDENTIAL PROJECT

BIOLOGICAL TECHNICAL REPORT

City of San Marcos, California

October 27, 2020

Prepared for:
Sophia Mitchell & Associates, LLC
P.O. Box 1700
Gualala, California 95445

Prepared by:
Rocks Biological Consulting
4312 Rialto Street
San Diego, CA 92107

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1 SUMMARY

This report presents the results of biological resource assessments conducted by Rocks Biological Consulting (RBC) and HELIX Environmental Planning (HELIX) for the Barham Drive Residential Project (project) in the City of San Marcos, San Diego County, California. The approximately 10.94-acre site is within the City of San Marcos' Draft Multiple Habitat Conservation Plan (MHCP) Subarea Plan. Development of the proposed residential buildings, parking areas, landscaped areas, and utilities would impact native habitats, including 0.61 acre of Diegan coastal sage scrub and 0.03 acre of Diegan coastal sage scrub – *Baccharis* dominated habitat. The project would comply with City's Draft MHCP guidelines, and project biological impacts would be less than significant with incorporation of the measures outlined herein. Additionally, the project would not impact jurisdictional aquatic resources as such resources are not present on site based on a jurisdictional assessment performed by HELIX (Appendix D).

2 INTRODUCTION

2.1 PROJECT LOCATION

The 10.94-acre project site is located at 943 E. Barham Drive, west of Le Moree Drive in the eastern portion of the City of San Marcos. The project vicinity is developed primarily with residential uses. To the west of the project is the Crescent Court residential development and to the southwest is the Williamsburg residential development. East of the project site is Grace Church and the Barham Park & Ride. Southeast of the project site is residential development associated with the Walnut Hills II Specific Plan. The northern boundary of the project site is E. Barham Drive and immediately north of E. Barham Drive is landscaping, a sound wall, and State Route 78 (SR-78). South of the project site is preserved open space, a private community park/view point and additional residences within the Williamsburg residential development.

The project site is comprised of the following properties identified by San Diego County Assessor's Parcel Numbers (APNs): 228-310-01, and occurs on the U.S. Geological Survey (USGS) 7.5' quadrangle (San Marcos) map, Section 18, Township 12 South, Range 2 West.

2.2 PROJECT DESCRIPTION

The project applicant is requesting approval of a General Plan Amendment, Specific Plan, Rezone, Tentative Map and a Conditional Use Permit. If approved, these entitlements would allow for the development of 151 multi-family residential units. The Specific Plan will be comprised of two main land uses; a residential land use component and an open space land use component which are further detailed below.

2.2.1 RESIDENTIAL LAND USE

The project proposes 151 multi-family residential units situated on approximately 10.6 gross acres. Residential land uses comprise approximately 2.8-acres of the project site. Multi-family residential

dwelling units are comprised of one, two, and three-story townhomes with ten dwelling unit types interspersed throughout the Specific Plan area. Overall building heights will not exceed 40 feet.

The project will have a Contemporary Spanish architectural style. Proposed materials include wood, stucco, brick with decorative metal accents and trims. The project includes a variety of floor plans to allow for the articulation of the building elevations. One-story, two-story and three-story product types are included with the project. The project proposes 19 7-Plex Buildings (133 units) and six 3-plex buildings (18 units) for a total of 151 units.

A 1,160 s.f. central recreation building is also proposed that would have a kitchen, living room, dining room, California room, patio, restroom and storage area.

2.2.2 OPEN SPACE LAND USE

Open space within the Specific Plan area will total approximately 5.35-acres and is the only other land use allowed within the Specific Plan area. Open space with the plan is categorized as common open space, which includes open space with grades 10 percent and greater, open space with grades less than ten percent, the water quality basin and recreational areas. The other type of open space is private open space which is associated with private patio and deck areas on the residential units. Table 1 summarizes the proposed open space areas.

Table 1. Proposed Open Space Summary

Open Space Description	Sq. Feet Provided
Common Open Space (Grades 10 percent or greater)(1)	134,776
Common Open Space (Grades less than 10 percent)	64,913
Basin	6,764
Recreational Areas	8,879
Private Open Space (Patios/Decks)	26,390

Note: (1) Per the Zoning Ordinance, open space areas with grades of 10 percent or greater and not counted as usable open space.

2.2.2.1 Common Open Space

Common open space is divided into: 1) common open space area with grades 10 percent or greater; 2) common open space area with grades less than 10 percent, private open space; 3) and the basin area.

The first category mentioned is common open space with grades of 10 percent or greater. According to the City of San Marcos Zoning Ordinance, open space of 10 percent grade or greater cannot be counted as usable open space. This category includes open space features such as landscaping and slopes.

Common open space area with grades less than 10 percent include usable open space areas, which encourage relaxation activities such as observing nature, bird watching, painting, photography, and picnicking as well as recreational open space areas such as open turf area, bocce ball courts, recreational building and facilities, tot lots, playgrounds, open turf areas, and fire pits.

The final sub-category of open space, basin areas, are passive open space areas which are used to direct water during rain events to control for flooding and to treat water before it is discharged from the site.

The Specific Plan includes five common-area recreation spaces totaling 8,879 sq. ft., inclusive of multi-age play areas, tot lots, seating, barbeque stations, open turf areas, and patio areas. These areas will be maintained by the Home Owners Association and include:

- A 3,564 sq. ft. primary recreation area will provide residents with amenities such as a barbeque counter and patio space, a bocce ball court, tot lot with seating, and open turf area.
- A multi-age recreation area has been established adjacent to Building 12 includes a multi-age play structure, open turf area, and bench seating and totals 1,499 sq. ft.
- A 1,805 sq. ft. amenity space adjacent to Building 1 will include a dog wash station, open turf areas, enhanced paving, and tables with seating.
- A 1,113 sq. ft. overlook tot lot area provided adjacent to Building 17 includes features such as a tot lot, firepit with seating, walkways, and bench seating.
- A 898 sq. ft. recreation area will be sited at the southeast portion of the Specific Plan area and will include amenities such as open turf area and a dog wash station.

2.2.2.2 Private Open Space

Private open space within the Specific Plan area consists of private patio space and private balcony/deck space. The City requires that each unit with ground floor living must provide 250 sq. ft. of private open space. Units with living space on the second floor and above must provide 50 sq. ft. of private open space in the form of decks or balconies. There is a total of 88 units within the Specific Plan area that include ground floor living space and 63 units with living area on the second floor or above. Therefore, according to the City of San Marcos Zoning Ordinance, the units with ground floor living would be required to provide 22,000 sq. ft. of private patio space and the units with living space on the second floor and above would be required to provide approximately 3,150 sq. ft. of balcony/deck space. Combined, the minimum private open space required within the Specific Plan area equates to 25,150 sq. ft. The project provides a total of 26,390 s.f. of outdoor private space and will exceed the City's requirement.

2.2.3 OTHER PROJECT COMPONENTS

Access and Circulation

Access to the project site will be via two driveways on E. Barham Drive which will provide an internal loop through the project site and provide access to alleys. A secondary emergency-only access is provided through the western boundary of the project site to connect with Saddleback Way. This access point is for emergency vehicles only and bollards would be put in place. Driveways and alleys within the project site will be private. In addition, the project provides and accessible path of travel through the site and to each residence via pedestrian pathways.

Parking

The project proposes a total of 349 parking spaces. This includes 264 garage spaces associated with the units, which will be pre-wired for electric vehicle charging stations. An additional 10 assigned outdoor spaces and 56 guest spaces (50 open spaces, 4 ADA spaces, 1 EV space and 1 postal delivery space).

Landscape Plan

The proposed landscape plan includes a mix of trees, shrubs, grasses and groundcover and the plant selection emphasizes, and moderate water use species. The project will also comply with the City's Model Water Efficient Landscape Ordinance (WELO).

Fire Fuel Modification

A 150-foot fire fuel modification buffer is included in the southern end of the project. This area will be subject to vegetation management to reduced fire fuels. For the purposes of biological resource impacts, any areas subject to ongoing vegetation management are considered to be impacted.

Project Construction

Grading will consist of approximately 36,394 cubic yards (CY) of cut material and 91,526 CY of fill material requiring an import of approximately 46,341 cy of material. Assuming project approvals in late 2021, the project is expected to start construction in late 2022 with an occupancy of Spring 2025.

2.3 SCOPE OF WORK

This report provides an analysis of impacts on biological resources associated with the proposed project in the context of the Draft San Marcos Subarea Plan (City of San Marcos 2001), the California Environmental Quality Act (CEQA; California Public Resources Code §§ 21000 et seq.), and state and federal regulations such as the federal Endangered Species Act (16 U.S. Code [U.S.C.] § 1531 et seq.), Clean Water Act (CWA; 33 U.S.C. §1251 et seq.), and the California Fish and Game Code (CFGC).

For this analysis, the following tasks were performed: 1) Biological and aquatic resource database review; 2) General biological survey and vegetation mapping; 3) Habitat assessments for special-

status plant and wildlife species; 4) Focused rare plant surveys; 5) Protocol coastal California gnatcatcher (*Polioptila californica californica*) surveys; and 6) A reconnaissance-level assessment for potentially jurisdictional aquatic resources.

2.4 REGULATORY FRAMEWORK

Several regulations have been established by federal, state, and local agencies to protect and conserve biological resources as listed below. Detailed descriptions of state and federal regulations that may be applicable to the project are provided in Appendix B, and a summary of the Draft San Marcos MHCP Subarea plan and General Plan are provided below.

Federal Regulations

- Endangered Species Act
- Migratory Bird Treaty Act (MBTA)
- Rivers and Harbors Appropriation Act of 1899
- Clean Water Act

State Regulations

- California Endangered Species Act
- California Environmental Quality Act
- Native Plant Protection Act and NCCP Act
- California Fish and Game Code (CFGC) Sections 1600-1602
- CFGC Sections 3503, 3511, 3513, 3800, 4700, 5050, and 5515
- Porter-Cologne Act

Regional and Local Plans

- City of San Marcos General Plan
- San Diego County MHCP
- Draft San Marcos MHCP Subarea Plan

2.4.1 MHCP BACKGROUND & REGULATORY CONSIDERATIONS

The County of San Diego MHCP is a regional Natural Community Conservation Plan (NCCP) and Habitat Conservation Plan (HCP) under state and federal endangered species acts. The plan was developed by the San Diego Association of Governments (SANDAG), the County of San Diego, and the cities of Carlsbad, Encinitas, Escondido, Oceanside, San Marcos, Solana Beach, and Vista as a regional approach to species conservation and development planning. Each participating agency is responsible for drafting subarea plan/implementing regulations and an implementing agreement with the US Fish and Wildlife Service (USFWS) or the California Department of Fish and Wildlife (CDFW) in order to enact the MHCP within their jurisdiction.

The City of San Marcos prepared its *Draft MHCP Subarea Plan* in 2001 but the plan has not yet been adopted by the San Marcos City Council and the City does not yet have an MHCP implementing agreement with the USFWS or the CDFW. The City of San Marcos uses the draft Subarea Plan as a guide in project processing and mitigation planning.

The project occurs within the MHCP planning area; however, the City of San Marcos has not adopted the *Draft MHCP Subarea Plan* and is not participant under the *Draft MHCP Subarea Plan*.

2.4.2 SAN MARCOS GENERAL PLAN

The City's General Plan Conservation and Open Space Element (2012) includes policies applicable to the project site, as follows:

Goal COS-1: Identify, protect, and enhance significant ecological and biological resources within San Marcos and its adaptive Sphere of Influence.

- Policy COS-1.1: Support the protection of biological resources through the establishment, restoration, and conservation of high-quality habitat areas.
- Policy COS-1.2: Ensure that new development, including Capital Improvement Projects, maintain the biotic habitat value of riparian areas, oak woodlands, habitat linkages, and other sensitive biological habitats policy.
- Policy COS-1.3: Continue to work with other federal, State, regional, and local agencies to implement the MHCP.

Goal COS-2: The City is committed to conserving, protecting, and maintaining open space, agricultural, and limited resources for future generations. By working with property owners, local organizations, and state and federal agencies, the City can limit the conversion of resource lands to urban uses.

- Policy COS-2.1: Provide and protect open space areas throughout the City for its recreational, agricultural, safety, and environmental value.
- Policy COS-2.2: Limit, to the extent feasible, the conversion of open space to urban uses and place a high priority on acquiring and preserving open space lands for recreation, habitat protection and enhancement, flood hazard management, water and agricultural resources protection, and overall community benefit.
- Policy COS-2.6: Preserve healthy mature trees where feasible; where removal is necessary, trees shall be replaced at a ratio of 1:1.

Goal COS-3: Protect natural topography to preserve and enhance the natural beauty of San Marcos.

- Policy COS-3.3: Continue to work with new development and redevelopment project applicants in designing land use plans that respect the topography, landforms, view corridors, wildlife corridors, and open space that exists.

- Policy COS-3.4: Evaluate potential impacts to visual and aesthetic resources, including the potential to create new light sources, while still maintaining and being sensitive to rural lighting standards.

Goal COS-8: Focus watershed protection, surface and groundwater quality management on sources and practices that the City has the ability to affect.

- Policy COS-8.4: Require new development and redevelopment to protect the quality of water bodies and natural drainage systems through site design, source controls, storm water treatment, runoff reduction measures, Best Management Practices (BMPs), low impact development (LID), hydromodification strategies consistent with the Current San Diego Regional Water Quality Control Board Municipal Stormwater National Pollutant Discharge Elimination System (NPDES) Permit, and all future municipal stormwater permits.

2.5 EXISTING CONDITIONS

The project site is generally undeveloped but appear to have been disturbed historically based on the presence of non-native grassland distinct from adjacent habitats and visible in historical aerial photographs of the area. The site has a north-aspect slope with elevations of approximately 650 to 755 feet above mean sea level (amsl). The majority of the project site supports non-native grassland, with Diegan coastal sage scrub habitat occurring along the southern project site boundary (Figure 2). A smaller area of Diegan coastal sage scrub – *Baccharis* dominated habitat occurs along the eastern project boundary, and disturbed land and ornamental vegetation occur scattered throughout the non-native grassland across the majority of the site. Developed, ruderal, and ornamental land border the north, east, and west project boundaries. Site photographs are presented in Appendix A.

3 METHODS

RBC performed a survey of on-site resources and analyzed potential project impacts on biological resources, including an analysis of project consistency with CEQA and the Draft San Marcos Subarea Plan.

3.1 DATABASE QUERIES AND LITERATURE REVIEW

Prior to the field survey, RBC queried and reviewed the following databases and literature:

- CDFW's California Natural Diversity Database (CNDDB; CDFW 2020a, CDFW 2020b) within one mile of the project site (Figure 3A)
- USFWS Database of Species (USFWS 2020b) within one mile of the project site (Figure 3B)
- USFWS Designated Critical Habitat (USFWS 2020a) within one mile of the project site (Figure 3B)

- California Native Plant Society (CNPS) Inventory of Rare and Endangered Plants of California (CNPS 2020) for the San Marcos USGS 7.5' quadrangle and adjacent three quadrangles in the elevational range of 500 to 900 feet amsl (excluding List 3 and List 4 species)
- Natural Resources Conservation Service (NRCS; NRCS 2020) for the soils present on the project site
- USFWS National Wetlands Inventory data (USFWS 2020)
- USGS National Hydrography Dataset and topography data (USGS 2020)
- MHCP and/or the City's draft Subarea Plan narrow endemic species list (SANDAG 2019, City 2001)

Information gathered during the database review was used to identify potential aquatic resource areas prior to the on-site survey and, along with local biological knowledge and on-site habitat analysis results, to analyze potential for various special-status species to occur on site.

3.2 VEGETATION MAPPING AND GENERAL BIOLOGICAL SURVEYS

RBC biologist Brenda Bennett conducted a field survey on March 11, 2020. The field survey focused on a number of objectives to comply with CEQA requirements, including general biological survey; vegetation mapping; general habitat assessments for special-status species; and a reconnaissance-level aquatic resource assessment of potential local, state, and/or federal jurisdictional wetland and/or non-wetland waters of the U.S./State.

RBC biologists identified plant species using *The Jepson Manual: Vascular Plants of California* (Baldwin et al. 2012) and local botanical knowledge. The project site was traversed on foot and binoculars (10x42) were used to aid in field identification of wildlife species. Plant and wildlife species observed on the project site are presented in Appendix C. Vegetation was mapped directly on a 200-scale (1"=200') aerial photograph following Holland's *Preliminary Descriptions of the Terrestrial Natural Communities of California* (Holland 1986).

Note that a 50-foot survey buffer is included in vegetation mapping provided herein; vegetation was identified in buffer areas via binoculars from the project site during the general biological survey. Buffer areas are included in this analysis in order to assess the potential for special-status species or resources in areas immediately adjacent the project site that could be impacted by the project analyzed in this report. Such information should not be considered comprehensive for all biological resources or aquatic resources that may occur in buffer areas, and buffer area mapping is intended only for the project analysis outlined herein; such information is not intended for impact analysis of any future projects within or adjacent to project buffer areas.

3.3 RARE PLANT SURVEYS

RBC biologist Brenda Bennett conducted special-status plant surveys for the project site in Spring 2020 (Appendix E; RBC 2020b). Two on-site surveys were performed to maximize detection of spring annual and bulb species, one on May 6, 2020 and a second on May 20, 2020. In addition, reference populations of both San Diego thornmint (*Acanthomintha ilicifolia*; federally threatened,

state endangered, CRPR 1B.1) and thread-leaved brodiaea (*Brodiaea filifolia*; federally threatened, state endangered, CRPR 1B.1) were visited to ensure proper survey timing as both of these species have a narrow window of observation.

Focal species for the rare plant surveys were San Diego thornmint, thread-leaved brodiaea, spreading navarretia (*Navarretia fossalis*; federally threatened, CRPR 1B.1), San Diego button celery (*Eryngium aristulatum* var. *parishii*; federally endangered, state endangered, CRPR 1B.1), Del Mar manzanita (*Arctostaphylos glandulosa* ssp. *crassifolia*; federally endangered, CRPR 1B.1) and wart-stemmed ceanothus (*Ceanothus verrucosus*; CRPR 2B.2); however, all plant species on site were identified during surveys, and other special-status plant species would have likely been incidentally observed, if present.

Surveys were conducted in accordance with Protocols for Surveying and Evaluating Impacts on Special Status Plant Populations and Natural Communities (CDFW 2018). Biologists walked transects throughout the project site and survey buffer and were prepared to map special-status plant occurrences using handheld ArcGIS Collector. During surveys all vascular plant species on the site were identified to species, subspecies, or varietal level.

3.4 COASTAL CALIFORNIA GNATCATCHER SURVEYS

RBC biologists Ian Hirschler and Chris Thomson conducted six breeding season coastal California gnatcatcher surveys from May 13, 2020 through June 17, 2020 (Appendix F; RBC 2020a). Survey methods followed the United States Fish and Wildlife Service (USFWS) presence/absence breeding season protocol (USFWS 1997) for non-NCCP areas. RBC surveyed all suitable coastal California gnatcatcher habitat within the project site and a 300-foot buffer (coastal California gnatcatcher survey buffer; RBC 2020a) using taped vocalizations to elicit a response from coastal California gnatcatcher.

3.5 AQUATIC RESOURCE ASSESSMENT

RBC conducted an initial reconnaissance-level aquatic resource assessment during general biological surveys on March 11, 2020, to identify potential areas that may be considered jurisdictional under the Corps pursuant to Section 404 of the CWA; the RWQCB pursuant to Section 401 of the CWA and the Porter-Cologne Act; the CDFW pursuant to CFGC §1602. RBC did not conduct a formal aquatic resources delineation as part of this effort.

HELIX performed additional assessment of the areas identified in the initial assessment on April 24, 2020 (HELIX, 2020; Appendix D). Please see Appendix D for jurisdictional aquatic resource assessment methods.

4 RESULTS

4.1 DATABASE QUERIES AND LITERATURE REVIEW RESULTS

The CNDDB and USFWS database results include historical occurrences of five special-status plant species and four special-status wildlife species within one mile of the project site (Figure 3A and 3B; CDFW 2020a and USFWS 2020b). A wider four-quadrangle search of the CNPS

electronic inventory resulted an additional 28 plant species with a California Rare Plant Ranking (CRPR) of 1 or 2. A brief discussion of database results is provided below; Analysis of the potential for special-status species occurrence on-site is provided in Section 4.2.2.

4.1.1 SPECIAL-STATUS PLANT SPECIES DATABASE SEARCH

CNDDB results included historical occurrences for five special-status plant species within one mile of the project site, Del Mar manzanita, San Diego button-celery, San Diego thorn-mint, spreading navarretia, and wart-stemmed ceanothus (Figure 3A; CDFW 2020a).

The CNPS electronic inventory includes reports of an additional 28 plant species in a much wider four quadrangle search area. Results of the database searches, along with local botanical knowledge and on-site habitat assessments, were used to determine potential for special status species occurrence on site (see Section 4.2.2)

4.1.2 SPECIAL-STATUS WILDLIFE SPECIES & CRITICAL HABITAT DATABASE SEARCH

CNDDB and USFWS database include reports of two federally or state-listed wildlife species, coastal California gnatcatcher (federally listed threatened, CDFW Species of Special Concern) and tricolored blackbird (*Agelaius tricolor*; state threatened, CDFW Species of Special Concern), within one mile of the project area. Historical occurrences for two additional special-status wildlife species occur within one mile of the project site, including Townsend's big-eared bat (*Corynorhinus townsendii*; CDFW Species of Special Concern) and western spadefoot (*Spea hammondii*; CDFW Species of Special Concern) (Figure 3A and 3B; CDFW 2020a and USFWS 2020b). No USFWS designated critical habitat occurs within one mile of the project site (Figure 3B; USFWS 2020a).

4.2 VEGETATION MAPPING AND GENERAL BIOLOGICAL SURVEY

The project site is predominantly undeveloped and supports primarily non-native grassland and Diegan coastal sage scrub, with smaller areas of Diegan coastal sage scrub – *Baccharis* dominated, and non-native habitats, such as developed land, ornamental vegetation, and disturbed land. Plant and wildlife species observed during the field survey are presented in Appendix C.

4.2.1 VEGETATION COMMUNITIES

Developed

Developed lands within the project site (0.40 acre) support no native vegetation and are comprised of paved roads (Figure 2). Developed lands occur along the northern site boundary, in the form of East Barham Drive.

