HELIX
Environmental Planning

Sweetwater Vistas Project

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Biological Technical Report

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Biological Technical Report

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EXECUTIVE SUMMARY

At the request of Sweetwater Vistas, LLC (Project Proponent), HELIX Environmental Planning, Inc. (HELIX) has prepared this biological resources technical report for the Sweetwater Vistas Project (project), which is proposed in the unincorporated community of Spring Valley in San Diego County, California. The project proposes development of a new master planned community consisting of multi-family residential units and open space. The proposed residential units and open space would occur within an approximately 51.9-acre area, referred to herein as the project site.

In preparing the biological resources technical report for the project, HELIX established a study area encompassing the approximately 51.9-acre project site and off-site areas within 100 feet of the project boundary, including the off-site improvement areas. The purpose of this report is to document the existing biological conditions within the study area and analyze the project's potential impacts to sensitive biological resources with respect to local, state, and federal policy. This report provides the biological resources technical documentation necessary for review under the California Environmental Quality Act (CEQA) by the County of San Diego (County) Planning & Development Services (PDS).

It is important to note that the project site was formerly part of the Pointe San Diego development, which the County approved on August 1, 1990, pursuant to a certified Final Environmental Impact Report (EIR) that analyzed impacts to biological resources and determined such impacts to be significant even after mitigation.[1] The project site was also the subject of eight CEQA addenda, as listed in Table 9, Cumulative Impacts on Biological Resources. In each case, the County determined that the proposed changes to the Pointe project did not result in new or more severe impacts to biological resources than those already assessed in the 1990 Final EIR.[2] Likewise, the currently-proposed project does not result in significant biological impacts additional to or more severe than those contemplated and addressed in these earlier CEQA documents.

Moreover, while the project does have the potential to cause significant effects on certain biological resources, each of these effects can be mitigated to a less than significant level. Consequently, this report concludes that the project will not have *project-specific* significant effects on any biological resource; nor will it make a "cumulatively considerable" contribution to any significant *cumulative* impact.

By way of summary, the project would affect 23.1 acres of the approximately 52-acre project site. Of the 23.1 acres of impacts, 0.5 acre would be restored to native habitat and included within the project's biological open space. To the extent the project's impacts to these 23.1 acres result in significant effects on particular biological resources – such as special-status species and jurisdictional waters – they can and will be mitigated to less than significant levels. The remaining 27.9 acres would be avoided and placed within biological open space to be managed

[1] See, the Pointe San Diego Draft EIR (SCH No. 88030915) at pp. 1-11—1-12.

[2] Addendum to EIR 90-GP-3 for the Pointe Habitat Loss Permit, November 21, 1996, pp. 1-2; Addendum to the Previously Adopted Negative Declaration or EIR for the Point San Diego, August 5, 2003, p. 2.

in perpetuity for conservation purposes. Within the biological open space, an additional 3.2 acres of restoration and 0.4 acre of enhancement of native habitat would occur. Altogether, the project's conservation percentage is 54 percent.

The project would also result in impacts from minor roadway improvements and a trail along Jamacha Boulevard, but these off-site impacts would occur entirely within existing disturbed habitat and developed (paved) roadways, and as such, would not affect biological resources. Areas of existing fire clearing and an existing County sewer easement (1.3 acres) were mapped as impact neutral.

HELIX conducted general biological surveys, jurisdictional delineation, rare plant surveys, and protocol-level surveys for the Quino checkerspot butterfly (*Euphydryas editha quino*), coastal