Diegan Coastal Sage Scrub

Diegan coastal sage scrub habitat within the project site (0.62 acre) occurs along the southern project site boundary and is dominated by coast monkey flower (*Diplacus puniceus*), black sage (*Salvia mellifera*), coastal sagebrush (*Artemisia californica*), and laurel sumac (*Malosma laurina*) (Figure 2). This vegetation community is a form of coastal sage scrub comprised of low, soft-

woody subshrubs to about one meter (three feet) high, many of which are facultatively drought-deciduous.

Diegan Coastal Sage Scrub – *Baccharis* Dominated

Diegan coastal sage scrub – *Baccharis* dominated habitat within the project site (0.03 acre) occurs along the eastern project boundary and contains coyote brush (*Baccharis pilularis* ssp. *consanguinea*) (Figure 2). This vegetation community is a form of Diegan coastal sage scrub comprised of low, soft-woody subshrubs to about one meter high, containing more than 50% cover of one or more *Baccharis* species.

Disturbed

Disturbed lands within the project site (0.17 acre) support bare ground or sparse non-native plant species that have been established through human disturbance. Disturbed lands on the project site consist of small patches of human-disturbed land (Figure 2).

Non-native Grassland

Non-native grassland supports greater than 50 percent cover of non-native grasses. Non-native grassland vegetation within the project site (9.50 acres) largely occurs in the middle of the site and consists of non-native grasses such as ripgut grass (*Bromus diandrus*), slender wild oat (*Avena barbata*), and glaucous barley (*Hordeum murinum* ssp. *glaucum*) (Figure 2).

Ornamental

Ornamental plantings are comprised of exotic trees and other ornamental vegetation. The ornamental area within the project site (0.22 acre) includes pepper trees (*Schinus* spp.), Mexican fan palm (*Washingtonia robusta*), and China berry (*Melia azedarach*).

Ruderal

Ruderal areas support vegetation capable of tolerating some form of disturbance. This disturbed community within the project site (<0.01 acre) is dominated by broad-leaf herbaceous species with a less than 50 percent cover of non-native grasses. Ruderal vegetation occurs in the center of the project site and primarily consists of black mustard (*Brassica nigra*), tocalote (*Centaurea melitensis*), and filaree/storksbill (*Erodium* spp.).

4.2.2 SPECIAL-STATUS PLANT SPECIES

No special-status plant species were documented on the project site during the general biological survey or during focused rare plant surveys, and none have a moderate or high potential to occur on the project site due to absence of suitable habitat and soils (Appendix E; RBC 2020b). Plant species observed during the field survey are presented in Appendix C, and an assessment of special-status plant species to occur on-site is provided in Table 2, below.

Table 2. Plant Species Potential for Occurrence

Species	Status	Habitat	Potential to Occur*
Beach goldenaster (*Heterotheca sessiliflora* ssp. *sessiliflora*)	CRPR 1B.1	Perennial herb. Blooms March-December. Chaparral (coastal), coastal dunes, coastal scrub. Elev. 0-4,020 ft.	Not anticipated to occur. While the project site and survey buffer are within the elevational range, and supports Diegan coastal sage scrub habitat, the species is typically found in coastal locations. Additionally, there are no inland collections of this species in San Marcos.
California adolphia (*Adolphia californica*)	CRPR 2B.1	Perennial deciduous shrub. Blooms December-May. Chaparral, coastal scrub, valley and foothill grassland. Elev. 30-2,430 ft.	Low potential to occur. The project site and survey buffer are within the elevational range, and supports Diegan coastal sage scrub habitats. However, this species would have likely been observed if present.
Coulter's goldfields (*Lasthenia glabrata* ssp. *coulteri*)	CRPR 1B.1	Annual herb. Blooms February-June. Coastal salt marshes and swamps, playas, vernal pools. Elev. 3-4,002 ft.	Low potential to occur. The site does not support coastal salt marshes or swamps, but supports potential vernal pool habitats that could contain the species.
Coulter's saltbush (*Atriplex coulteri*)	CRPR 1B.2	Perennial herb. Blooms March-October. Coastal bluff scrub, coastal dunes, coastal scrub, valley and foothill grassland. Elev. 5-1,510 ft.	Low potential to occur. This species is typically found coastally or in the southern part of the county where it is found inland as well. This species would have likely been observed if present.
Decumbent goldenbush (*Isocoma menziesii* var. *decumbens*)	CRPR 1B.2	Perennial shrub. Blooms April-November. Chaparral, coastal scrub (sandy, often in disturbed areas). Elev. 30-455 ft.	Low potential to occur. The site supports sandy soils, disturbed areas, and Diegan coastal sage scrub.
Del Mar manzanita (*Arctostaphylos glandulosa* ssp. *crassifolia*)	FE, CRPR 1B.1	Perennial evergreen shrub. Blooms December-July. Chaparral (maritime, sandy). Elev. 0-1,200 ft.	Low potential to occur. Species is typically found coastally in maritime chaparral, which doesn't not occur within survey area.
Delicate clarkia (*Clarkia delicata*)	CRPR 1B.2	Annual herb. Blooms April-June. Often gabbroic soils within chaparral, cismontane woodland. Elev. 770-3,280 ft.	Not anticipated to occur. The project site and survey buffer are within the elevational range; however, the site does not support gabbroic soils within habitat on site.
Dunn's mariposa lily (*Calochortus dunnii*)	SR, CRPR 1B.2	Perennial bulbiferous herb. Bloom (February) April-June. Gabbroic or metavolcanics, rocky soils within closed-cone coniferous forest, chaparral, valley and foothill grassland. Elev. 605-6,500 ft.	Low potential to occur. While the project site and survey buffer are within the elevational range and supports grassland habitat, gabbroic soils needed for this species are not found on site. In addition, there are no nearby collections of this species.

Species	Status	Habitat	Potential to Occur*
Encinitas *Baccharis* (*Baccharis vanessae*)	FT, SE, CRPR 1B.1	Perennial deciduous shrub. Blooms (August) October-November. Sandstone soils within chaparral (maritime) and cismontane woodland. Elev. 196-2,363 ft.	Not anticipated to occur. The project site and survey buffer are within the elevational range; however, the site does not support chaparral habitat suitable for the species. Would have been observed if present.
Felt-leaved monardella (*Monardella hypoleuca* ssp. *lanata*)	CRPR 1B.2	Perennial rhizomatous herb. Blooms June-August. Rocky, granitic slopes or hilltops in chaparral, cismontane woodland. Elev. 980-5,165 ft.	Not anticipated to occur. The project site and survey buffer are within the elevational range; however, the site does not support suitable soils or habitats for this species.
Munz's sage (*Salvia munzii*)	CRPR 2B.2	Perennial evergreen shrub. Blooms February-April. Chaparral, coastal scrub. Elev. 375-3,495 ft.	Low potential to occur. While the project site and survey buffer are within the elevational range and supports Diegan coastal sage scrub habitat, the species is known only from the southern part of the County.
Nuttall's scrub oak (*Quercus dumosa*)	CRPR 1B.1	Perennial evergreen shrub. Blooms February-April(May-August). Sandy, clay loam soils within closed-cone coniferous forest, chaparral, and coastal scrub. Elev. 49-1,313 ft.	Low potential to occur. The project site and survey buffer are within the elevational range, and supports sandy loam soils and Diegan coastal sage scrub habitat; however, species would have likely been observed if present.
Orcutt's brodiaea (*Brodiaea orcuttii*)	CRPR 1B.1	Perennial bulbiferous herb. Blooms May-July. Mesic, clay soils within closed-cone coniferous forest, chaparral, cismontane woodland, meadows and seeps, valley and foothill grassland, and vernal pools. Elev. 98-5,552 ft.	Low potential to occur. The site does not support clay soils, coniferous forest, chaparral, or cismontane woodland, but supports potential vernal pool habitats that could contain the species.
Palmer's goldenbush (*Ericameria palmeri* var. *palmeri*)	CRPR 1B.1	Perennial evergreen shrub. Blooms (July) September-October. Chaparral, coastal scrub. Elev. 95-1,970 ft.	Low potential to occur. While the project site and survey buffer support Diegan coastal sage scrub habitat, this species is typically found in the southern part of the County.
Parish's brittlescale (*Atriplex parishii*)	CRPR 1B.1	Annual herb. Blooms June-October. Alkaline habitats including chenopod scrub, playas, and vernal pools. Elev. 80-6,235 ft.	Low potential to occur. The site does not support chenopod scrub or playas, but supports potential mesic habitats that have a minor potential to support the species. However, this species would have likely been observed if present.

Species	Status	Habitat	Potential to Occur*
Parry's tetracoccus (*Tetracoccus dioicus*)	CRPR 1B.2	Perennial deciduous shrub. Blooms April-May. Gabbroic soil in chaparral, coastal scrub. Elev. 540-3,280 ft.	Not anticipated to occur. While the project site and survey buffer are within the elevational range and supports Diegan coastal sage scrub habitat, it does not contain gabbroic (Las Posas) soils that support this species.
Rainbow manzanita (*Arctostaphylos rainbowensis*)	CRPR 1B.1	Perennial evergreen shrub. Blooms December-March. Chaparral. Elev. 670-2,200 ft.	Low potential to occur. The site does not support suitable chaparral habitat for this species.
Ramona horkelia (*Horkelia truncata*)	CRPR 1B.3	Perennial herb. Blooms May-June. Clay, gabbroic soils within chaparral and cismontane woodland. Elev. 1,310-4,265 ft.	Not anticipated to occur. The site does not support clay or gabbroic soils within chaparral and cismontane woodland habitats.
San Diego ambrosia (*Ambrosia pumila*)	FE, CRPR 1B.1	Perennial rhizomatous herb. Blooms April-October. Found in sandy loam or clay soils in chaparral, coastal scrub, valley and foothill grassland, and vernal pools. Elev. 65-1,360 ft.	Low potential to occur. The site does not support chaparral, but supports sandy loam soils and potential mesic habitats that have a minor potential to support the species. However, this species would have likely been observed if present.
San Diego barrel cactus (*Ferocactus viridescens*)	CRPR 2B.1	Perennial stem succulent. Blooms May-June. Found on chaparral, coastal scrub, valley and foothill grassland, and vernal pools. Elev. 5-1,475 ft.	Low potential to occur. While the project site and survey buffer are within the elevational range and contains Diegan coastal sage scrub habitat, the species is not known from the vicinity. Would have likely been observed if present.
San Diego button-celery (*Eryngium aristulatum* var. *parishii*)	FE, SE, CRPR 1B.1	Annual/perennial herb. Blooms April-June. Mesic habitats in coastal scrub, valley and foothill grassland, and vernal pools. Elev. 65-2,035 ft.	Low potential to occur. The site supports mesic habitats that have a minor potential to support the species; however, this species would have likely been observed if present.
San Diego goldenstar (*Bloomeria clevelandii*)	CRPR 1B.1	Perennial bulbiferous herb. Blooms April-May. Occurs on clay soils in chaparral, coastal scrub, valley and foothill grassland, and vernal pools. Elev. 164-1,525 ft.	Low potential to occur. Site does not have suitable clay soils to support this species. Would have likely been observed if present.
San Diego marsh-elder (*Iva hayesiana*)	CRPR 2B.2	Perennial herb. Blooms April-October. Occurs in marshes, swamps and playas. Elev. 32-1,640 ft.	Not anticipated to occur. Site does not support marshes, swamps or playas.

Species	Status	Habitat	Potential to Occur*
San Diego mesa mint (*Pogogyne abramsii*)	FE, SE, CRPR 1B.1	Annual herb. Blooms March-July. Vernal pools. Elev. 295-655 ft.	Low potential to occur. The site supports potential mesic habitats that have a minor potential to support the species; however, would have likely been observed if present.
San Diego thorn-mint (*Acanthomintha ilicifolia*)	FT, SE, CRPR 1B.1	Annual herb. Blooms April-June. Clay, openings within chaparral, coastal scrub, valley and foothill grassland, vernal pools. Elev. 30-3,150 ft.	Low potential to occur. Site does not have suitable clay soils to support this species and species was not observed during focused surveys.
Smooth tarplant (*Centromadia pungens* ssp. *laevis*)	CRPR 1B.1	Annual herb. Blooms April-September. Chenopod scrub, meadows and seeps, playas, riparian woodland, and valley and foothill grassland. Elev. 0-2,100 ft.	Low potential to occur. The site does not support chenopod scrub, meadows and seeps, playas, or riparian woodland, but supports grassland habitat that has minor potential to support the species; however, would have likely been observed if present.
Southern tarplant (*Centromadia parryi* ssp. *australis*)	CRPR 1B.1	Annual herb. Blooms May-November. Marshes and swamps (margins), valley and foothill grassland (vernally mesic), vernal pools. Elev. 0-1,575 ft.	Low potential to occur. The site supports grassland habitat and potential mesic habitat that has a minor potential to support the species; however, would have likely been observed if present.
Spreading navarretia (*Navarretia fossalis*)	FT, CRPR 1B.1	Annual herb. Blooms April-June. Chenopod scrub, marshes and swamps (assorted shallow freshwater), playas, vernal pools. Elev. 95-2,150 ft.	Low potential to occur. The site supports grassland habitat and potential mesic habitat that has a minor potential to support the species; however, would have likely been observed if present.
Sticky dudleya (*Dudleya viscida*)	CRPR 1B.2	Perennial herb. Blooms May-June. Coastal bluff scrub, chaparral, cismontane woodland, coastal scrub. Elev. 30-1,805 ft.	Low potential to occur. The project site and survey buffer are within the elevational range and supports Diegan coastal sage scrub. However, this species would have likely been observed if present.
Summer holly (*Comarostaphylis diversifolia* ssp. *diversifolia*)	CRPR 1B.2	Perennial evergreen shrub. Blooms April-June. Chaparral, cismontane woodland. Elev. 98-2,592 ft.	Not anticipated to occur. Site does not support chaparral or cismontane woodland.
Thread-leaved brodiaea (*Brodiaea filifolia*)	FT, SE, CRPR 1B.1	Perennial bulbiferous herb. Blooms March-June. Found in often clay soils in chaparral (openings), cismontane woodland, coastal scrub, playas, valley and foothill grassland, vernal pools. Elev. 80-3,675 ft.	Low potential to occur. While the site supports Diegan coastal sage scrub habitat and the species is known from the nearby vicinity, appropriate clay soils do not occur on site. Species was not observed during focused surveys.

Species	Status	Habitat	Potential to Occur*
Variegated dudleya (*Dudleya variegata*)	CRPR 1B.2	Perennial herb. Blooms April-June. Chaparral, cismontane woodland, coastal scrub, valley and foothill grassland, vernal pools. Elev. 5-1,905 ft.	Low potential to occur. The site supports grassland habitat and potential mesic habitat that has a minor potential to support the species; however, species would have likely been observed if present.
Wart-stemmed ceanothus (*Ceanothus verrucosus*)	CRPR 2B.2	Perennial evergreen shrub. Blooms December-May. Chaparral. Elev. 3-1,247 ft.	Not anticipated to occur. Site does not support suitable chaparral habitat.

*: Sensitive plants were not observed during 2020 Focused Rare Plant Surveys

California Rare Plant Rank (CRPR)
1A: presumed extirpated in California and rare or extinct elsewhere
1B: rare, threatened, or endangered in California and elsewhere
2A: presumed extirpated in California but more common elsewhere
2B: rare, threatened, or endangered in California but more common elsewhere
3: plants for which more information needed
4: plants of limited distribution

CRPR Threat Ranks
0.1: Seriously threatened in California (*over 80% of occurrences threatened / high degree and immediacy of threat*)
0.2: Moderately threatened in California (*20-80% occurrences threatened / moderate degree and immediacy of threat*)
0.3: Not very threatened in California (*<20% of occurrences threatened / low degree and immediacy of threat or no current threats known*)

FE: Endangered Species Act (ESA) Federally Endangered Species
FT: Endangered Species Act (ESA) Federally Threatened Species
SE: California Endangered Species Act (CESA) State Endangered Species
ST: California Endangered Species Act (CESA) State Threatened Species
SR: California Endangered Species Act (CESA) State Rare Species

4.2.3 SPECIAL-STATUS WILDLIFE SPECIES

Wildlife species observed during the field survey are presented in Appendix C, and a full assessment of special-status wildlife species' potential to occur on the project site is provided as Table 3, below.

Focused 2020 breeding season coastal California gnatcatcher surveys for the project were negative (RBC 2020a). No additional federally or state-listed wildlife species have a moderate or high potential to occur on site.

One CDFW Watch List species, Cooper's hawk (*Accipiter cooperii*), was observed flying over the site during the project biological survey (Figure 2). No additional CDFW Watch List species are anticipated to have a moderate or high potential to occur on the project site.

Table 3. Wildlife Species Potential for Occurrence

Species	Status	Habitat	Potential to Occur
REPTILES			
Western spadefoot (*Spea hammondii*)	SSC	Found in grassland and occasionally woodland habitats. Species requires ponds to breed.	Low potential to occur. Although the site supports potential mesic habitat, this habitat is not capable of supporting breeding populations of western spadefoot.
BIRDS			
Coastal California gnatcatcher (*Polioptila californica californica*)	FT, SSC	Found in coastal sage scrub habitats including Diegan coastal sage scrub, often dominated by California buckwheat (Eriogonum fasciculatum) and California sagebrush (Artemisia californica).	Low potential to occur. Although suitable Diegan coastal sage scrub is present on site, the habitat is limited, and focused 2020 breeding-season coastal California gnatcatcher surveys for the project were negative.
Cooper's hawk (*Accipiter cooperii*)	WL (Nesting)	Found in a variety of habitats including woodlands, shrublands, and urban areas. Nests in woodlands, often near rivers and streams.	Present. Species observed flying over the project site during spring 2020 surveys. Species has a low potential to nest on the project site however due to lack of suitable nesting trees.
Tricolored blackbird (*Agelaius tricolor*)	ST, SSC (Nesting colony)	Breeds within dense aquatic vegetation bordering freshwater aquatic habitats including marshes, swamps, lakes and ponds. This species is often found near agricultural areas.	Not anticipated to occur. Suitable marsh, swamp, lake and pond aquatic habitats are not present on site.
MAMMALS			
Townsend's big-eared bat (*Corynorhinus townsendii*)	SSC	Roosts in mines, caves, tunnels, and abandoned buildings. Forages in a variety of habitats including coastal sage scrub and arid scrub habitats.	Not anticipated to occur. Suitable habitats containing cavity roosts not present on site.

FT: Endangered Species Act (ESA) Federally Threatened Species
ST: California Endangered Species Act (CESA) State Threatened Species
SSC: California Department of Fish and Wildlife (CDFW) Species of Special Concern
WL: California Department of Fish and Wildlife (CDFW) Watch List Species

Federally Listed Species

Coastal California Gnatcatcher (*Polioptila californica californica*)

The coastal California gnatcatcher is federally listed as threatened and is considered a California Species of Special Concern. This species is a year-round resident of southern California and is found in the six southernmost California counties located within the coastal plain (San Bernardino,

Ventura, Los Angeles, Orange, San Diego, and Riverside). The primary cause of this species' decline is conversion of coastal sage scrub vegetation to urban and agricultural uses. USFWS has estimated that coastal sage scrub habitat has been reduced by 70 to 90 percent of its historical extent (USFWS 1991). Coastal California gnatcatcher generally inhabit coastal sage scrub habitats such as California buckwheat scrub dominated by California sagebrush and flat-topped buckwheat, generally below 1,500 feet in elevation along the coastal slope. When nesting, this species typically avoids slopes greater than 25% with dense, tall vegetation. Gnatcatcher pairs will attempt several nests each year (average of 4), each placed in a different location inside their breeding territory, but most nest attempts are unsuccessful because of depredation by a variety of species (Preston et al. 1998; Atwood and Bontrager 2001). Clutch size ranges from one to 5 eggs, with 3 or 4 eggs most common. Males and females will remain paired through the non-breeding season and will often expand their home range when not breeding.

This species is particularly vulnerable to habitat destruction and fragmentation because of their low dispersal rate, reliance on a specific habitat type, and low breeding success. Coastal California gnatcatcher has been described as "an obligate resident of coastal sage scrub" (Atwood and Bontrager 2001), a vegetation community that is vulnerable to urban pressures. The destruction of coastal sage scrub by wildfire also has a detrimental effect on local populations. This species also inhabits chaparral vegetation where adjacent to coastal sage scrub.

This species has been reported within one mile of the project site, with one report occurring approximately 0.15 mile west of the project site (Figure 4A and 4B; CNDDB 2020a). This historical sighting is from 1997 and the area where the sighting occurred has been developed into a residential development, likely fragmenting gnatcatcher populations. Suitable gnatcatcher Diegan coastal sage scrub habitat occurs along the southern project boundary. However, this habitat is surrounded by residential developments and lacks connectivity to larger expanses of habitat. Focused 2020 breeding season surveys for coastal California gnatcatcher for the project were negative (Appendix F; RBC 2020a).

4.2.4 OTHER SPECIAL-STATUS WILDLIFE SPECIES

Cooper's Hawk (Ac*cipiter cooperii*)

Coopers hawk is a CDFW Watch List species when nesting. This species is found across a variety of habitats, including coastal sage scrub, riparian woodlands, and urban areas. Cooper's hawk feed on small bird species and require large trees to nest. This species often nests in riparian woodlands and will occasionally nest in large ornamental trees.

Cooper's hawk was observed flying over the project site during the 2020 general biological survey (Figure 2). Although Cooper's hawk may use the project site as a hunting territory, suitable nesting habitat containing large trees is not present. As such, Cooper's hawk is not anticipated to nest within the project site.

4.3 POTENTIAL FEDERAL AND STATE JURISDICTIONAL AQUATIC RESOURCES

RBC documented curly dock (*Rumex crispus*), a wetland indicator species with a facultative (FAC) rating within a low-lying area in the center of the site during the general biological survey conducted on March 11, 2020 (Figure 2) (RBC 2020c). In addition, RBC documented two plant species commonly associated with depressional areas confined by clay soils, coastal plantain (*Plantago elongata*; FACW) and slender woolly marbles (*Psilocarphus tenellus*; OBL), within another low-lying area in the southern portion of the site (Figure 2; RBC 2020c). No defined bed or bank or other regular flow indicators were observed during the initial aquatic resources assessment; thus, no potential non-wetland waters of the U.S./State or CDFW streambed were observed on site.

These two areas were further investigated by Helix on April 24, 2020 to determine their anticipated jurisdictional status per Corps, RWQCB, or CDFW regulations and protocols (Appendix D). Helix staff took four wetland delineation sampling points within and near the two areas noted during RBC's initial aquatic resources assessment. None of the four sampling points met the required federal- or state-jurisdictional wetland parameters per Helix's findings (Appendix D). As such, HELIX concluded that the on-site low-lying areas are not expected to be jurisdictional under the Corps, RWQCB, or CDFW.

5 IMPACTS

Direct impacts refer to any alteration, disturbance, or destruction of biological resources caused by and occurring at the same time and place as the project. Examples include direct losses to native habitats, potential jurisdictional waters, wetlands, and special-status species; the crushing of adult plants, bulbs, or seeds; the diversion of natural surface water flows; injury, death, and/or harassment of listed and/or special-status species; and the destruction of habitats necessary for species breeding, feeding, or sheltering.

Indirect impacts may occur later in time or at a place that is farther removed in distance from the project than direct impacts, but indirect impacts are still reasonably foreseeable and attributable to project-related activities. Examples include habitat fragmentation; elevated noise, dust, and lighting levels; changes in hydrology, runoff, and sedimentation; decreased water quality; soil compaction; increased human activity; and the introduction of invasive wildlife (domestic cats and dogs) and plants.

Cumulative impacts are the direct and indirect impacts of a proposed project which, when considered alone, would not be deemed substantial, but when considered in addition to the impacts of related projects in the area, would be considered potentially significant. 'Related projects' refers to past, present, and reasonably foreseeable future projects which would have similar impacts on the proposed project.

CEQA Guidelines thresholds of significance have been used to determine whether project implementation would result in a significant direct, indirect, and/or cumulative impact. These thresholds are based on Appendix G of the CEQA Guidelines (California Code of Regulations [CCR] Title 14, Division 6, Chapter 3, Sections 15000–15387).

A significant biological resources impact would occur if the project would:

- Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by CDFW or USFWS;
- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by CDFW or USFWS;
- Have a substantial adverse effect on federal protected wetlands (including, but not limited to, marshes, vernal pools, coastal, etc.) through direct removal, filling, hydrological interruption, or other means;
- Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites;
- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy, or ordinance;
- Conflict with the provisions of an adopted Habitat Conservation Plan (HCP); NCCP; or other approved local, regional, or state habitat conservation plan.

5.1 VEGETATION COMMUNITIES/LAND USE IMPACT ANALYSIS

The project will impact seven habitats or land uses (Table 4). The project will primarily impact non-native grassland; however, impacts on developed lands, Diegan coastal sage scrub, Diegan coastal sage scrub – *Baccharis* dominated, disturbed lands, ornamental vegetation and ruderal vegetation would also occur. Impacts on Diegan coastal sage scrub and Diegan coastal sage scrub – *Baccharis* dominated are considered potentially significant and require mitigation.

Table 4. Project Vegetation Community/Land Use Impacts and Avoidance Acreages*

Vegetation Community/Land Use (Map Code)	Project Site Impacts (Acres)*	Grading Off Site (Acres)*	150-foot Brush Management Zone (Acres)*	Total Project Impacts	Remaining/ Non-Impacted Project Site (Acres)*
Developed	0.06	<0.01		0.06	0.34
Diegan Coastal Sage Scrub	0.01		0.59	0.61	0.60
Diegan Coastal Sage Scrub-*Baccharis* Dominated	0.03			0.03	
Disturbed	0.17			0.17	
Non-Native Grassland	9.07		0.44	9.50	0.44
Ornamental	0.22	0.04		0.26	
Ruderal	<0.01			<0.01	
TOTAL	9.56	0.05	1.03	10.63	1.38

** Acreages rounded to the hundredths based on raw numbers provided during GIS analysis of the project, which are available upon request.*

5.2 SPECIAL-STATUS PLANTS IMPACT ANALYSIS

No special-status plant species were documented during general biological surveys or during focused rare plant surveys, and none have a moderate or high potential to occur on the project site. As such, no impacts on special-status plant species would occur with project implementation.

5.3 SPECIAL-STATUS WILDLIFE IMPACT ANALYSIS

No special-status wildlife species were documented during project biological surveys or during focused coastal California gnatcatcher surveys. One CDFW Watch list species, Cooper's hawk, was observed flying over the site. No other special-status wildlife species have a moderate or high potential for occurrence on-site.

Coastal California Gnatcatcher

Protocol 2020 breeding season coastal California gnatcatcher surveys for the project were negative (RBC 2020a). As such, the project site is not considered to be occupied and impacts on coastal California gnatcatcher are not anticipated with implementation of the project.

Other Special Status Wildlife Species

One CDFW Watch list species, Cooper's hawk, was observed flying over the site. This species is protected while nesting. The site does not support many potential nesting sites for raptors; however, compliance with nesting bird regulations (see Section 6) would avoid direct impacts on Cooper's hawk.

The project would be constructed in conformance with state and federal nesting bird regulations as outlined in Section 6. As such, no significant impact on special-status wildlife would occur with project implementation.

5.4 NESTING BIRD IMPACT ANALYSIS

The project site has the potential to impact active bird nests if vegetation is removed, ground disturbing activities occur, or structures are removed during the nesting season (February 1 to August 31). Impacts on nesting birds are prohibited by the MBTA and CFGC. If construction were to occur during the breeding season, impacts are potentially significant.

5.5 POTENTIALLY JURISDICTIONAL AQUATIC RESOURCES IMPACT ANALYSIS

Based on the focused investigation and findings by HELIX (Appendix D), on-site low-lying areas discussed in Section 4.3 above are not anticipated to be considered jurisdictional aquatic resources given they did not meet the required hydrophytic vegetation, hydric soils, and wetland hydrology parameters (HELIX 2020). As such, impacts on potentially jurisdictional aquatic features are not anticipated.

5.6 CITY OF SAN MARCOS REGULATORY COMPLIANCE

5.6.1 DRAFT MHCP

The project site does not occur within lands designated as FPAs in the City's Draft MHCP Subarea Plan (2001). Additionally, the project would comply with habitat mitigation requirements outlined in the City's Draft MHCP Subarea Plan. As such, no project conflicts with adopted NCCP or HCP plans would occur with project implementation.

5.6.2 GENERAL PLAN

The project would be developed in compliance with the City's general plan and draft MHCP Subarea Plan. One coast live oak tree was documented on the site but would not be impacted by the proposed development. As such, no conflicts with local policies or ordinances would occur with project implementation.

5.7 WILDLIFE CORRIDORS

A wildlife corridor can be defined as a physical feature that links wildlife habitat, often consisting of native vegetation that joins two or more larger areas of similar wildlife habitat. Corridors enable migration, colonization, and genetic diversity through interbreeding and are therefore critical for the movement of animals and the continuation of viable populations. Corridors can consist of large, linear stretches of connected habitat (such as riparian vegetation) or as a sequence of stepping-stones across the landscape (discontinuous areas of habitat such as wetlands and ornamental vegetation), or corridors can be larger habitat areas with known or likely importance to local fauna.

Regional corridors are defined as those linking two or more large patches of habitat, and local corridors are defined as those allowing resident animals to access critical resources (food, cover, and water) in a smaller area that might otherwise be isolated by urban development. A viable

wildlife migration corridor consists of more than an unobstructed path between habitat areas. Appropriate vegetation communities must be present to provide food and cover for both transient species and resident populations of less mobile animals. There must also be a sufficient lack of stressors and threats within and adjacent to the corridor for species to use it successfully.

The project area does not occur within a local movement corridor identified in the City's General Plan (See Figure 4-2; City 2012). As such, impacts on wildlife movement and corridors would be less than significant and no mitigation is required.

5.8 INDIRECT IMPACT ANALYSIS

In the context of biological and aquatic resources, indirect impacts are those effects associated with development activities. Examples of indirect effects include water quality impacts from site drainage into adjacent open space/downstream aquatic resources; lighting effects; noise effects; invasive plant species from landscaping; and effects from human access into adjacent open space, such as recreational activities (including off-road vehicles and hiking), pets, dumping, etc. Temporary, indirect effects may also occur as a result of construction-related activities. The project is adjacent to already developed or disturbed areas and will comply with stormwater regulations, the project will not result in significant indirect stormwater impacts.

The project does have the potential for adverse impacts on adjacent habitats through the introduction of non-native invasive plant species through site landscaping. Impacts are potentially significant.

5.9 CUMULATIVE IMPACT ANALYSIS

Project development would primarily impact non-native grassland (9.50 acres); with a small impact on Diegan coastal sage scrub (0.61 acre) and Diegan coastal sage scrub – *Baccharis* dominated (0.03 acre) lands. Though impacts are adverse, they are relatively small and would be mitigated in conformance with City of San Marcos regulations. As such, project implementation would not result in significant cumulative impacts on biological resources.

6 MITIGATION AND AVOIDANCE MEASURES

The following discussion provides project-specific mitigation/avoidance measures for potential impacts on biological resources.

6.1 VEGETATION COMMUNITIES MITIGATION

As noted above, the proposed project will directly impact sensitive vegetation communities. The project would impact three sensitive habitats, including 0.61 acre of Diegan coastal sage scrub, 0.03 acre of Diegan coastal sage scrub – *Baccharis* dominated, and 9.50 acres of non-native grassland. Mitigation requirements are detailed in Table 5.

Table 5. Mitigation for Potential Project Impacts on Vegetation Communities/Land Uses

Vegetation Community/Land Use (Map Code)	Total Project Impacts (Acres)*	Mitigation Ratio**	Required Mitigation (Acres)
Developed	0.06		
Diegan Coastal Sage Scrub	0.61	1:1	0.61
Diegan Coastal Sage Scrub – *Baccharis* Dominated	0.03	1:1	0.03
Disturbed	0.17	0:1	0
Non-Native Grassland	9.50	0.5:1	4.75
Ornamental	0.26		
Ruderal	<0.01		
TOTAL	10.63		5.39

** Acreages rounded to the hundredths based on raw numbers provided during GIS analysis of the project, which are available upon request.*
*** Mitigation ratios are consistent with those presented in Tables 4-6 and 4-7 of the MHCP (SANDAG 2003) and Section 5.2.1 of the draft San Marcos Subarea Plan (City 2001) for projects located outside of FPAs.*

Implementation of MM-1, below, would reduce impacts on vegetation communities to less than significant. Mitigation for impacts on sensitive vegetation communities is consistent with the mitigation ratios presented in Tables 4-6 and 4-7 of the MHCP (SANDAG 2019) and Section 5.2.1 of the Draft San Marcos Subarea Plan (City 2001) (Table 4).

MM-1 – Project impacts on 0.61 acre of Diegan coastal sage scrub (1:1 ratio), and 0.03 acre of Diegan coastal sage scrub – Baccharis dominated (1:1 ratio), and 9.50 acres of non-native grassland (0.5:1 ratio) shall be mitigated at the appropriate ratios either through: 1) Placing on-site lands that are not included in the development footprint (including brush management areas) into a conservation easement; or 2) Purchasing land off site for mitigation.

6.2 NESTING BIRD MITIGATION

To avoid impacts on nesting birds and comply with state and federal regulations, the following mitigation shall be implemented:

MM-2 – To avoid direct impacts on raptors and/or native/migratory birds, removal of habitat that supports active nests in the proposed area of disturbance should occur outside of the breeding season for these species (February 1 to September 15). If removal of habitat in the proposed area of disturbance must occur during the breeding season, a qualified biologist shall conduct a pre-construction survey to determine the presence or absence of nesting birds in the proposed area of disturbance. The pre-construction (precon) survey shall be conducted within ten (10) calendar days prior to the start of construction activities (including removal of vegetation). If nesting birds are observed, a letter report or mitigation plan in conformance with applicable State and Federal Law (i.e. appropriate follow up surveys, monitoring schedules, construction and noise barriers/buffers, etc.) shall be prepared and include proposed measures to be implemented to ensure that take of birds or eggs or disturbance of breeding activities is avoided. The report or mitigation plan shall be submitted to the CDFW and/or USFWS as applicable for review and approval and implemented to the satisfaction of those agencies. The project biologist shall verify and approve that all measures

identified in the report or mitigation plan are in place prior to and/or during construction. If nesting birds are not detected during the precon survey, no further mitigation is required.

6.3 INVASIVE PLANT SPECIES MITIGATION

Due to the site's location near sensitive habitats, the following mitigation measure shall be implemented:

MM-3 – To avoid indirect impacts on adjacent sensitive habitats, final landscape plans will be approved by a qualified biologist to ensure that no invasive plant materials are included in planting plans.

6.4 SITE MONITORING AND ADJACENT IMPACT AVOIDANCE

To prevent inadvertent disturbance to adjacent habitats outside the limits of the proposed project activities, the following monitoring requirements and best management practices (BMPs) shall be implemented:

MM-4 – A biologist shall be contracted to perform regular random checks (at minimum once a month) to ensure implementation of the following monitoring requirements and BMPs. Monitoring reports and a post-construction monitoring report will be prepared to document compliance with these requirements.

1) To prevent inadvertent disturbance to areas outside the limits of work, the construction limits shall be clearly demarcated (e.g., installation of flagging or temporary visibility construction fence) prior to ground disturbance activities and all construction activities, including equipment staging and maintenance shall be conducted within the marked disturbance limits. The work limit delineation will be maintained throughout project construction.
2) Spoils, trash, and any excavation-generated debris will be removed to an approved off-site disposal facility. Trash and food items will be contained in closed containers and removed daily to reduce the attraction of opportunistic predators to the site, such as common ravens, coyotes, and feral cats and dogs that may prey on listed species.
3) Raw cement/concrete or washings thereof, asphalt, paint or other coating material, oil, or other petroleum products, or any other substances that could be hazardous to vegetation or wildlife resources, resulting from project-related activities, will be prevented from contaminating the soil.
4) Construction activities will be limited to daylight hours to the extent feasible. If nighttime work is necessary, lighting will be shielded away from surrounding natural areas. Fixtures will be shielded to downcast below the horizontal plane of the fixture height and mounted as low as possible.

7 CONCLUSION

The project would impact primarily non-native grassland and Diegan coastal sage scrub habitats. Mitigation outlined in Section 6 would ensure impacts on adjacent habitats are avoided (see MM-3

and MM-4). Impacts on non-native grassland, Diegan coastal sage scrub and Diegan coastal sage scrub – *Baccharis* dominated would be less than significant with incorporation of the mitigation outlined in Section 6 (see MM-1 and MM-4).

Based on the presence of suitable avian nesting habitat, pre-construction clearance survey for nesting birds should be conducted to ensure that no impacts on nesting birds occur (see MM-2). With the implementation of the mitigation measures outline above, direct impacts on special-status and nesting birds would be less than significant.

With implementation of the measures outlined in Section 6, project impacts on biological resources would be less than significant.

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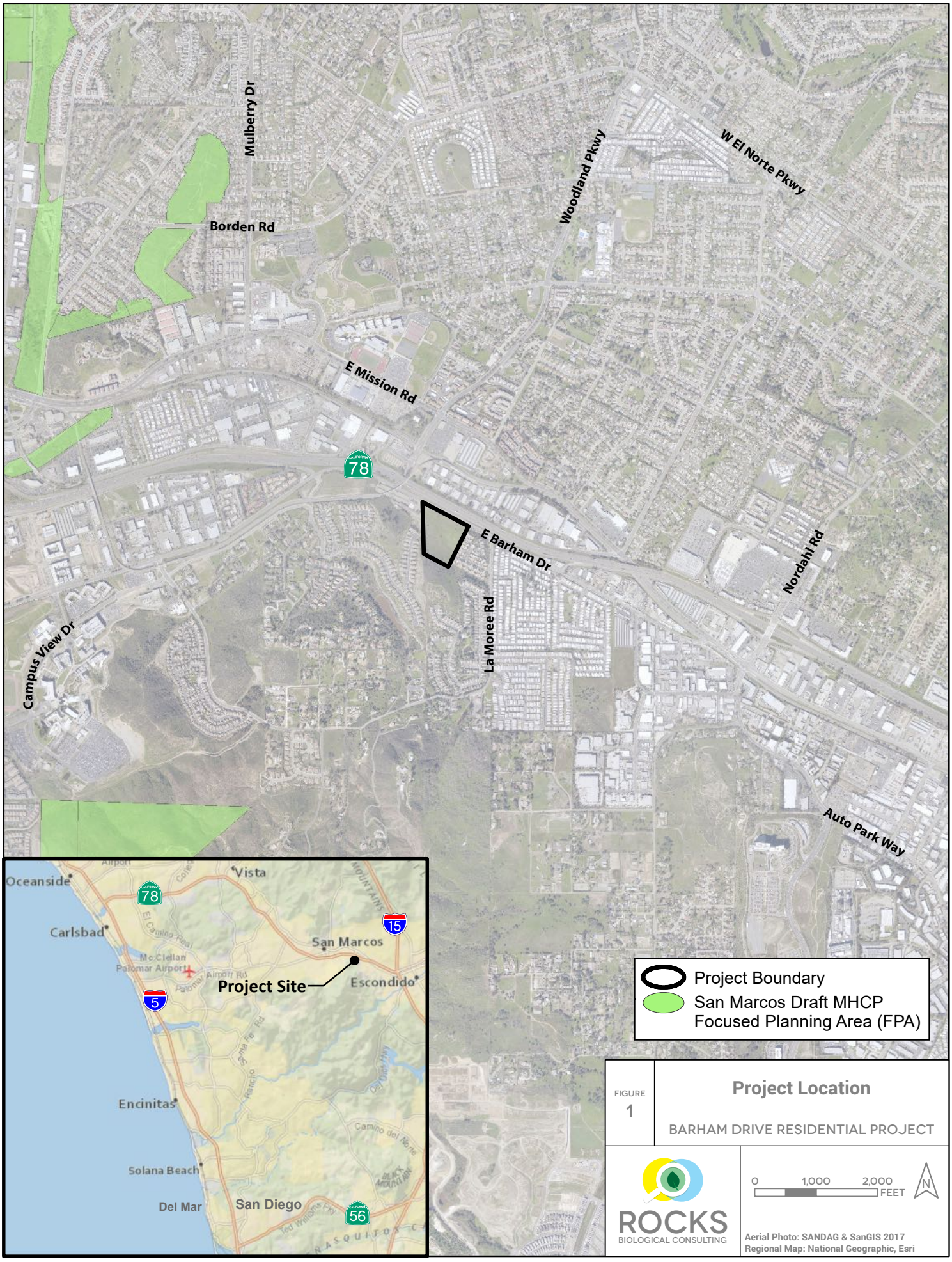


FIGURE 1

Project Location

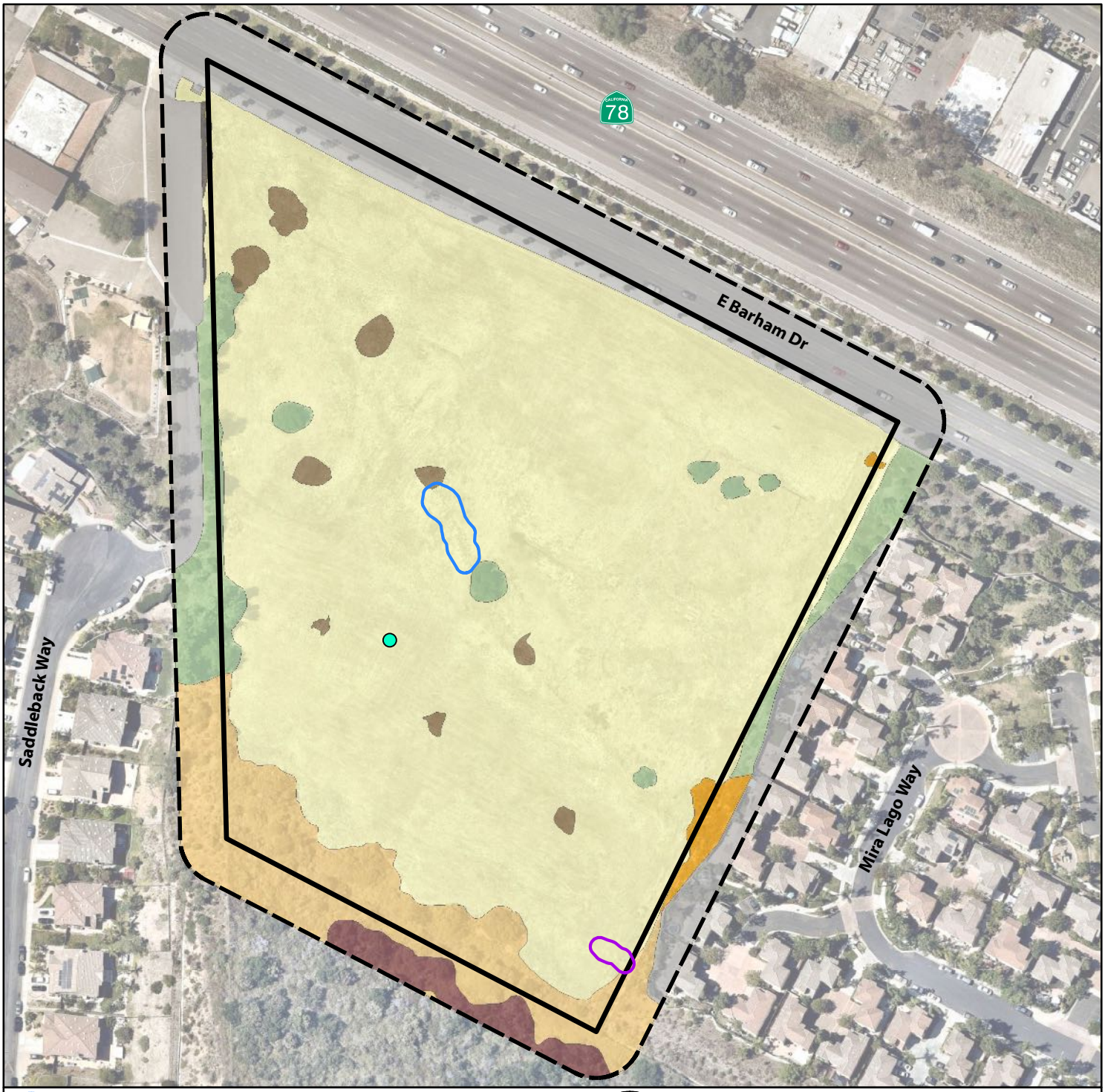
BARHAM DRIVE RESIDENTIAL PROJECT

ROCKS BIOLOGICAL CONSULTING

0 1,000 2,000 FEET

N

Aerial Photo: SANDAG & SanGIS 2017
Regional Map: National Geographic, Esri



Low-Lying Area Investigated for Potential Jurisdictional Aquatic Resources (HELIX, 2020)

Clay Associated Species Observation Area (*Plantago elongata* and *Psilocarphus tenellus*) Investigated for Potential Jurisdictional Aquatic Resources (HELIX, 2020)

Project Boundary/Survey Area

Survey Buffer

Special-Status Species

Cooper's Hawk (*Accipiter cooperii*; CDFW WL) flyover

Vegetation

- Diegan Coastal Sage Scrub
- Diegan Coastal Sage Scrub-Baccharis Dominated
- Chaparral
- Non-Native Grassland
- Ornamental
- Disturbed
- Ruderal
- Developed

FIGURE 2

Biological Resources

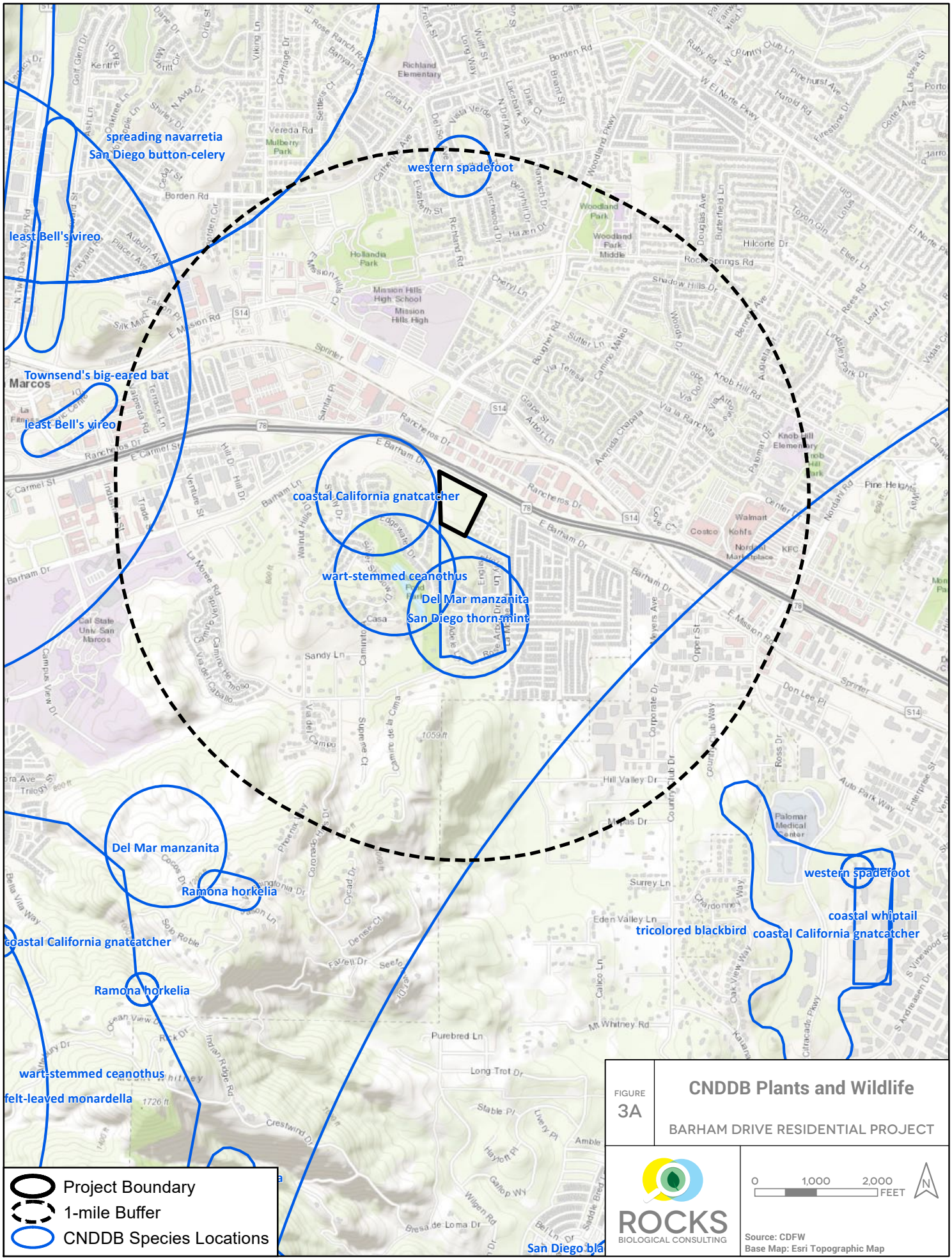
BARHAM DRIVE RESIDENTIAL PROJECT

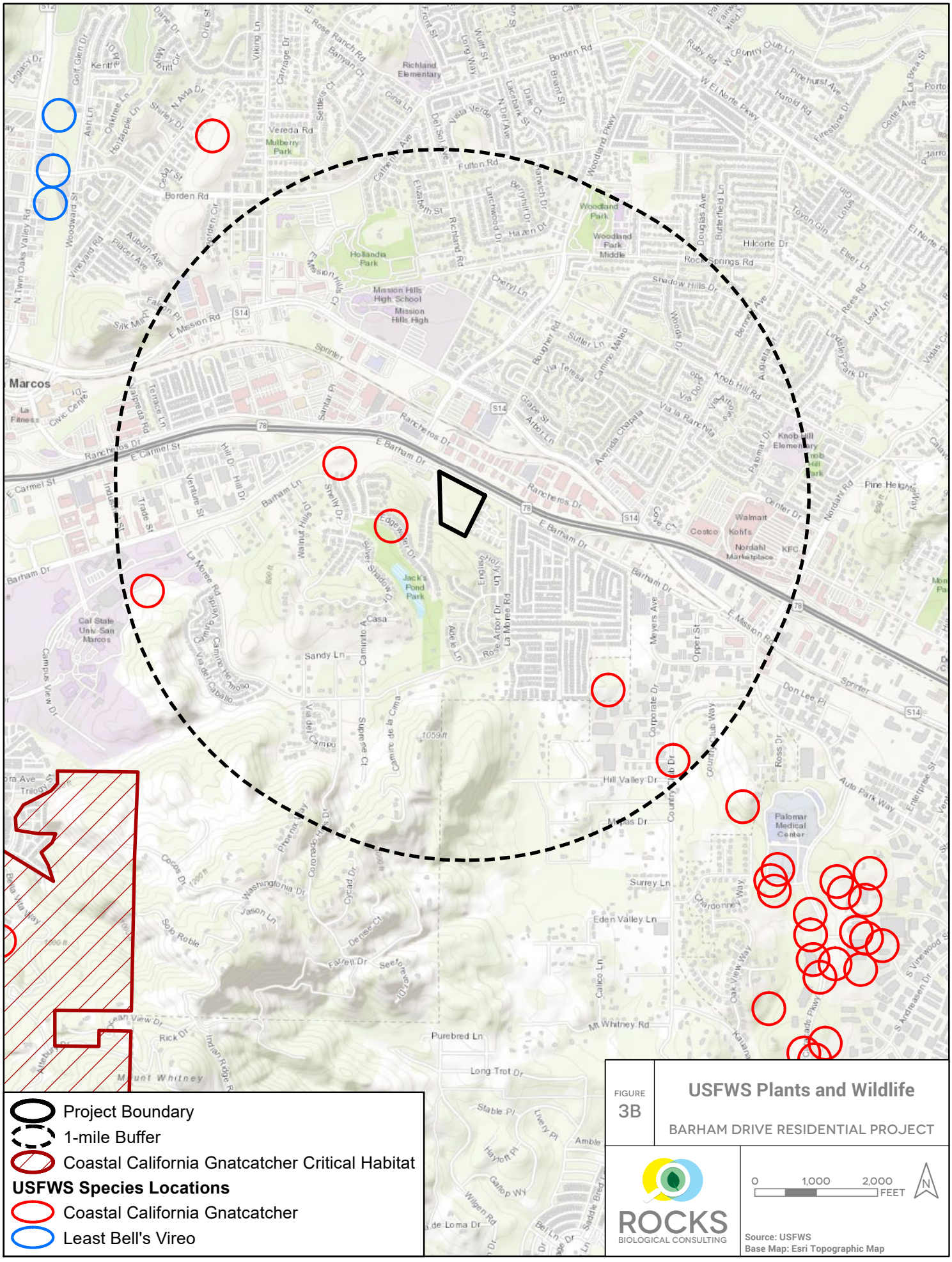
ROCKS BIOLOGICAL CONSULTING

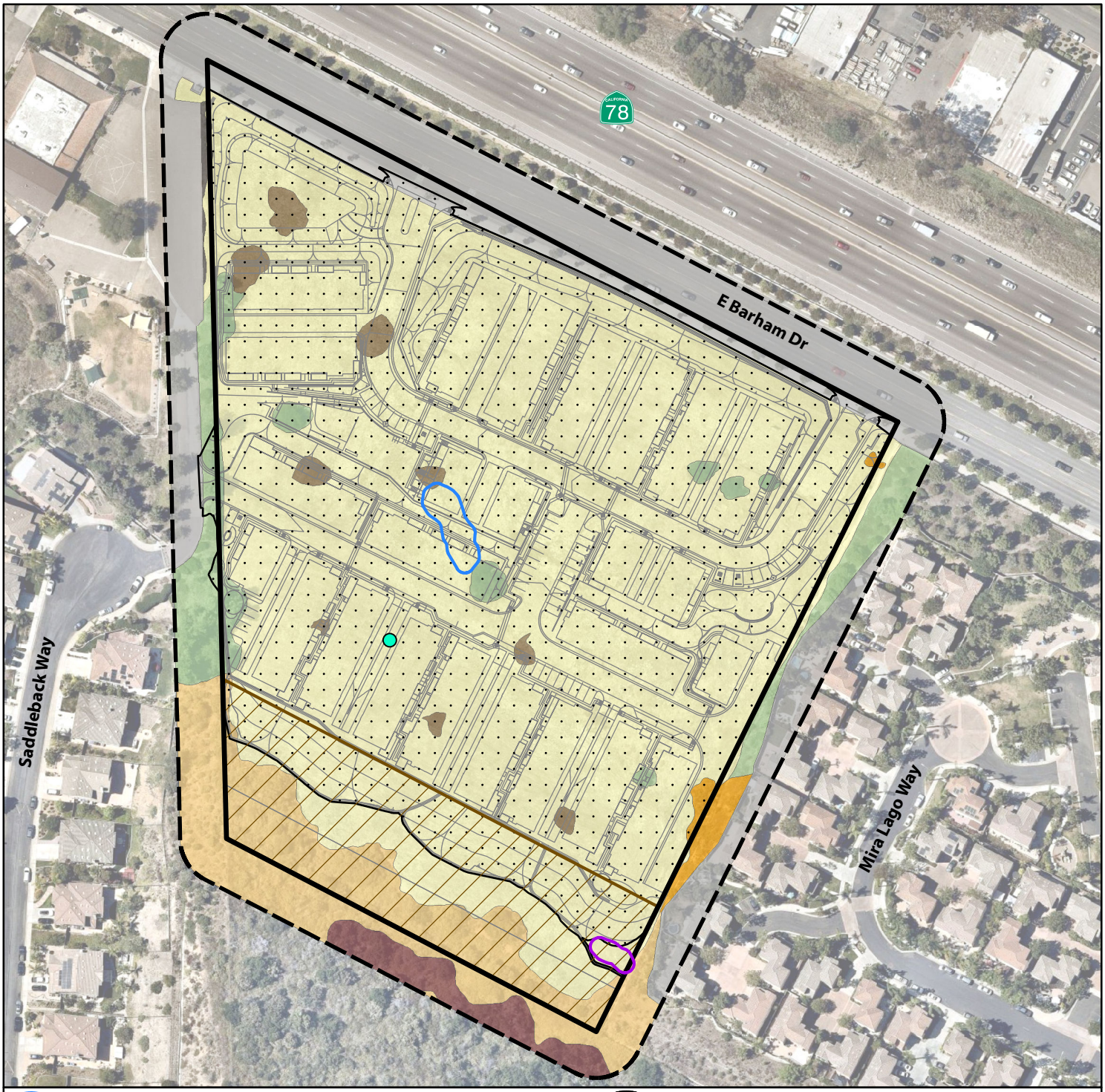
0 75 150 FEET

N

Aerial Photo: Nearmap 2019


spreading navarretia
San Diego button-celery
western spadefoot
least Bell's vireo
Townsend's big-eared bat
least Bell's vireo
coastal California gnatcatcher
wart-stemmed ceanothus
Del Mar manzanita
San Diego thorn-mint
Del Mar manzanita
Ramona horkelia
coastal California gnatcatcher
Ramona horkelia
wart-stemmed ceanothus
felt-leaved monardella
western spadefoot
coastal whiptail
tricolored blackbird
coastal California gnatcatcher
Project Boundary
1-mile Buffer
CNDDB Species Locations
FIGURE 3A
CNDDB Plants and Wildlife
BARHAM DRIVE RESIDENTIAL PROJECT
ROCKS BIOLOGICAL CONSULTING
0 1,000 2,000 FEET
Source: CDFW
Base Map: Esri Topographic Map


Project Boundary
1-mile Buffer
Coastal California Gnatcatcher Critical Habitat
USFWS Species Locations
Coastal California Gnatcatcher
Least Bell's Vireo
FIGURE
3B
USFWS Plants and Wildlife
BARHAM DRIVE RESIDENTIAL PROJECT
ROCKS
BIOLOGICAL CONSULTING
0
1,000
2,000
FEET
N
Source: USFWS
Base Map: Esri Topographic Map



Low-Lying Area Investigated for Potential Jurisdictional Aquatic Resources (HELIX, 2020)

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Project Boundary/Survey Area

Survey Buffer

Grading Limits

150' Brush Management Zone for R-3-10

Special-Status Species

Cooper's Hawk (*Accipiter cooperii*); CDFW WL

Vegetation

Diegan Coastal Sage Scrub

Diegan Coastal Sage Scrub-Baccharis Dominated

Chaparral

Non-Native Grassland

Ornamental

Disturbed

Ruderal

Developed

FIGURE 4

Impacts

BARHAM DRIVE RESIDENTIAL PROJECT

ROCKS BIOLOGICAL CONSULTING

0 75 150 FEET

N

Aerial Photo: Nearmap 2019

Appendix A

Site Photographs

Photo 1. Overview of project site showing non-native grassland and ornamental trees, facing north. March 11, 2020.

Photo 2. Overview of project site showing disturbed land (foreground), and non-native grassland (background), facing south. March 11, 2020.

Photo 3. Overview from the eastern project boundary, facing southwest. Photo shows Diegan coastal sage scrub – *Baccharis* dominated (foreground) and non-native grassland (background). March 11, 2020.

Photo 4. View of non-native grassland (foreground), and ornamental trees (right) and Diegan coastal sage scrub (background) at the western portion of the site, facing south. March 11, 2020.

Photo 5. View of clay associated species observation area where coastal plantain (*Plantago elongata*) and slender woolly marbles (*Psilocarphus tenellus*) were observed, facing east. March 11, 2020.

Photo 6. View of low-lying area where curly dock (*Rumex crispus*) was observed, facing northwest. March 11, 2020.

Photo 7. View of Diegan coastal sage scrub in the southern portion of the project site, facing southwest. May 13, 2020.

Photo 8. Overview of project site from western project boundary showing non-native grassland and ornamental trees (background), facing north. May 13, 2020.

Photo 9. View of low-lying area where curly dock (*Rumex crispus*) was observed, facing northwest. May 20, 2020.

Photo 10. View of curly dock (*Rumex crispus*) within the documented low lying area, facing east. May 20, 2020.

Appendix B
Regulatory Framework

Federal Regulations

Federal Endangered Species Act

The federal Endangered Species Act of 1973, as amended, (FESA; 16 U.S. Code [U.S.C.] § 1531 et seq.) provides for listing of endangered and threatened species of plants and animals and designation of critical habitat for such listed species. FESA regulates the "taking" of any endangered fish or wildlife species, per Section 9 of FESA. As development is proposed, the responsible agency or individual landowner is required to consult with the U.S. Fish and Wildlife Service (USFWS) to assess potential impacts on listed species (including plants) or their critical habitat, pursuant to Sections 7 and 10 of FESA. USFWS is required to make a determination as to the extent of impact to a particular species a project would have. If it is determined that potential impacts to a species would likely occur, measures to avoid or reduce such impacts must be identified. Following consultation and the issuance of a Biological Opinion, USFWS may issue an incidental take permit, which allows for take of the species that is incidental to another authorized activity, provided that the action will not adversely affect the existence of the species. Section 10 of FESA provides for issuance of incidental take permits to non-federal parties with the development of a habitat conservation plan (HCP); Section 7 of FESA provides for permitting of federal projects or projects requiring federal permits.

Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA; 16 U.S.C. 703 et seq.) implements treaties with several countries on the conservation and protection of migratory birds. The number of bird species covered by the MBTA is extensive and listed at 50 Code of Federal Regulations (CFR) 10.13. USFWS enforces the MBTA and prohibits "by any means or in any manner, to pursue, hunt, take, capture, [or] kill" any migratory bird, or attempt such actions, except as permitted by regulation.

Rivers and Harbors Appropriation Act of 1899

The Rivers and Harbors Appropriation Act of 1899 (Rivers and Harbors Act; 33 U.S.C. § 401 et seq.) prohibits the discharge of any material into navigable waters, or tributaries thereof, of the U.S. without a permit. The Rivers and Harbors Act also makes it a misdemeanor to excavate, fill, or alter the course, condition, or capacity of any port, harbor, or channel; or to dam navigable streams without a permit.

Many activities originally covered by the Rivers and Harbors Act are now regulated under the Clean Water Act of 1972 (CWA; 33 U.S.C. § 1251 et seq.), discussed below. However, the 1899 act retains relevance and created the structure under which the U.S. Army Corps of Engineers (Corps) oversees Clean Water Act 404 permitting.

Clean Water Act

Pursuant to Section 404 of the CWA, the Corps is authorized to regulate any activity that would result in the discharge of dredged or fill material into waters of the U.S. (including wetlands), which

include those waters listed in 33 CFR 328.3. The Corps, with oversight from the U.S. Environmental Protection Agency (EPA), has the principal authority to issue CWA Section 404 permits.

A water quality certification or waiver pursuant to Section 401 of the CWA is required for all Section 404 permitted actions. The Regional Water Quality Control Board (RWQCB), a division of the State Water Resources Control Board, provides oversight of the 401 permit process in California. The RWQCB is required to provide "certification that there is reasonable assurance that an activity that may result in the discharge to waters of the United States will not violate water quality standards." Water Quality Certification must be based on the finding that a proposed discharge will comply with applicable water quality standards.

The National Pollutant Discharge Elimination System (NPDES) is the permitting program for discharge of pollutants into surface waters of the U.S. under Section 402 of the CWA. Substantial impacts to wetlands may require an Individual Permit. Projects that only minimally affect wetlands may meet the conditions of one of the existing Nationwide Permits (NWPs).

State Regulations

California Endangered Species Act

The California Endangered Species Act (CESA; California Fish and Game Code [CFGC] § 2050 et seq.) defines an endangered species as "a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant which is in serious danger of becoming extinct throughout all, or a significant portion, of its range due to one or more causes, including loss of habitat, change in habitat, overexploitation, predation, competition, or disease." CESA defines a threatened species as "a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant that, although not presently threatened with extinction, is likely to become an endangered species in the foreseeable future in the absence of the special protection and management efforts required by this chapter." Candidate species are defined as "a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant that the commission has formally noticed as being under review by the department for addition to either the list of endangered species or the list of threatened species, or a species for which the commission has published a notice of proposed regulation to add the species to either list." Candidate species may be afforded temporary protection as though they were already listed as threatened or endangered at the discretion of the California Fish and Game Commission. Unlike FESA, CESA does not list invertebrate species.

Section 2080 of CESA addresses the taking of threatened, endangered, or candidate species by stating "[n]o person or public agency shall import into this state, export out of this state, or take, possess, purchase, or sell within this state, any species, or any part or product thereof, that the commission determines to be an endangered species or a threatened species, or attempt any of those acts, except as otherwise provided." Section 86 of the CFGC defines "take" as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill." Exceptions authorized by the State to allow "take" require permits or memoranda of understanding and can be authorized for endangered species, threatened species, or candidate species for scientific,

educational, or management purposes and for take incidental to otherwise lawful activities. Sections 1901 and 1913 of the CFGC provide that notification is required prior to disturbance.

California Environmental Quality Act

The California Environmental Quality Act (CEQA; Public Resources Code § 21000 et seq.) was established in 1970 as California's counterpart to the National Environmental Policy Act (NEPA; 42 U.S.C. § 4321 et seq.). CEQA requires state and local agencies to identify significant environmental impacts of their actions and to avoid or mitigate those impacts, where feasible.

CEQA applies to certain activities of state and local public agencies. A public agency must comply with CEQA when it undertakes an activity defined by CEQA as a "project." A project is an activity undertaken by a public agency or a private activity, which must receive some discretionary approval from a government agency (meaning that the agency has the authority to deny the requested permit or approval) that may cause either a direct physical change in the environment or a reasonably foreseeable indirect change in the environment.

Native Plant Protection Act and Natural Community Conservation Planning Act

CESA, in combination with California's Native Plant Protection Act of 1977 (NPPA; CFGC § 1900 et seq.), regulates the listing and take of plant and animal species designated as endangered, threatened, or rare within California. California also lists species of special concern based on limited distribution, declining populations, diminishing habitat, or unusual scientific, recreational, or educational value. The California Department of Fish and Wildlife (CDFW) is responsible for assessing development projects for their potential to impact listed species and their habitats. State-listed special-status species are addressed through the issuance of a 2081 permit (Memorandum of Understanding).

In 1991, the California Natural Community Conservation Planning (NCCP) Act (CFGC § 2800 et seq.) was approved and the NCCP Coastal Sage Scrub program was initiated in Southern California. The State established the NCCP program "to provide for regional protection and perpetuation of natural wildlife diversity while allowing compatible land use and appropriate development and growth." The NCCP Act encourages preparation of plans that address habitat conservation and management on an ecosystem basis rather than one species or habitat at a time.

California Fish and Game Code Sections 1600-1602

Pursuant to Division 2, Chapter 6, Section 1602 of the CFGC, CDFW regulates all diversions, obstructions, or changes to the natural flow or bed, channel or bank of any river, stream or lake that supports fish or wildlife. A Notification of Lake or Streambed Alteration must be submitted to CDFW for "any activity that may substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake." CDFW has jurisdiction over riparian habitats associated with watercourses. Jurisdictional waters are delineated by the outer edge of riparian vegetation (i.e., drip line) or at the top of the bank of streams or lakes, whichever is wider. CDFW jurisdiction does not include tidal areas or isolated resources. CDFW reviews the proposed actions and, if necessary, submits (to the applicant) a proposal that includes measures to protect

affected fish and wildlife resources. The final proposal that is mutually agreed upon by CDFW and applicant is the Lake or Streambed Alteration Agreement.

California Fish and Game Code Sections 3503, 3511, 3513, 3800, 4700, 5050, and 5515

CDFW protects and manages fish, wildlife, and native plant resources within California. The California Fish and Game Commission and/or CDFW are responsible for issuing permits for the take or possession of protected species. The following sections of the CFGC address protected species: Section 3511 (birds), Section 4700 (mammals), Section 5050 (reptiles and amphibians), and Section 5515 (fish). In addition, the protection of birds of prey is provided for in Sections 3503, 3513, and 3800 of the CFGC.

Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act (Water Code Section 13000 et seq.) provides for statewide coordination of water quality regulations. The State Water Resources Control Board was established as the statewide authority and nine separate RWQCBs were developed to oversee water quality on a day-to-day basis. The RWQCB is the primary agency responsible for protecting water quality in California. As discussed above, the RWQCB regulates discharges to surface waters under the CWA. In addition, the RWQCB is responsible for administering the Porter-Cologne Water Quality Control Act.

Pursuant to the Porter-Cologne Water Quality Control Act, the state is given authority to regulate waters of the state, which are defined as any surface water or groundwater, including saline waters. As such, any person proposing to discharge waste into a water body that could affect its water quality must first file a Report of Waste Discharge if Section 404 is not required for the activity. “Waste” is partially defined as any waste substance associated with human habitation, including fill material discharged into water bodies.

Regional and Local Plans

City of San Marcos General Plan

The Conservation and Open Space Element of the City of San Marcos (City) General Plan (City 2012) includes the following policies applicable to the project site as they relate to the conservation and protection of natural resources within the City.

Goal COS-1: Identify, protect, and enhance significant ecological and biological resources within San Marcos and its adaptive Sphere of Influence.

- Policy COS-1.1: Support the protection of biological resources through the establishment, restoration, and conservation of high quality habitat areas.
- Policy COS-1.2: Ensure that new development, including Capital Improvement Projects, maintain the biotic habitat value of riparian areas, oak woodlands, habitat linkages, and other sensitive biological habitats policy.
- Policy COS-1.3: Continue to work with other federal, State, regional, and local agencies to implement the MHCP.

Goal COS-2: The City is committed to conserving, protecting, and maintaining open space, agricultural, and limited resources for future generations. By working with property owners, local organizations, and state and federal agencies, the City can limit the conversion of resource lands to urban uses.

- Policy COS-2.6: Preserve healthy mature trees where feasible; where removal is necessary, trees shall be replaced at a ratio of 1:1.

Goal COS-3: Protect natural topography to preserve and enhance the natural beauty of San Marcos.

- Policy COS-3.4: Evaluate potential impacts to visual and aesthetic resources, including the potential to create new light sources, while still maintaining and being sensitive to rural lighting standards.

Goal COS-8: Focus watershed protection, surface and groundwater quality management on sources and practices that the City has the ability to affect.

- Policy COS-8.4: Require new development and redevelopment to protect the quality of water bodies and natural drainage systems through site design, source controls, storm water treatment, runoff reduction measures, Best Management Practices (BMPs), low impact development (LID), hydromodification strategies consistent with the Current San Diego Regional Water Quality Control Board Municipal Stormwater National Pollutant Discharge Elimination System (NPDES) Permit, and all future municipal stormwater permits.

San Diego County Multiple Habitat Conservation Program

The San Diego County Multiple Habitat Conservation Program (MHCP) is a comprehensive habitat conservation/planning program for northwestern San Diego County (the Cities of Carlsbad, Encinitas, Escondido, Oceanside, San Marcos, Solana Beach, and Vista) (SANDAG 2003b, SANDAG 2003c). The intent of the MHCP is to provide a coordinated, comprehensive approach to maintaining biodiversity and ecosystem health in the region while maintaining quality of life and providing economic growth opportunities throughout northwestern San Diego County. The goal of the MHCP is to have a 19,781-acre reserve system, of which 8,800 acres are already in public ownership (SANDAG 2019). Each of the cities within the MHCP planning area, except for the City of Solana Beach, is required to implement their portion of the MHCP via a city-wide subarea plan.

The MHCP identifies focused planning areas (FPAs), which are specific areas within which lands "will be dedicated for open space and habitat conservation" (SANDAG 2003a). The MHCP provides a preliminary list of 50 special-status animal and plant species proposed as covered species under the MHCP. The wildlife agencies (USFWS and CDFW) will make a final determination as to a species coverage (including take authorization for listed species) upon completion of a USFWS Section 7 consultation regarding permit issuance for each city-specific subarea plan and will attach a city-specific covered species list to each city's subarea plan implementing agreement (SANDAG 2003a).

Draft San Marcos Subarea Plan

The City prepared a draft San Marcos Subarea Plan in 2001 to obtain 'take' authorization of special status species under the MHCP. The goal of the City's Subarea Plan is to identify a City-wide preserve system that meets local and regional biological goals while minimizing fiscal and economic effects to the City and adverse effects on private property owners (City 2001). To assist in achieving this goal, the City's Subarea Plan has designated focused planning areas (FPAs) with "parcel level preserve goals" which will contribute to achieving the "local and regional conservation goals" while minimizing "adverse effects on property rights and property values" (City 2001). The City's Subarea Plan provides a list of 26 covered species (seven plant species and 19 animal species). Although the City does not yet have an MHCP implementing agreement with the USFWS or CDFW, the City uses the draft San Marcos Subarea Plan and San Diego County MHCP as guides for project processing and mitigation planning.

Appendix C

Plant and Wildlife Species Observed

Family	Common Name	Scientific Name
PLANTS		
Adoxaceae	blue elderberry	*Sambucus nigra* ssp. *caerulea*
Aizoaceae	hottentot-fig	*Carpobrotus edulis* *
Amaranthaceae	white tumbleweed	*Amaranthus albus* *
Anacardiaceae	laurel sumac	*Malosma laurina*
Anacardiaceae	Peruvian pepper tree	*Schinus molle* *
Anacardiaceae	Brazilian pepper tree	*Schinus terebinthifolius* *
Anacardiaceae	western poison-oak	*Toxicodendron diversilobum*
Apiaceae	American bowlesia	*Bowlesia incana*
Apiaceae	rattlesnake weed	*Daucus pusillus*
Apiaceae	sweet fennel	*Foeniculum vulgare* *
Apiaceae	pacific sanicle	*Sanicula crassicaulis*
Apocynaceae	narrow-leaf milkweed	*Asclepias fascicularis*
Arecaceae	Mexican fan palm	*Washingtonia robusta* *
Asparagaceae	florist's-smilax	*Asparagus asparagoides* *
Asteraceae	western ragweed	*Ambrosia psilostachya*
Asteraceae	coastal sagebrush	*Artemisia californica*
Asteraceae	coyote brush	*Baccharis pilularis* ssp. *consanguinea*
Asteraceae	Italian thistle	*Carduus pycnocephalus* ssp. *pycnocephalus**
Asteraceae	bachelor's button	*Centaurea cyanus* *
Asteraceae	tocalote	*Centaurea melitensis* *
Asteraceae	California sand-aster	*Corethrogyne filaginifolia* var. *filaginifolia*
Asteraceae	Australian brass-buttons	*Cotula australis* *
Asteraceae	fascicled tarweed	*Deinandra fasciculata*
Asteraceae	stinkwort	*Dittrichia graveolens* *
Asteraceae	flax-leaf fleabane	*Erigeron bonariensis* *
Asteraceae	horseweed	*Erigeron canadensis*
Asteraceae	asthmaweed	*Erigeron sumatrensis* *
Asteraceae	long-stem golden-yarrow	*Eriophyllum confertiflorum* var. *confertiflorum*
Asteraceae	desert cudweed	*Gamochaeta stagnalis* *
Asteraceae	treasure flower	*Gazania linearis* *
Asteraceae	garland/crown daisy	*Glebionis coronaria* *
Asteraceae	southern sawtooth goldenbush	*Hazardia squarrosa* var. *grindelioides*
Asteraceae	crete hedypnois	*Hedypnois cretica* *
Asteraceae	bristly ox-tongue	*Helminthotheca echioides* *
Asteraceae	telegraph weed	*Heterotheca grandiflora*
Asteraceae	smooth cat's ear	*Hypochaeris glabra* *
Asteraceae	spreading goldenbush	*Isocoma menziesii* var. *menziesii*
Asteraceae	prickly lettuce	*Lactuca serriola* *
Asteraceae	narrow-leaf cottonrose	*Logfia gallica* *
Asteraceae	fragrant everlasting	*Pseudognaphalium beneolens*
Asteraceae	California everlasting	*Pseudognaphalium californicum*
Asteraceae	fragrant everlasting cudweed	*Pseudognaphalium luteoalbum* *

Family	Common Name	Scientific Name
Asteraceae	cotton-batting plant	*Pseudognaphalium stramineum*
Asteraceae	slender woolly-marbles	*Psilocarphus tenellus*
Asteraceae	California chicory	*Rafinesquia californica*
Asteraceae	common groundsel	*Senecio vulgaris* *
Asteraceae	milk thistle	*Silybum marianum* *
Asteraceae	prickly sow-thistle	*Sonchus asper* ssp. *asper* *
Asteraceae	common sow-thistle	*Sonchus oleraceus* *
Asteraceae	everlasting nest-straw	*Stylocline gnaphaloides*
Asteraceae	common dandelion	*Taraxacum officinale* *
Asteraceae	greenthread	*Thelesperma sp.**
Boraginaceae	rigid fiddleneck	*Amsinckia menziesii*
Boraginaceae	minute-flower johnstonella	*Johnstonella micromeres*
Boraginaceae	popcornflower	*Plagiobothrys collinus*
Brassicaceae	turnip, field mustard	*Brassica rapa* *
Brassicaceae	Sahara mustard	*Brassica tournefortii* *
Brassicaceae	short-pod mustard	*Hirschfeldia incana* *
Brassicaceae	lesser wart-cress	*Lepidium didymum* *
Brassicaceae	wild radish	*Raphanus sativus* *
Brassicaceae	charlock	*Sinapis arvensis* *
Brassicaceae	London rocket	*Sisymbrium irio* *
Brassicaceae	hare's-ear cabbage	*Sisymbrium orientale* *
Campanulaceae	small Venus looking-glass	*Triodanis biflora*
Caryophyllaceae	mouse-ear chickweed	*Cerastium glomeratum* *
Caryophyllaceae	four-leaf allseed	*Polycarpon tetraphyllum* ssp. *tetraphyllum* *
Caryophyllaceae	dwarf/sticky pearlwort	*Sagina apetala*
Caryophyllaceae	western pearlwort	*Sagina decumbens* ssp. *occidentalis*
Caryophyllaceae	common catchfly	*Silene gallica* *
Caryophyllaceae	stickwort, starwort	*Spergula arvensis* *
Caryophyllaceae	common chickweed	*Stellaria media* *
Chenopodiaceae	lamb's quarters	*Chenopodium album* *
Chenopodiaceae	nettle-leaf goosefoot	*Chenopodium murale* *
Convolvulaceae	south coast morning-glory	*Calystegia macrostegia* ssp. *intermedia*
Convolvulaceae	field bindweed	*Convolvulus arvensis* *
Crassulaceae	pygmyweed	*Crassula connata*
Crassulaceae	mossy stonecrop	*Crassula tillaea* *
Cucurbitaceae	wild-cucumber	*Marah macrocarpa*
Cyperaceae	cyperus	*Cyperus sp.*
Euphorbiaceae	doveweed	*Croton setiger*
Euphorbiaceae	spotted spurge	*Euphorbia maculata* *
Euphorbiaceae	petty spurge	*Euphorbia peplus* *
Fabaceae	Spanish-clover	*Acmispon americanus* var. *americanus*
Fabaceae	deerweed	*Acmispon glaber*
Fabaceae	grab lotus	*Acmispon micranthus*
Fabaceae	birdfoot trefoil	*Lotus corniculatus* *

Family	Common Name	Scientific Name
Fabaceae	miniature lupine	*Lupinus bicolor*
Fabaceae	red-flower lupine	*Lupinus microcarpus* var. *microcarpus*
Fabaceae	yellow trefoil	*Medicago lupulina* *
Fabaceae	California burclover	*Medicago polymorpha* *
Fabaceae	Indian sweetclover	*Melilotus indicus* *
Fabaceae	rose clover	*Trifolium hirtum* *
Fabaceae	crimson clover	*Trifolium incarnatum* *
Fabaceae	maiden clover	*Trifolium microcephalum*
Fabaceae	common vetch	*Vicia sativa* ssp. *nigra* *
Gentianaceae	canchalagua	*Zeltnera venusta*
Geraniaceae	long-beak filaree/storksbill	*Erodium botrys* *
Geraniaceae	red-stem filaree/storksbill	*Erodium cicutarium* *
Geraniaceae	white-stem filaree/storksbill	*Erodium moschatum* *
Geraniaceae	cut-leaf geranium	*Geranium dissectum* *
Hydrophyllaceae	common eucrypta	*Eucrypta chrysanthemifolia* var. *chrysanthemifolia*
Iridaceae	blue-eyed-grass	*Sisyrinchium bellum*
Juncaceae	toad rush	*Juncus bufonius* var. *bufonius*
Lamiaceae	henbit	*Lamium amplexicaule* *
Lamiaceae	horehound	*Marrubium vulgare* *
Lamiaceae	black sage	*Salvia mellifera*
Lythraceae	grass poly	*Lythrum hyssopifolia* *
Malvaceae	cheeseweed	*Malva parviflora* *
Meliaceae	china berry	*Melia azedarach* *
Montiaceae	red maids	*Calandrinia menziesii*
Montiaceae	narrow-leaf miner's-lettuce	*Claytonia parviflora* ssp. *parviflora*
Montiaceae	miner's lettuce	*Claytonia perfoliata*
Myrsinaceae	scarlet pimpernel	*Anagallis arvensis* *
Onagraceae	summer cotton weed	*Epilobium brachycarpum*
Onagraceae	willow herb	*Epilobium ciliatum* ssp. *ciliatum*
Onagraceae	beautiful evening-primrose	*Oenothera speciosa* *
Oxalidaceae	creeping wood-sorrel	*Oxalis corniculata* *
Oxalidaceae	bermuda-buttercup	*Oxalis pes-caprae* *
Papaveraceae	California poppy	*Eschscholzia californica*
Phrymaceae	coast monkey flower	*Diplacus puniceus*
Plantaginaceae	large blue toadflax	*Nuttallanthus texanus*
Plantaginaceae	prairie plantain	*Plantago elongata*
Plantaginaceae	corn speedwell	*Veronica arvensis* *
Platanaceae	western sycamore	*Platanus racemosa*
Poaceae	giant reed	*Arundo donax* *
Poaceae	slender wild oat	*Avena barbata* *
Poaceae	wild oat	*Avena fatua* *
Poaceae	purple false brome	*Brachypodium distachyon* *
Poaceae	quaking grass	*Briza minor* *

Family	Common Name	Scientific Name
Poaceae	rescue grass	*Bromus catharticus* var. *catharticus* *
Poaceae	ripgut grass	*Bromus diandrus* *
Poaceae	soft chess	*Bromus hordeaceus* *
Poaceae	red brome	*Bromus rubens* *
Poaceae	African fountain grass	*Cenchrus setaceus* *
Poaceae	selloa pampas grass	*Cortaderia selloana* *
Poaceae	Bermuda grass	*Cynodon dactylon* *
Poaceae	salt grass	*Distichlis spicata*
Poaceae	panic veldt grass	*Ehrharta erecta* *
Poaceae	gray's fescue	*Festuca microstachys*
Poaceae	rat-tail fescue	*Festuca myuros* *
Poaceae	perennial rye grass	*Festuca perennis* *
Poaceae	nit grass	*Gastridium phleoides* *
Poaceae	Mediterranean barley	*Hordeum marinum* ssp. *gussoneanum* *
Poaceae	glaucous barley	*Hordeum murinum* ssp. *glaucum* *
Poaceae	little-seed canary grass	*Phalaris minor* *
Poaceae	annual blue grass	*Poa annua* *
Poaceae	annual beard grass	*Polypogon monspeliensis* *
Poaceae	purple needle grass	*Stipa pulchra*
Polygonaceae	knotweeed	*Polygonum aviculare* *
Polygonaceae	curly dock	*Rumex crispus* *
Portulacaceae	common purslane	*Portulaca oleracea* *
Rhamnaceae	spiny redberry	*Rhamnus crocea*
Rosaceae	western lady's mantle	*Aphanes occidentalis*
Rubiaceae	common bedstraw	*Galium aparine*
Salicaceae	arroyo willow	*Salix lasiolepis*
Scrophulariaceae	slender myoporum	*Myoporum parvifolium* *
Solanaceae	tree tobacco	*Nicotiana glauca* *
Solanaceae	parish's nightshade	*Solanum parishii*
Tamaricaceae	athel	*Tamarix aphylla* *
Urticaceae	dwarf nettle	*Urtica urens* *
Zygophyllaceae	puncture vine	*Tribulus terrestris* *
INVERTEBRATES		
Nymphalidae	common buckeye	*Junonia coenia*
REPTILES		
Phrynosomatidae	western fence lizard	*Sceloporus occidentalis*
BIRDS		
Accipitridae	Cooper’s hawk (WL; nesting) †	*Accipiter cooperi*
Accipitridae	red-shouldered hawk	*Buteo lineatus*
Accipitridae	red-tailed hawk	*Buteo jamaicensis*
Aegithalidae	bushtit	*Psaltriparus minimus*
Apodidae	white-throated swift	*Aeronautes saxatalis*
Columbidae	mourning dove	*Zenaida macroura*

Family	Common Name	Scientific Name
Corvidae	American crow	*Corvus brachyrhyncos*
Corvidae	California scrub-jay	*Aphelocoma californica*
Fringillidae	house finch	*Haemorhous mexicanus*
Fringillidae	lesser goldfinch	*Spinus psaltria*
Hirundinidae	cliff swallow	*Petrochelidon pyrhonnota*
Icteridae	hooded oriole	*Icterus cucullatus*
Mimidae	California thrasher	*Toxostoma redivivum*
Mimidae	northern mockingbird	*Mimus polyglottos*
Passerellidae	California towhee	*Melozone crissalis*
Passerellidae	spotted towhee	*Papilio maculatus*
Polioptilidae	blue-gray gnatcatcher	*Polioptila caerulea*
Sylviidae	wrentit	*Chamaea fasciata*
Trochillidae	Allen's hummingbird	*Selasphorus sasin*
Trochillidae	Anna's hummingbird	*Calypte anna*
Troglodytidae	Bewick's wren	*Thryomanes bewickii*
Troglodytidae	house wren	*Troglodytes aedon*
Tyrannidae	black phoebe	*Sayornis nigricans*
Tyrannidae	pacific-slope flycatcher	*Empidonax difficilis*
Tyrannidae	Say's phoebe	*Sayornis saya*
Tyrannidae	western kingbird	*Tyrannus verticalis*

*: Non-native species
WL: California Department of Fish and Wildlife (CDFW) Watch List Species
†: This species is considered FP, WL or SSC only if nesting. No nesting by these species was observed during surveys.

APPENDIX D

JURISDICTIONAL FINDINGS FOR 943 BARHAM DRIVE PROJECT SITE, SAN MARCOS, CA (HELIX)

Memorandum

HELIX Environmental Planning, Inc.
703 Palomar Airport Road
Suite 200
Carlsbad, CA 92011
StacyN@helixepi.com
760.517.9060 **tel**
619.462.0552 **fax**
www.**helixepi**.com

Date: May 27, 2020

To: Ms. Mariana McGrain
Hallmark Communities, Inc.
740 Lomas Santa Fe Drive, Suite 204
Solana Beach, CA 92075

From: Stacy Nigro

Subject: Jurisdictional Findings for 943 Barham Drive Project Site, San Marcos, CA

HELIX Proj. No.: HMC-16

Message: Dear Ms. McGrain,

This memo summarizes the jurisdictional findings from field work conducted on the property located at 943 Barham Drive, San Marcos, California.

Methods

HELIX Environmental Planning, Inc. (HELIX) biologists Stacy Nigro and Jason Kurnow conducted a site visit on April 24, 2020 to assess the property for potential wetland habitats that could be potentially 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), Regional Water Quality Control Board (RWQCB) pursuant to Section 401 of the CWA, and/or habitats regulated by the California Department of Fish and Wildlife (CDFW) pursuant to Section 1600 of the California Fish and Game Code.

Prior to beginning fieldwork, aerial imagery (Google Earth), the local soil survey, and National Wetland Inventory (U.S. Fish and Wildlife Service 2020) and U.S. Geological Survey quadrangle maps were reviewed to determine the location of potential jurisdictional areas within the project site.

Plants were identified according to The Jepson Manual: Vascular Plants of California (Baldwin et al. [2012]). Wetland affiliations of plant species follow the National Wetland Plant List (Lichvar et al. 2016). Soils information was taken from the U.S. Department of Agriculture's (USDA's) Web Soil Survey (2020) and USDA Hydric Soil Lists (1992). Soil colors were identified according to Munsell's Soil Color Charts (Kollmorgen 1994).

Potential USACE and RWQCB wetlands were determined using three criteria (vegetation, hydrology, and soils) established for wetland delineations as described within the Wetlands Delineation Manual (Environmental Laboratory 1987) and Arid West Regional Supplement (USACE 2008). Potential CDFW wetlands were determined based on the presence of riparian vegetation or a stream.

HELIX Environmental Planning, Inc.
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Suite 200
Carlsbad, CA 92011
760.517.9060 **tel**
619.462.0552 **fax**
www.**helixepi**.com

Four sampling points were studied, and soil pits were excavated at each of these locations. Photographs taken of the sampling points are included in Attachment A. Standard USACE wetland determination data forms were completed for each sampling point in the field, and are included in Attachment B.

Results

None of the four sampling points were determined to be wetland. The results for each sampling point are summarized below and further details can be found in Attachment B. Normal circumstances were present and neither vegetation, soil, or hydrology were significantly disturbed or naturally problematic. In addition, soil map units on site are not on the USDA Hydric Soils List and the National Wetlands Inventory does not show any features on the site.

Sampling Point 1A

Sampling Point 1A was taken in a low area of non-native grassland in the central portion of the site. Ripgut grass (*Bromus diandrus*), an upland species, was the dominant species present, thus the hydrophytic vegetation criterion was not met. A soil pit excavated to 19 inches did not reveal the presence of hydric soil indicators, thus the hydric soil criterion was not met. No secondary or primary indicators of wetland hydrology were observed; thus, the wetland hydrology criterion was not met. This sampling point did not meet any of the three wetland criteria for the USACE or RWQCB, nor is it a CDFW wetland or riparian habitat.

Sampling Point 1B

Sampling Point 1B was taken in non-native grassland in the central portion of the site, near to and upslope of Sampling Point 1A. Two upland species: ripgut grass and oats (*Avena* sp.), were the dominant species present, thus the hydrophytic vegetation criterion was not met. A soil pit excavated to 18 inches did not reveal the presence of hydric soil indicators, thus the hydric soil criterion was not met. No secondary or primary indicators of wetland hydrology were observed; thus, the wetland hydrology criterion was not met. This sampling point did not meet any of the three wetland criteria for the USACE or RWQCB, nor is it a CDFW wetland or riparian habitat.

Sampling Point 2

Sampling Point 2 was taken in non-native grassland in the southern portion of the site. One upland species: rattail fescue (*Festuca myuros*), was the dominant species present, thus the hydrophytic vegetation criterion was not met. A soil pit excavated to 8 inches did not reveal the presence of hydric soil indicators, thus the hydric soil criterion was not met. Deeper excavation was precluded by the presence of an underlying rock layer. No secondary or primary indicators of wetland hydrology were observed; thus, the wetland hydrology criterion was not met. This sampling point did not meet any of the three wetland criteria for the USACE or RWQCB, nor is it a CDFW wetland or riparian habitat.

HELIX Environmental Planning, Inc.
703 Palomar Airport Road
Suite 200
Carlsbad, CA 92011
760.517.9060 **tel**
619.462.0552 **fax**
www.**helixepi**.com

Sampling Point 3

Sampling Point 3 was taken in non-native grassland in the central portion of the site. One upland species (ripgut grass) and one wetland species (curly dock [*Rumex crispus*]) were the dominant species present, thus the hydrophytic vegetation criterion was not met as it failed both the dominance test and the prevalence index. While curly dock can occur in wetland habitat, it also is frequently observed in upland habitat, particularly in grassland. Curly dock is rated as a facultative (FAC) species, which has equal likelihood of occurring in an upland as it does in a wetland; it is not a strongly hydrophytic species. A soil pit excavated to 20 inches did not reveal the presence of hydric soil indicators, thus the hydric soil criterion was not met. No secondary or primary indicators of wetland hydrology were observed; thus, the wetland hydrology criterion was not met. This sampling point did not meet any of the three wetland criteria for the USACE or RWQCB, nor is it a CDFW wetland or riparian habitat.

In summary, all sampling points were determined to be upland, wetlands were not observed on the project site.

If you have any questions about the content of this memo, please call me at 760-517-9054 or 619-462-1515.

Sincerely,

Stacy Nigro
Principal Biologist

Enclosures

Figure 1	Sampling Point Locations
Attachment A	Sampling Point Photos
Attachment B	Wetland Determination Data Forms

HELIX Environmental Planning, Inc.
703 Palomar Airport Road
Suite 200
Carlsbad, CA 92011
760.517.9060 **tel**
619.462.0552 **fax**
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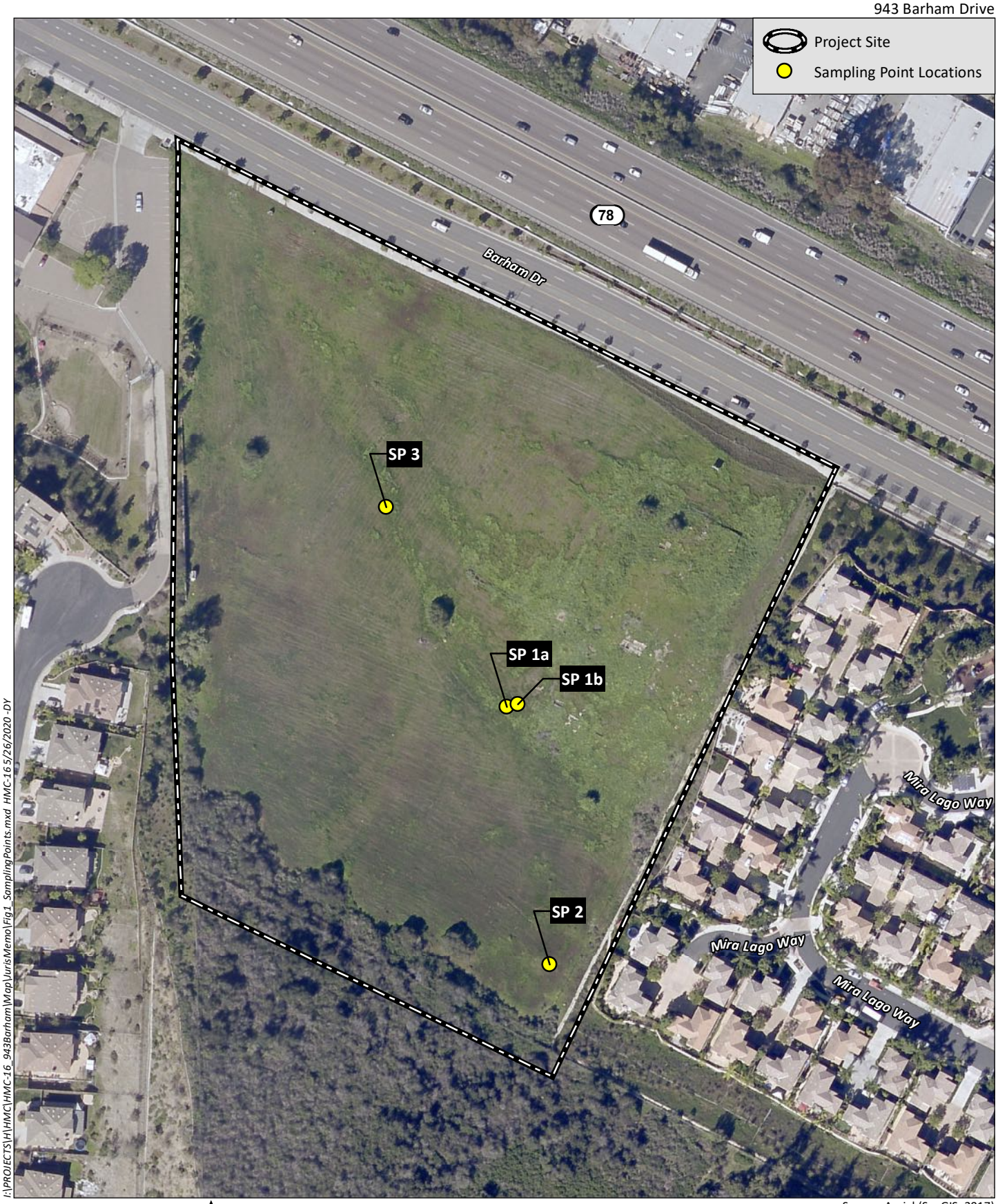
943 Barham Drive



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0 150 Feet

Source: Aerial (SanGIS, 2017)

HELIX Environmental Planning

Sampling Point Locations

Figure 1

Attachment A

Sampling Point Photos

Photo 1. Looking north at Sampling Point (SP-) 1A taken April 24, 2020 in the central portion of the site. SP-1A is in a low area within non-native grassland; it did not meet USACE, RWQCB, or CDFW wetland criteria.

Photo 2. Looking north at SP-1B taken April 24, 2020 in the central portion of the site. SP-1B is near SP-1A but located slightly upslope and to the east. This SP is non-native grassland; it did not meet USACE, RWQCB, or CDFW wetland criteria.

Photo 3. Looking north at SP-2 taken April 24, 2020 in the southern portion of the site. SP-2 is located on a north-facing slope in non-native grassland. This SP did not meet USACE, RWQCB, or CDFW wetland criteria.

Photo 4. Looking north at SP-3 taken April 24, 2020 in the central portion of the site. SP-3 is in a low area of non-native grassland habitat; it did not meet USACE, RWQCB, or CDFW wetland criteria.

Attachment B

Wetland Determination Data Forms

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: 943 E Barham Dr - JO# HMC-16 City/County: San Marcos/San Diego Sampling Date: 4/24/2020

Applicant/Owner: State: CA Sampling Point: 1A

Investigator(s): S. Nigro/J. Kurnow Section, Township, Range: 18/12S/2W San Marcos quadrangle

Landform (hillslope, terrace, etc.): low spot Local relief (concave, convex, none): slightly concave Slope (%): 0

Subregion (LRR): C Lat: 33.1358454684 Long: -117.138713486 Datum: WGS 1984

Soil Map Unit Name: VsC - Vista coarse sandy loam, 5-9% slopes NWI classification: none

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No ✓ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No ✓	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes _____	No ✓	

Remarks:

SP taken in low area in non-native grassland at bottom of 2 converging slopes, one of which has residential development on adjacent parcel, which could potentially contribute runoff to this area. In addition, the area received much higher than average rainfall in March and April. SP does not meet wetland criteria.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: r=25')	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: r=25')			
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	
Herb Stratum (Plot size: r=8')			
1. Bromus diandrus	70	X	UPL
2. Avena sp.	20		UPL
3. Hordeum murinum	10		FACU
4. Carduus pycnocephalus	5		UPL
5. Anagallis arvensis	5		UPL
6. Rumex crispus	2		FAC
7. Brassica nigra	2		UPL
8. Lactuca serriola	1		FACU
	115	= Total Cover	
Woody Vine Stratum (Plot size: r=25')			
1.			
2.			
	0	= Total Cover	

% Bare Ground in Herb Stratum 0 % Cover of Biotic Crust 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	2	x 3 =	6
FACU species	11	x 4 =	44
UPL species	102	x 5 =	510
Column Totals:	115 (A)		560 (B)

Prevalence Index = B/A = 4.9

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes _____ No ✓

Remarks:

Upland vegetation is dominant. Sampling point taken here because it was a low area (landscape position suitable for wetland) supporting a few Rumex crispus (a FAC species). Area is dominated by upland vegetation (= non-native [annual] grassland) and does not support a dominance of hydrophytic vegetation.

SOIL

Sampling Point: 1A

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-5	10YR 2/2	100	-	-	-	-	clay loam	moist
5-19	10YR 3/3	100	-	-	-	-	clay loam	moist + saturated in lower part

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks:

No hydric soil indicators present.
Observed pillbugs and earthworms in excavated soil, and pocket gopher mound 5' from pit.
Photos 1-7

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No ✓ Depth (inches): _____

Water Table Present? Yes ✓ No _____ Depth (inches): 18

Saturation Present? (includes capillary fringe) Yes ✓ No _____ Depth (inches): 14

Wetland Hydrology Present? Yes _____ No ✓

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

No primary or secondary hydrology indicators observed. Soil moist with saturation at 14" and water table at 18" during the growing season during a normal rainfall year, but with much higher than average rainfall in the weeks leading up to the site visit (i.e., in March [5.7" while 2.5" is normal] and April [6.8" while 1.0" is normal]). Saturation and water table observations did not satisfy the hydrology indicators as they were deeper than 12" from the surface in the growing season. Saturation and water table observed below 12" likely related to high rainfall in March and April, and location of the pit in the lowest area near convergence of two slopes.
FAC-Neutral test: W:U=0:1 (negative).

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: 943 E Barham Dr - JO# HMC-16 City/County: San Marcos/San Diego Sampling Date: 4/24/2020

Applicant/Owner: State: CA Sampling Point: 1B

Investigator(s): S. Nigro/J. Kurnow Section, Township, Range: 18/12S/2W San Marcos quadrangle

Landform (hillslope, terrace, etc.): just upslope of SP-1A Local relief (concave, convex, none): none Slope (%): 0

Subregion (LRR): C Lat: 33.1358544372 Long: -117.138672397 Datum: WGS 1984

Soil Map Unit Name: VsC - Vista coarse sandy loam, 5-9% slopes NWI classification: none

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No ✓ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No ✓	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes _____	No ✓	

Remarks:

SP taken approximately 15' from SP-1A, in a slightly higher landscape position. The area received much higher than average rainfall in March and April. SP does not meet wetland criteria.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: r=25')	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: r=25')			
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	
Herb Stratum (Plot size: r=8')			
1. Bromus diandrus	80	X	UPL
2. Avena sp.	25	X	UPL
3. Anagallis arvensis	5		UPL
4. Carduus pycnocephalus	3		UPL
5. Lactuca serriola	1		FACU
6. Amsinckia intermedia	1		UPL
7.			
8.			
	115	= Total Cover	
Woody Vine Stratum (Plot size: r=25')			
1.			
2.			
	0	= Total Cover	

% Bare Ground in Herb Stratum 0 % Cover of Biotic Crust 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	1	x 4 =	4
UPL species	114	x 5 =	570
Column Totals:	115 (A)		574 (B)

Prevalence Index = B/A = 5.0

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes _____ No ✓

Remarks:

Area is dominated by upland vegetation (= non-native [annual] grassland).

SOIL

Sampling Point: 1B

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-18	10YR 3/2	100	-	-	-	-	clay loam	moist

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks:

No hydric soil indicators present. Soil moisture likely due to much higher than average rainfall in March and April, and landscape position near the bottom of two converging slopes. Pocket gopher mounds near pit.
Photos 12-14

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No ✓ Depth (inches): _____

Water Table Present? Yes _____ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✓ Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ✓

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

No primary or secondary hydrology indicators observed.
FAC-Neutral test: W:U=0:2 (negative).

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: 943 E Barham Dr - JO# HMC-16 City/County: San Marcos/San Diego Sampling Date: 4/24/2020

Applicant/Owner: State: CA Sampling Point: 2

Investigator(s): S. Nigro/J. Kurnow Section, Township, Range: 18/12S/2W San Marcos quadrangle

Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): none Slope (%): 30

Subregion (LRR): C Lat: 33.1350461393 Long: -117.13854567 Datum: WGS 1984

Soil Map Unit Name: VsE2 - Vista coarse sandy loam, 15-30% slopes, eroded NWI classification: none

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No ✓ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No ✓	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes _____	No ✓	

Remarks:

SP taken on non-native grassland slope with underlying rock restrictive layer. The area received much higher than average rainfall in March and April. SP does not meet wetland criteria.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: r=25')	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: r=25')			
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	
Herb Stratum (Plot size: 10' X 4')			
1. Festuca myuros	45	X	FACU
2. Bromus hordeaceus	15		FACU
3. Logfia gallica	10		UPL
4. Deinandra fasciculata (seedlings)	5		UPL
5. Erodium sp.	5		UPL
6. Anagallis arvensis	2		UPL
7. Juncus bufonius	1		FACW
8. Silene gallica + unk herb* (see remarks)	2 + 2		UPL + ?
	87	= Total Cover	
Woody Vine Stratum (Plot size: r=25')			
1.			
2.			
	0	= Total Cover	

% Bare Ground in Herb Stratum 5 % Cover of Biotic Crust 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	1	x 2 =	2
FAC species	0	x 3 =	0
FACU species	60	x 4 =	240
UPL species	24	x 5 =	120
Column Totals:	85 (A)		362 (B)

Prevalence Index = B/A = 4.3

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes _____ No ✓

Remarks:

Upland vegetation is dominant.

*Unknown herb was not flowering or fruiting. Possibly a species in Boraginaceae, e.g. Amsinckia intermedia or Cryptantha sp.

SOIL

Sampling Point: 2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-8	10YR 3/2	60	-	-	-	-	loam	soil completely dry
0-8	10YR 3/3	40	-	-	-	-	loam	soil completely dry

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: rock layer

Depth (inches): 8

Hydric Soil Present? Yes ____ No ✓

Remarks:

No hydric soil indicators present. Soil pit depth limited by underlying rock layer.
Photos 8-11

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ____ No ✓ Depth (inches): ____

Water Table Present? Yes ____ No ✓ Depth (inches): ____

Saturation Present? (includes capillary fringe) Yes ____ No ✓ Depth (inches): ____

Wetland Hydrology Present? Yes ____ No ✓

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

No primary or secondary hydrology indicators observed. Soil completely dry despite much higher than average rainfall in the weeks leading up to the site visit (i.e., in March [5.7" while 2.5" is normal] and April [6.8" while 1.0" is normal]). FAC-Neutral test: W:U=0:1(negative).

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: 943 E Barham Dr - JO# HMC-16 City/County: San Marcos/San Diego Sampling Date: 4/24/2020

Applicant/Owner: State: CA Sampling Point: 3

Investigator(s): S. Nigro/J. Kurnow Section, Township, Range: 18/12S/2W San Marcos quadrangle

Landform (hillslope, terrace, etc.): low spot Local relief (concave, convex, none): none Slope (%): 0

Subregion (LRR): C Lat: 33.1364633452 Long: -117.139165351 Datum: WGS 1984

Soil Map Unit Name: VsC - Vista coarse sandy loam, 5-9% slopes NWI classification: none

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No ✓ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No ✓	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes _____	No ✓	

Remarks:

SP taken in low area in non-native grassland. The area received much higher than average rainfall in March and April. SP does not meet wetland criteria.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: r=25')	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: r=25')			
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	
Herb Stratum (Plot size: r=8')			
1. Bromus diandrus	40	X	UPL
2. Rumex crispus	30	X	FAC
3. Avena sp.	15		UPL
4. Anagallis arvensis	5		UPL
5. Erodium sp.	5		UPL
6. Lythrum hyssopifolium	3		OBL
7. Silene gallica + Cerastrium glomeratum	3+3		UPL
8. Lactuca serriola	3		FACU
	107	= Total Cover	
Woody Vine Stratum (Plot size: r=25')			
1.			
2.			
	0	= Total Cover	

% Bare Ground in Herb Stratum 0 % Cover of Biotic Crust 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	3	x 1 =	3
FACW species	0	x 2 =	0
FAC species	30	x 3 =	90
FACU species	3	x 4 =	12
UPL species	71	x 5 =	355
Column Totals:	107 (A)		560 (B)

Prevalence Index = B/A = 5.2

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes _____ No ✓

Remarks:

Upland vegetation is dominant. Sampling point taken here because it was a low area (landscape position suitable for wetland) supporting several Rumex crispus (a FAC species). Area is dominated by upland vegetation (= non-native [annual] grassland) and does not support a dominance of hydrophytic vegetation.

SOIL

Sampling Point: 3

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-6	10YR 3/2	100	-	-	-	-	clay loam	moist
6-20	10YR 3/3	100	-	-	-	-	clay loam	moist

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ **No** ✓

Remarks:

No hydric soil indicators present. Soil moisture likely due to low and flat landscape position combined with much higher than average rainfall in the weeks leading up to the site visit (i.e., in March [5.7" while 2.5" is normal] and April [6.8" while 1.0" is normal]). Photos 18-22

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No ✓ Depth (inches): _____

Water Table Present? Yes _____ No ✓ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ✓ No _____ Depth (inches): 16

Wetland Hydrology Present? Yes _____ **No** ✓

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

No primary or secondary hydrology indicators observed. Saturation at 16" depth during the growing season in a higher than average rainfall period does not meet the A3 hydrology indicator, which requires saturation within 12 inches. FAC-Neutral test: W:U=0:1 (negative).

APPENDIX E

SPECIAL-STATUS PLANT SURVEY RESULTS FOR THE BARHAM DRIVE RESIDENTIAL PROJECT, SAN MARCOS, CALIFORNIA

ROCKS
BIOLOGICAL CONSULTING

June 17, 2020

Ms. Sophia Habl Mitchell
Sophia Mitchell & Associates, LLC
P.O. Box 1700
Gualala, California 95445

Subject: Special-Status Plant Survey Results for the Barham Drive Residential Project, San Marcos, California

Ms. Habl Mitchell:

This letter report provides the results of special-status plant surveys conducted by Rocks Biological Consulting (RBC) for the proposed Barham Drive Residential Project (project) on May 6 and 19, 2020.

INTRODUCTION

The 10.56-acre project site is located in the City of San Marcos, within San Diego County, California (Figure 1). The project site is undeveloped but occurs within a relatively developed area, with residential development to the east and west of the site. The northern project boundary borders East Barham Drive, and the southern project boundary borders undeveloped lands that support Diegan coastal sage scrub and chaparral habitat.

The majority of the project site supports non-native grassland and disturbed vegetation, with smaller areas of native Diegan coastal sage scrub and chaparral habitat along the southern project boundary. Ornamental species are scattered throughout the project site (Figure 2).

Special-status plant species are those that are: 1) Listed by federal and/or state agencies, proposed for listing as threatened or endangered, or candidate species; 2) Considered rare by the California Native Plant Society (CNPS); and/or 3) Listed on the County of San Diego Sensitive Plant List (County 2006). Six special-status plant species have been reported within approximately three miles of the project site and were the focus of the on-site surveys (Figure 3):

- San Diego thornmint [*Acanthomintha ilicifolia*; California Rare Plant Rank (CRPR) 1B.1, Federally Threatened (FT), State Endangered (SE)]
- Thread-leaved brodiaea (*Brodiaea filifolia*; CRPR 1B.1, FT, SE).
- Spreading navarretia (*Navarretia fossalis*; CRPR 1B.1, FT)
- San Diego button-celery [*Eryngium aristulatum* var. *parishii*; CRPR 1B.1, Federally Endangered (FE), SE]
- Del Mar manzanita (*Arctostaphylos glandulosa* ssp. *crassifolia*; CRPR 1B.1, FE)
- Wart-stemmed ceanothus (*Ceanothus verrucosus*; CRPR 2B.2)

METHODS

Special-status plant surveys were conducted within the project site two times in spring 2020 to maximize detection of spring annual and bulb species, first on May 6, 2020 and then on May 20, 2020. Surveys were conducted in accordance with *Protocols for Surveying and Evaluating Impacts to Special Status Plant Populations and Natural Communities* (California Department of Fish and Wildlife 2018). Biologists walked transects throughout the survey area and were prepared to map special-status plant occurrences using handheld ArcGIS Collector. During surveys all vascular plant species on the site were identified to species, subspecies, or varietal level (Appendix A). Reference populations were visited to determine flowering status and appropriate survey timing for the target special-status plant species with narrow windows of observation.

REFERENCE SITE VISITS

Several reference sites were visited to ensure appropriate timing for on-site surveys of annual and short-lived bulb species. These included: 1) A San Diego thornmint population at Los Peñasquitos Preserve in Mira Mesa on May 19, 2020; 2) Two thread-leaved brodiaea populations, one at the Taylor Preserve in Vista on May 13, 2020, and one at the San Marcos Baldwin Preserve on May 13, 2020; and 3) Spreading navarretia and San Diego button celery populations at the Otay Lakes Preserve in Otay Ranch on May 14, 2020.

The Los Peñasquitos Preserve thornmint population, located approximately 20 miles south of the project site, was flowering during the visit (Appendix B). Given the confirmed presence, it is assumed that populations on the project site would have been observable during on-site surveys on May 6 or May 19, 2020.

The Taylor Preserve and Baldwin Preserve thread-leaved brodiaea populations, located approximately 11 miles northwest of the project site and four miles northwest of the site, respectively, were flowering during the May 13, 2020 visits (Appendix B). Given the confirmed presence, it is assumed that populations on the project site would have been observable during this confirmed flowering time.

The Otay Lakes Preserve spreading navarretia and San Diego button celery populations, located approximately 50 miles south of the project site, were identifiable during the visit (Appendix B). Given the confirmed presence, it is assumed that populations on the project site would have being observable during this time.

RESULTS

Survey results for San Diego thornmint, thread-leaved brodiaea, spreading navarretia, San Diego button celery, Del Mar manzanita and wart-stemmed ceanothus were all negative on the project site. No incidental sightings of any other non-target special-status plant species were observed during surveys.

Please don't hesitate to contact me with any questions or concerns at brenda@rocksbio.com or (619) 701-6798.

Sincerely,

Brenda Bennett
Senior Biologist

ENCLOSED

Figure 1: Location
Figure 2: Biological Resources
Figure 3: CNDDB Plants (1 and 3 mile radius)
Attachment A: Plant Species Observed
Attachment B: Photo Log

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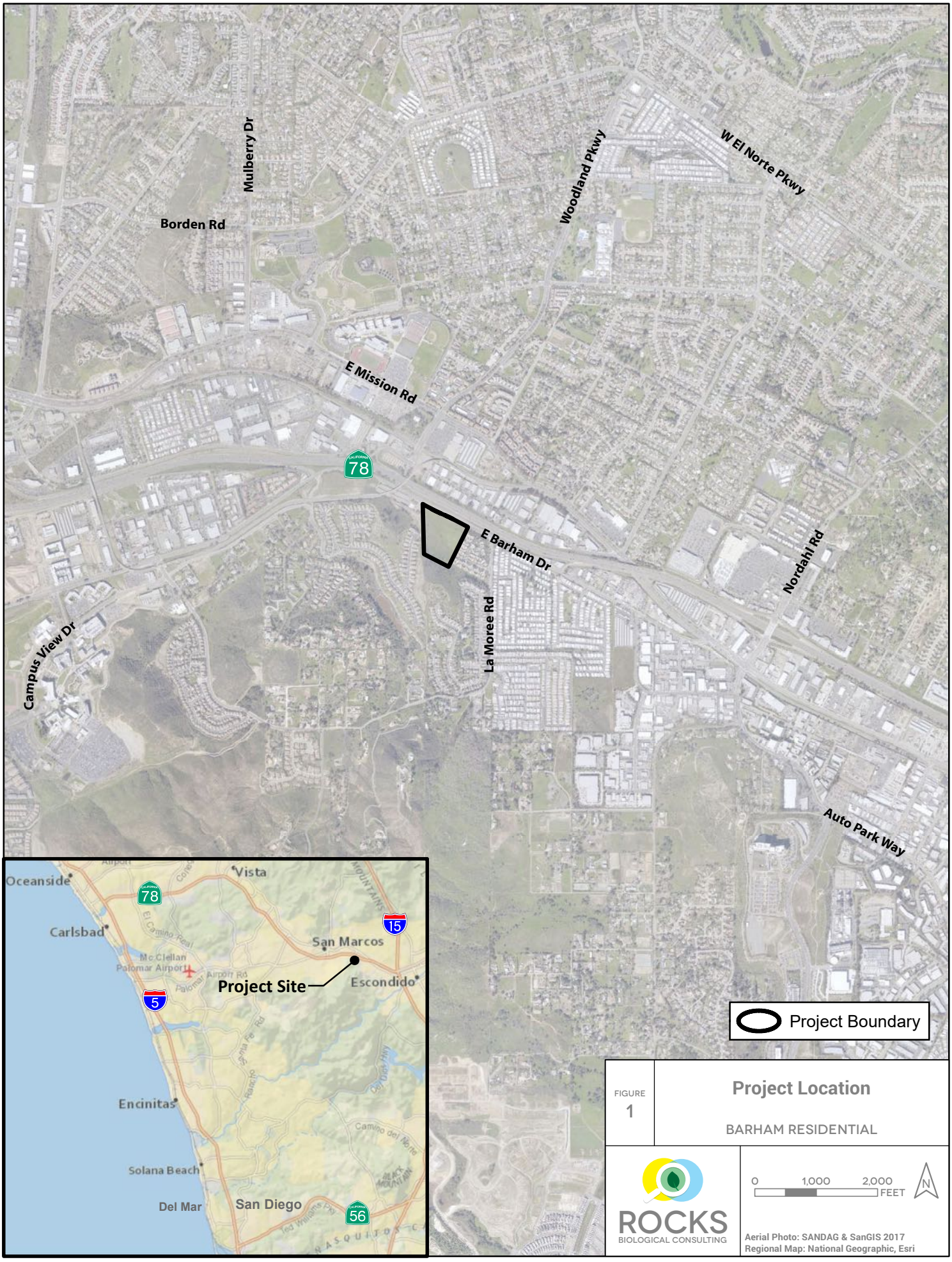


FIGURE 1

Project Location

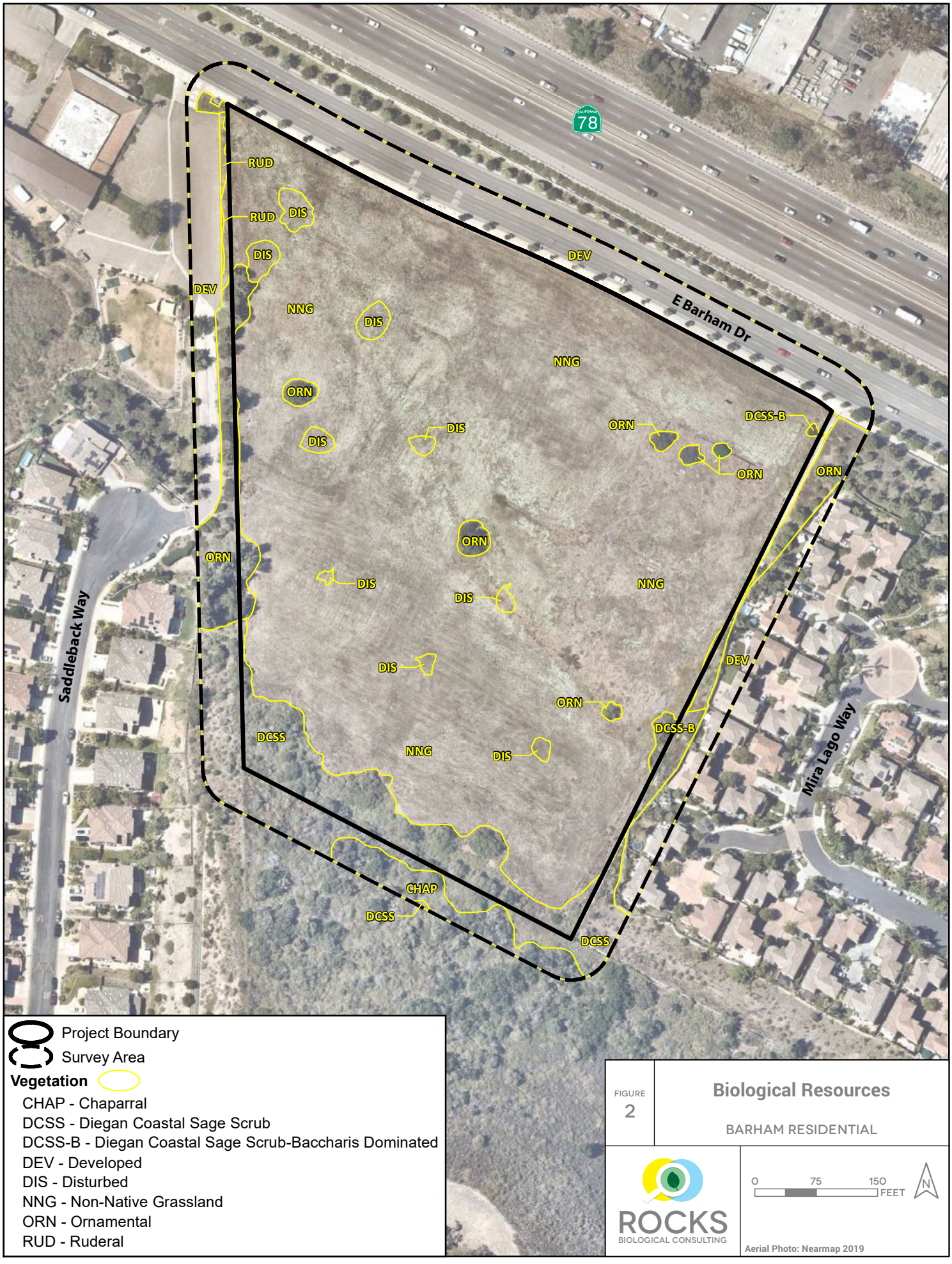
BARHAM RESIDENTIAL

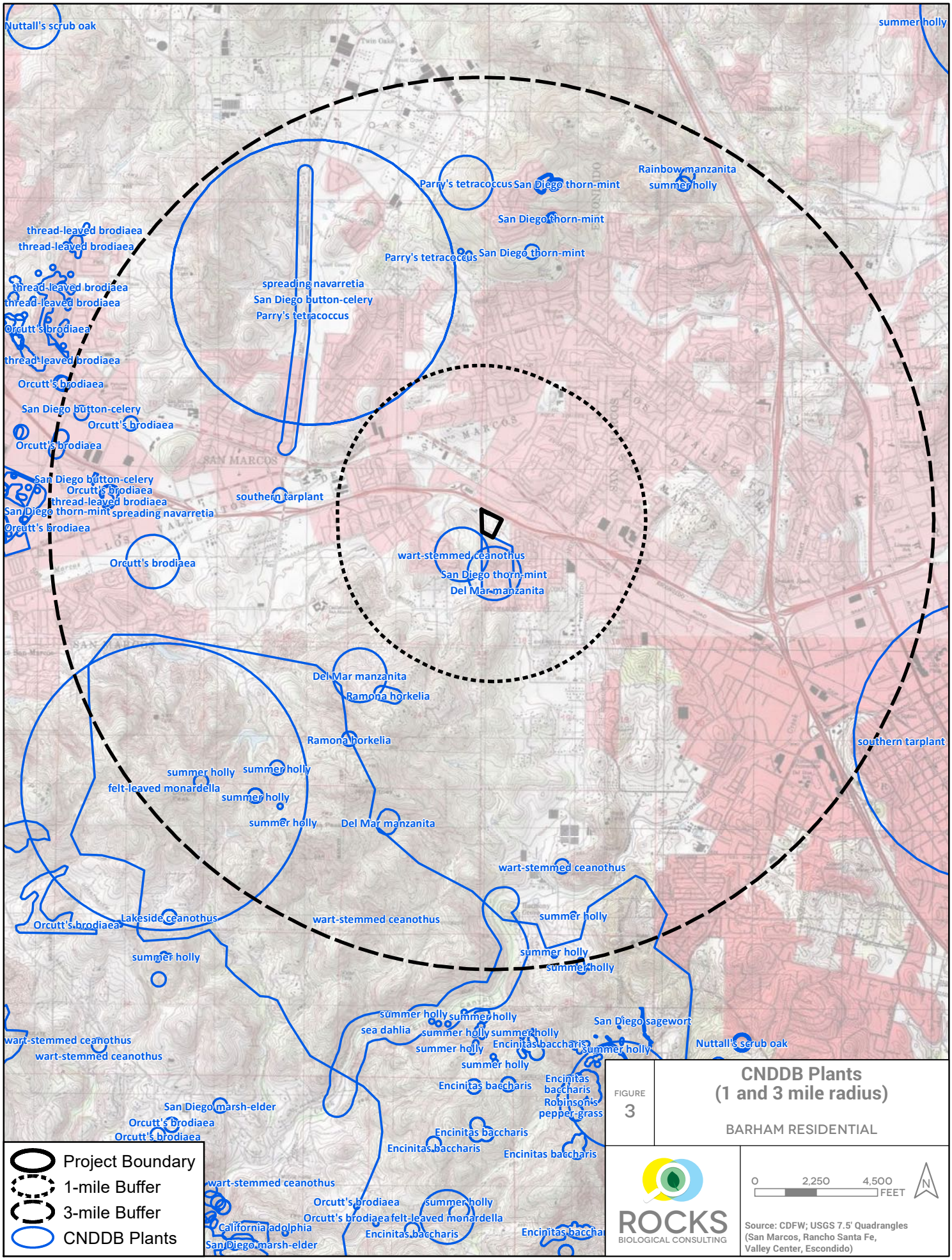
ROCKS BIOLOGICAL CONSULTING

0 1,000 2,000 FEET

N

Aerial Photo: SANDAG & SanGIS 2017
Regional Map: National Geographic, Esri


78
E Barham Dr
Saddleback Way
Mira Lago Way
RUD
RUD
DIS
DIS
DEV
DEV
NNG
DIS
NNG
ORN
DIS
DIS
ORN
DCSS-B
ORN
ORN
ORN
ORN
DIS
DIS
NNG
DIS
DEV
ORN
DCSS-B
DCSS
NNG
DIS
CHAP
DCSS
DCSS
Project Boundary
Survey Area
Vegetation
CHAP - Chaparral
DCSS - Diegan Coastal Sage Scrub
DCSS-B - Diegan Coastal Sage Scrub-Baccharis Dominated
DEV - Developed
DIS - Disturbed
NNG - Non-Native Grassland
ORN - Ornamental
RUD - Ruderal
FIGURE
2
Biological Resources
BARHAM RESIDENTIAL
ROCKS
BIOLOGICAL CONSULTING
0
75
150
FEET
N
Aerial Photo: Nearmap 2019


Nuttall's scrub oak
summer holly
Rainbow manzanita
summer holly
Parry's tetracoccus
San Diego thorn-mint
San Diego thorn-mint
thread-leaved brodiaea
thread-leaved brodiaea
Parry's tetracoccus
San Diego thorn-mint
thread-leaved brodiaea
thread-leaved brodiaea
spreading navarretia
San Diego button-celery
Parry's tetracoccus
Orcutt's brodiaea
thread-leaved brodiaea
Orcutt's brodiaea
San Diego button-celery
Orcutt's brodiaea
Orcutt's brodiaea
SAN MARCOS
San Diego button-celery
Orcutt's brodiaea
thread-leaved brodiaea
San Diego thorn-mint
spreading navarretia
Orcutt's brodiaea
southern tarplant
Orcutt's brodiaea
wart-stemmed ceanothus
San Diego thorn-mint
Del Mar manzanita
Del Mar manzanita
Ramona horkelia
Ramona horkelia
southern tarplant
summer holly
summer holly
felt-leaved monardella
summer holly
summer holly
Del Mar manzanita
wart-stemmed ceanothus
Orcutt's brodiaea
Lakeside ceanothus
wart-stemmed ceanothus
summer holly
summer holly
summer holly
summer holly
summer holly
summer holly
sea dahlia
summer holly
summer holly
San Diego sagewort
Encinitas baccharis
summer holly
Nuttall's scrub oak
summer holly
wart-stemmed ceanothus
wart-stemmed ceanothus
Encinitas baccharis
Encinitas baccharis
Robinson's pepper-grass
San Diego marsh-elder
Orcutt's brodiaea
Orcutt's brodiaea
Encinitas baccharis
Encinitas baccharis
Encinitas baccharis
wart-stemmed ceanothus
Orcutt's brodiaea
summer holly
Orcutt's brodiaea
felt-leaved monardella
California adolphia
Encinitas baccharis
Encinitas baccharis
San Diego marsh-elder
Project Boundary
1-mile Buffer
3-mile Buffer
CNDDB Plants
FIGURE 3
CNDDB Plants
(1 and 3 mile radius)
BARHAM RESIDENTIAL
ROCKS
BIOLOGICAL CONSULTING
0
2,250
4,500
FEET
N
Source: CDFW; USGS 7.5' Quadrangles
(San Marcos, Rancho Santa Fe,
Valley Center, Escondido)

Attachment A

Plant Species Observed

Family	Common Name	Scientific Name
Plants		
Adoxaceae	Blue Elderberry	*Sambucus nigra* ssp. *caerulea*
Aizoaceae	Hottentot-Fig	*Carpobrotus edulis* *
Amaranthaceae	White Tumbleweed	*Amaranthus albus* *
Anacardiaceae	Laurel Sumac	*Malosma laurina*
Anacardiaceae	Peruvian Pepper Tree	*Schinus molle* *
Anacardiaceae	Brazilian Pepper Tree	*Schinus terebinthifolius* *
Anacardiaceae	Western Poison-Oak	*Toxicodendron diversilobum*
Apiaceae	American Bowlesia	*Bowlesia incana*
Apiaceae	Rattlesnake Weed	*Daucus pusillus*
Apiaceae	Sweet Fennel	*Foeniculum vulgare* *
Apiaceae	Pacific Sanicle	*Sanicula crassicaulis*
Apocynaceae	Narrow-Leaf Milkweed	*Asclepias fascicularis*
Arecaceae	Mexican Fan Palm	*Washingtonia robusta* *
Asparagaceae	Florist's-Smilax	*Asparagus asparagoides* *
Asteraceae	Western Ragweed	*Ambrosia psilostachya*
Asteraceae	Coastal Sagebrush	*Artemisia californica*
Asteraceae	Coyote Brush	*Baccharis pilularis* ssp. *consanguinea*
Asteraceae	Italian Thistle	*Carduus pycnocephalus* ssp. *pycnocephalus**
Asteraceae	Bachelor's Button	*Centaurea cyanus* *
Asteraceae	Tocalote	*Centaurea melitensis* *
Asteraceae	California Sand-Aster	*Corethrogyne filaginifolia* var. *filaginifolia*
Asteraceae	Australian Brass-Buttons	*Cotula australis* *
Asteraceae	Fascicled Tarweed	*Deinandra fasciculata*
Asteraceae	Stinkwort	*Dittrichia graveolens* *
Asteraceae	Flax-Leaf Fleabane	*Erigeron bonariensis* *
Asteraceae	Horseweed	*Erigeron canadensis*
Asteraceae	Asthmaweed	*Erigeron sumatrensis* *
Asteraceae	Long-Stem Golden-Yarrow	*Eriophyllum confertiflorum* var. *confertiflorum*
Asteraceae	Desert Cudweed	*Gamochaeta stagnalis* *
Asteraceae	Treasure Flower	*Gazania linearis* *
Asteraceae	Garland/Crown Daisy	*Glebionis coronaria* *
Asteraceae	Southern Sawtooth Goldenbush	*Hazardia squarrosa* var. *grindelioides*

Family	Common Name	Scientific Name
Asteraceae	Crete Hedypnois	*Hedypnois cretica* *
Asteraceae	Bristly Ox-Tongue	*Helminthotheca echioides* *
Asteraceae	Telegraph Weed	*Heterotheca grandiflora*
Asteraceae	Smooth Cat's Ear	*Hypochaeris glabra* *
Asteraceae	Spreading Goldenbush	*Isocoma menziesii* var. *menziesii*
Asteraceae	Prickly Lettuce	*Lactuca serriola* *
Asteraceae	Narrow-Leaf Cottonrose	*Logfia gallica* *
Asteraceae	Fragrant Everlasting	*Pseudognaphalium beneolens*
Asteraceae	California Everlasting	*Pseudognaphalium californicum*
Asteraceae	Fragrant Everlasting Cudweed	*Pseudognaphalium luteoalbum* *
Asteraceae	Cotton-Batting Plant	*Pseudognaphalium stramineum*
Asteraceae	Slender Woolly-Marbles	*Psilocarphus tenellus*
Asteraceae	California Chicory	*Rafinesquia californica*
Asteraceae	Common Groundsel	*Senecio vulgaris* *
Asteraceae	Milk Thistle	*Silybum marianum* *
Asteraceae	Prickly Sow-Thistle	*Sonchus asper* ssp. *asper* *
Asteraceae	Common Sow-Thistle	*Sonchus oleraceus* *
Asteraceae	Everlasting Nest-Straw	*Stylocline gnaphaloides*
Asteraceae	Common Dandelion	*Taraxacum officinale* *
Asteraceae	Greenthread	*Thelesperma sp.**
Boraginaceae	Rigid Fiddleneck	*Amsinckia menziesii*
Boraginaceae	Minute-Flower Johnstonella	*Johnstonella micromeres*
Boraginaceae	Popcornflower	*Plagiobothrys collinus*
Brassicaceae	Turnip, Field Mustard	*Brassica rapa* *
Brassicaceae	Sahara Mustard	*Brassica tournefortii* *
Brassicaceae	Short-Pod Mustard	*Hirschfeldia incana* *
Brassicaceae	Lesser Wart-Cress	*Lepidium didymum* *
Brassicaceae	Wild Radish	*Raphanus sativus* *
Brassicaceae	Charlock	*Sinapis arvensis* *
Brassicaceae	London Rocket	*Sisymbrium irio* *
Brassicaceae	Hare's-Ear Cabbage	*Sisymbrium orientale* *
Campanulaceae	Small Venus Looking-Glass	*Triodanis biflora*
Caryophyllaceae	Mouse-Ear Chickweed	*Cerastium glomeratum* *
Caryophyllaceae	Four-Leaf Allseed	*Polycarpon tetraphyllum* ssp. *tetraphyllum* *

Family	Common Name	Scientific Name
Caryophyllaceae	Dwarf/Sticky Pearlwort	*Sagina apetala*
Caryophyllaceae	Western Pearlwort	*Sagina decumbens* ssp. *occidentalis*
Caryophyllaceae	Common Catchfly	*Silene gallica* *
Caryophyllaceae	Stickwort, Starwort	*Spergula arvensis* *
Caryophyllaceae	Common Chickweed	*Stellaria media* *
Chenopodiaceae	Lamb's Quarters	*Chenopodium album* *
Chenopodiaceae	Nettle-Leaf Goosefoot	*Chenopodium murale* *
Convolvulaceae	South Coast Morning-Glory	*Calystegia macrostegia* ssp. *intermedia*
Convolvulaceae	Field Bindweed	*Convolvulus arvensis* *
Crassulaceae	Pygmyweed	*Crassula connata*
Crassulaceae	Mossy Stonecrop	*Crassula tillaea* *
Cucurbitaceae	Wild-Cucumber	*Marah macrocarpa*
Cyperaceae	Cyperus	*Cyperus sp.*
Euphorbiaceae	Doveweed	*Croton setiger*
Euphorbiaceae	Spotted Spurge	*Euphorbia maculata* *
Euphorbiaceae	Petty Spurge	*Euphorbia peplus* *
Fabaceae	Spanish-Clover	*Acmispon americanus* var. *americanus*
Fabaceae	Deerweed	*Acmispon glaber*
Fabaceae	Grab Lotus	*Acmispon micranthus*
Fabaceae	Birdfoot Trefoil	*Lotus corniculatus* *
Fabaceae	Miniature Lupine	*Lupinus bicolor*
Fabaceae	Red-Flower Lupine	*Lupinus microcarpus* var. *microcarpus*
Fabaceae	Yellow Trefoil	*Medicago lupulina* *
Fabaceae	California Burclover	*Medicago polymorpha* *
Fabaceae	Indian Sweetclover	*Melilotus indicus* *
Fabaceae	Rose Clover	*Trifolium hirtum* *
Fabaceae	Crimson Clover	*Trifolium incarnatum* *
Fabaceae	Maiden Clover	*Trifolium microcephalum*
Fabaceae	Common Vetch	*Vicia sativa* ssp. *nigra* *
Gentianaceae	Canchalagua	*Zeltnera venusta*
Geraniaceae	Long-Beak Filaree/Storksbill	*Erodium botrys* *
Geraniaceae	Red-Stem Filaree/Storksbill	*Erodium cicutarium* *
Geraniaceae	White-Stem Filaree/Storksbill	*Erodium moschatum* *
Geraniaceae	Cut-Leaf Geranium	*Geranium dissectum* *

Family	Common Name	Scientific Name
Hydrophyllaceae	Common Eucrypta	*Eucrypta chrysanthemifolia* var. *chrysanthemifolia*
Iridaceae	Blue-Eyed-Grass	*Sisyrinchium bellum*
Juncaceae	Toad Rush	*Juncus bufonius* var. *bufonius*
Lamiaceae	Henbit	*Lamium amplexicaule* *
Lamiaceae	Horehound	*Marrubium vulgare* *
Lamiaceae	Black Sage	*Salvia mellifera*
Lythraceae	Grass Poly	*Lythrum hyssopifolia* *
Malvaceae	Cheeseweed	*Malva parviflora* *
Meliaceae	China Berry	*Melia azedarach* *
Montiaceae	Red Maids	*Calandrinia menziesii*
Montiaceae	Narrow-Leaf Miner's-Lettuce	*Claytonia parviflora* ssp. *parviflora*
Montiaceae	Miner's lettuce	*Claytonia perfoliata*
Myrsinaceae	Scarlet Pimpernel	*Anagallis arvensis* *
Onagraceae	Summer Cotton Weed	*Epilobium brachycarpum*
Onagraceae	Willow Herb	*Epilobium ciliatum* ssp. *ciliatum*
Onagraceae	Beautiful Evening-Primrose	*Oenothera speciosa* *
Oxalidaceae	Creeping Wood-Sorrel	*Oxalis corniculata* *
Oxalidaceae	Bermuda-Buttercup	*Oxalis pes-caprae* *
Papaveraceae	California Poppy	*Eschscholzia californica*
Phrymaceae	Coast Monkey Flower	*Diplacus puniceus*
Plantaginaceae	Large Blue Toadflax	*Nuttallanthus texanus*
Plantaginaceae	Prairie Plantain	*Plantago elongata*
Plantaginaceae	Corn Speedwell	*Veronica arvensis* *
Platanaceae	Western Sycamore	*Platanus racemosa*
Poaceae	Giant Reed	*Arundo donax* *
Poaceae	Slender Wild Oat	*Avena barbata* *
Poaceae	Wild Oat	*Avena fatua* *
Poaceae	Purple False Brome	*Brachypodium distachyon* *
Poaceae	Quaking Grass	*Briza minor* *
Poaceae	Rescue Grass	*Bromus catharticus* var. *catharticus* *
Poaceae	Ripgut Grass	*Bromus diandrus* *
Poaceae	Soft Chess	*Bromus hordeaceus* *
Poaceae	Red Brome	*Bromus rubens* *
Poaceae	African Fountain Grass	*Cenchrus setaceus* *

Family	Common Name	Scientific Name
Poaceae	Selloa Pampas Grass	*Cortaderia selloana* *
Poaceae	Bermuda Grass	*Cynodon dactylon* *
Poaceae	Salt Grass	*Distichlis spicata*
Poaceae	Panic Veldt Grass	*Ehrharta erecta* *
Poaceae	Gray's Fescue	*Festuca microstachys*
Poaceae	Rat-Tail Fescue	*Festuca myuros* *
Poaceae	Perennial Rye Grass	*Festuca perennis* *
Poaceae	Nit Grass	*Gastridium phleoides* *
Poaceae	Mediterranean Barley	*Hordeum marinum* ssp. *gussoneanum* *
Poaceae	Glaucous Barley	*Hordeum murinum* ssp. *glaucum* *
Poaceae	Little-Seed Canary Grass	*Phalaris minor* *
Poaceae	Annual Blue Grass	*Poa annua* *
Poaceae	Annual Beard Grass	*Polypogon monspeliensis* *
Poaceae	Purple Needle Grass	*Stipa pulchra*
Polygonaceae	Knotweeed	*Polygonum aviculare* *
Polygonaceae	Curly Dock	*Rumex crispus* *
Portulacaceae	Common Purslane	*Portulaca oleracea* *
Rhamnaceae	Spiny Redberry	*Rhamnus crocea*
Rosaceae	Western Lady's Mantle	*Aphanes occidentalis*
Rubiaceae	Common Bedstraw	*Galium aparine*
Salicaceae	Arroyo Willow	*Salix lasiolepis*
Scrophulariaceae	Slender Myoporum	*Myoporum parvifolium* *
Solanaceae	Tree Tobacco	*Nicotiana glauca* *
Solanaceae	Parish's Nightshade	*Solanum parishii*
Tamaricaceae	Athel	*Tamarix aphylla* *
Urticaceae	Dwarf Nettle	*Urtica urens* *
Zygophyllaceae	Puncture Vine	*Tribulus terrestris* *
*non-native species		

Attachment B

Photograph Log

Photo 1: *Acanthomintha ilicifolia* in bloom at Los Peñasquitos Preserve, May 19, 2020.

Photo 2: *Acanthomintha ilicifolia* in bloom at Los Peñasquitos Preserve, May 19, 2020.

Photo 3: *Brodiaea filifolia* in bloom at Taylor Preserve, May 13, 2020.

Photo 4: *Brodiaea filifolia* in bloom at Taylor Preserve, May 13, 2020.

Photo 5: *Navarretia fossalis* at Otay Lakes Preserve, May 14, 2020.

Photo 6: *Eryngium aristulatum* var. *parishii* at Otay Lakes Preserve, May 14, 2020.

APPENDIX F

45-DAY REPORT FOR COASTAL CALIFORNIA GNATCATCHER SURVEYS FOR THE BARHAM DRIVE RESIDENTIAL PROJECT, CITY OF SAN MARCOS, SAN DIEGO COUNTY, CALIFORNIA

ROCKS
BIOLOGICAL CONSULTING

July 15, 2020

U.S. Fish and Wildlife Service
Attn: Ms. Stacey Love
Carlsbad Fish and Wildlife Office
2177 Salk Ave., Ste. 250
Carlsbad, CA 92008

Subject: 45-Day Report for Coastal California Gnatcatcher Surveys for the Barham Drive Residential Project, City of San Marcos, San Diego County, California

Ms. Love:

This letter is a summary of the protocol coastal California gnatcatcher (*Polioptila californica californica*; CAGN) presence/absence surveys Rocks Biological Consulting (RBC) conducted for the proposed Barham Drive Residential Project (project) in the City of San Marcos, San Diego County, California. Survey results were negative for CAGN.

INTRODUCTION

The project includes construction of a residential multifamily development with associated parking and landscaping on a currently undeveloped property.

The 10.56-acre project site is located south of State Route 78 (SR-78) in the City of San Marcos, San Diego County, California (Figure 1). The site is bounded by East Barham Drive to the north, open space to the south, and residential development to the east and west (Figure 2).

METHODS

RBC biologists Ian Hirschler and Chris Thomson conducted six CAGN surveys, each at least one week apart, between May 13, 2020 and June 17, 2020. Survey methods followed the United States Fish and Wildlife Service (USFWS) presence/absence breeding season protocol (USFWS 1997) for non-NCCP areas. RBC surveyed all suitable CAGN habitat within the project site and a 300-foot buffer (survey area; Figure 2) using taped vocalizations to elicit a response from CAGN.

RESULTS

Suitable habitat within the survey area is composed primarily of Diegan coastal sage scrub (DCSS) dominated by black sage (*Salvia mellifera*) and California sagebrush (*Artemisia californica*). Other co-occurring species within the DCSS on-site include sticky monkey flower

(*Diplacus puniceus*), lemonadeberry (*Rhus integrifolia*), and laurel sumac (*Malosma laurina*). Non-suitable CAGN habitat within the survey area includes developed land and non-native grassland dominated by filaree (*Erodium* sp.) and slender wild oat (*Avena barbata*). Representative photographs of the project site are included as Attachment A.

RBC did not document CAGN within the project site or 300-foot buffer during the six surveys conducted between May 13, 2020 and June 17, 2020. Blue-gray gnatcatchers (*Polioptila caerulea*) were documented within the Diegan coastal cage scrub on-site during each survey. RBC biologists distinguished these gnatcatchers from CAGN by their vocalizations and by their plumage. Blue-gray gnatcatchers have white outer tail feathers that make the underside of their tails appear much whiter than those of CAGN. Male blue-gray gnatcatchers also lack the characteristic black crown that male CAGN display during the breeding season.

Survey dates and conditions are presented in Table 1, below. A list of 25 bird species observed during the surveys is included as Attachment B, and surveyor field notes are included as Attachment C.

Table 1. Survey Conditions During CAGN Surveys at Barham Drive Residential Project

Date	Survey Time	Temp (°F) Start-End	Sky Cover (%)	Wind Speed (mph)	Surveyor
5/13/20	0745-0845	60-61	80-80	0-2; 2-5	IH
5/20/20	0750-0915	59-64	20-0	2-4; 2-4	IH
5/27/20	0800-0910	63-68	100-0	0-2; 0-2	CT
6/3/20	0715-0815	65-70	5-10	1-3; 1-3	IH
6/10/20	0745-0845	76-78	0-0	0-3; 1-4	IH
6/17/20	0715-0840	62-64	100-100	0-2; 0-2	CT
IH = Ian Hirschler (authorized under TE-063230-5.4), CT = Chris Thomson (authorized under TE-063230-5.4)					

CONCLUSION

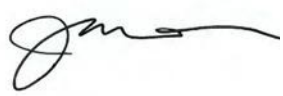
RBC did not document any CAGN within the Barham Drive Residential project site or 300-foot buffer during the six breeding season protocol surveys. Impacts on CAGN are not anticipated to occur on-site.

Please do not hesitate to contact Ian Hirschler at (619) 701-6798 if you have any questions or concerns regarding this report.

We certify that the information in this survey report and attached exhibits fully and accurately represent our work.

Chris Thomson
Authorized Individual TE-063230-5.6

Ian Hirschler
Authorized Individual TE-063230-5.6



Jim Rocks
TE-063230-5.6

Enclosures: Figure 1 – Project Location
Figure 2 – Survey Area
Attachment A – Site Photographs
Attachment B – Birds Species Observed During Coastal California Gnatcatcher Presence/Absence Surveys for Barham Drive Residential Project
Attachment C – Surveyor Field Notes

References

U.S. Fish and Wildlife Service (USFWS). 1997. Coastal California Gnatcatcher (*Polioptila californica californica*) Presence/Absence Survey Protocol. 5 pages.

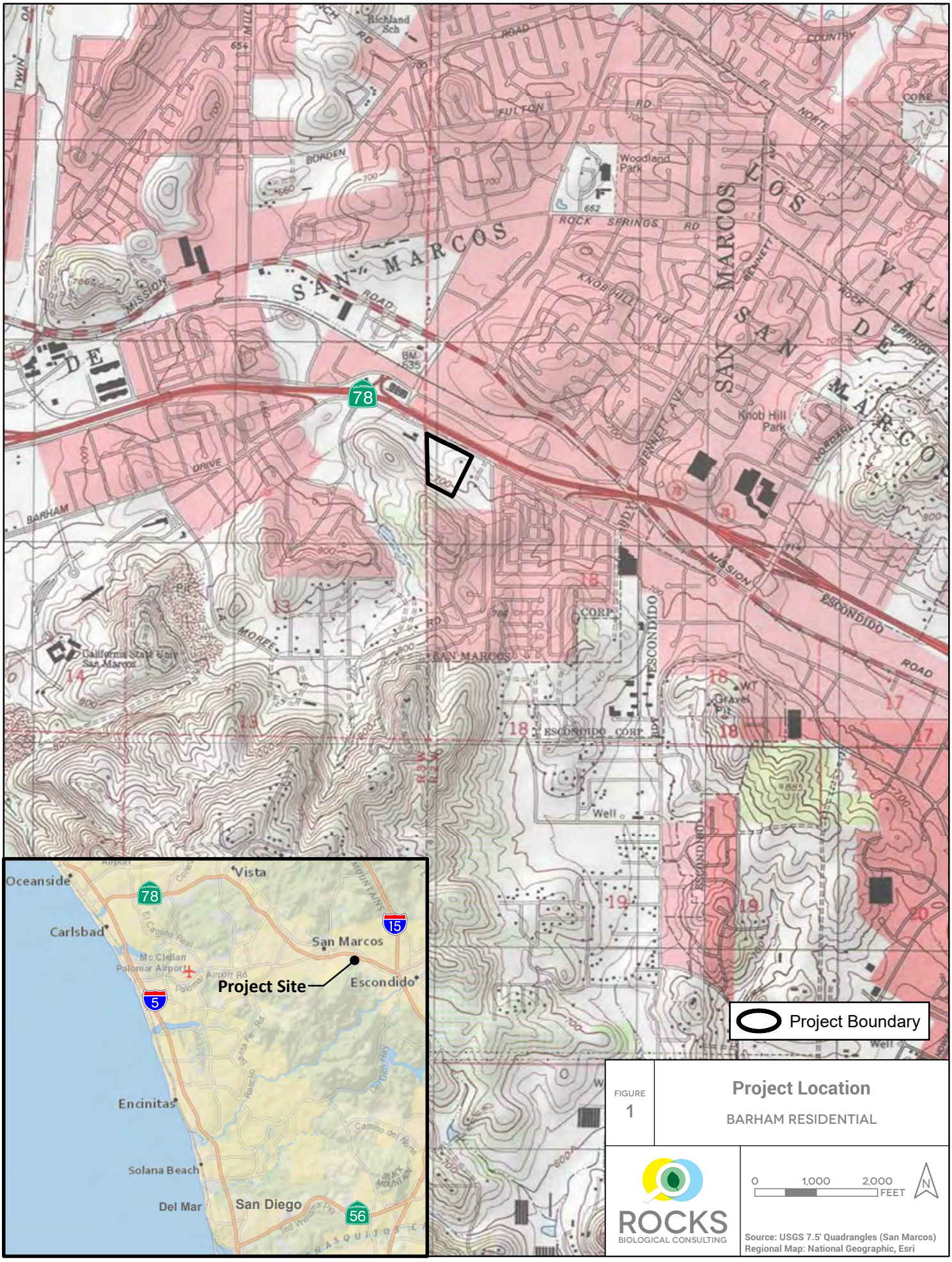


FIGURE 1

Project Location

BARHAM RESIDENTIAL

ROCKS BIOLOGICAL CONSULTING

0 1,000 2,000 FEET

N

Source: USGS 7.5' Quadrangles (San Marcos)
Regional Map: National Geographic, Esri

FIGURE 2

Survey Area

BARHAM RESIDENTIAL

ROCKS BIOLOGICAL CONSULTING

0 100 200 FEET

N

Aerial Photo: Nearmap 2019

ATTACHMENT A

SITE PHOTOGRAPHS

Attachment A

Site Photographs

Photo 1. View of the project site from the western boundary, facing east. May 13, 2020.

Photo 2. View of the project site from the western boundary, facing south. May 13, 2020.

Photo 3. View of the project site from the southern boundary, facing north. May 20, 2020.

Photo 4. View of the Diegan coastal sage scrub along the southern project boundary, facing southeast. May 20, 2020.

Photo 5. View of Diegan coastal sage scrub, facing south. May 27, 2020.

Photo 6. View of Diegan coastal sage scrub along southern project boundary, facing southwest. May 27, 2020.

ATTACHMENT B

BIRD SPECIES OBSERVED DURING THE COASTAL CALIFORNIA GNATCATCHER PRESENCE/ABSENCE SURVEYS FOR BARHAM DRIVE RESIDENTIAL PROJECT

Attachment B

Bird Species Observed During Coastal California Gnatcatcher
Presence/Absence Surveys for the Barham Drive Residential Project

Family	Common Name	Scientific Name
Accipitridae	Cooper's hawk	*Accipiter cooperi* (WL; nesting)
Accipitridae	red-shouldered hawk	*Buteo lineatus*
Accipitridae	red-tailed hawk	*Buteo jamaicensis*
Aegithalidae	bushtit	*Psaltriparus minimus*
Apodidae	white-throated swift	*Aeronautes saxatalis*
Columbidae	mourning dove	*Zenaida macroura*
Corvidae	American crow	*Corvus brachyrhyncos*
Corvidae	California scrub-jay	*Aphelocoma californica*
Fringillidae	house finch	*Haemorhous mexicanus*
Fringillidae	lesser goldfinch	*Spinus psaltria*
Hirundinidae	cliff swallow	*Petrochelidon pyrhonnota*
Icteridae	hooded oriole	*Icterus cucullatus*
Mimidae	California thrasher	*Toxostoma redivivum*
Mimidae	northern mockingbird	*Mimus polyglottos*
Passerellidae	California towhee	*Melozone crissalis*
Passerellidae	spotted towhee	*Papilio maculatus*
Polioptilidae	blue-gray gnatcatcher	*Polioptila caerulea*
Sylviidae	wrentit	*Chamaea fasciata*
Trochillidae	Allen's hummingbird	*Selasphorus sasin*
Trochillidae	Anna's hummingbird	*Calypte anna*
Troglodytidae	Bewick's wren	*Thryomanes bewickii*
Troglodytidae	house wren	*Troglodytes aedon*
Tyrannidae	black phoebe	*Sayornis nigricans*
Tyrannidae	pacific-slope flycatcher	*Empidonax difficilis*
Tyrannidae	Say's phoebe	*Sayornis saya*
Tyrannidae	western kingbird	*Tyrannus verticalis*
WL – California Department of Fish and Wildlife Watch List		

ATTACHMENT C

SURVEYOR FIELD NOTES

5/13/20 BARHAM DR. CAGN #1

	TIME	TEMP	CC	WIND	
START	0745	60	80%	0-2	
END	0845	61	80%	2-5	
CALT	MODO	ANHU	CLSW	HOFI	NOMO
BLPH	SPTO	BGGN	ALHU	LEGO	WREN
BEWR	CATH	SAPH			

NO CAGN.

5/20/20 BARHAM DR. CAGN #2

	TIME	TEMP	CC	WIND	
START	0750	59	20%	2-4	
END	0915	64	0%	2-4	
HOFI	LEGO	BLPH	CLSW	RTHA	WTSW
SPTO	WEKI	CALT	BGGN	WREN	ALHU
NOMO	CASJ				
NO CAGN					

5/27/20 BARHAM CAGN #3 (CT)

left@ 0720; ret@ 0950

	Ti	Te	C	WIND
S	0800	63°	100%	0-2
E	0910	68°	0%	0-2

BIRDS

AMCR
CACT
BUSH
RSHA
LEGO
HOFI
CLSW
RTHA
BLPH
BGGN
BEWR
WREN
MODO
CATH
ANHM
SPTO
CORA
WTSW
EUST *
HOWR

Notes

- dense CSS
↳ fragmented + lined by CHAP
- NO CAGN

6/3/20 BARHAM DR. CAGN #4

	TIME	TEMP	CC	WIND
START	0715	65	5%	1-3
END	0815	70	10%	1-3

HOFI	BUSH	LEGO	MODO	SOSP	BUPH
HOOR	BGGN	RTHA	NOMO	WREN	ALHU
CLSW	SPTO	CALT	AMCR		

NO CAGN

6/10/20 BARHAM DR. CAGN 5

	TIME	TEMP	CC	WIND
START	0745	76	0%	0-3
END	0845	78	0%	1-4

BUSH	CALT	ANHU	HOFI	LEGO	SPTO
WTSW	NOMO	BLPH	MODO	BGGN	WREN
PSFL	COHA				

NO CAGN.

6/17/20 BARHAM CAGN #6 (CT)

left @ 0630; net @ 0925

	Ti	Te	C	WIND
S	0715	62°	100%	0-2
E	0840	64°	100%	0-2

BIRDS

HOFI
LEGO
RTHA
BLPH
HOWR
CATH
CALT
CCSW
HOOR
AMCR
ANHU
ALHU
SPTO
WREN
BEWR
WTSW
BUSH
CORA
BGGN

NOTES

- overcast
- low bird activity

overall
No CAGN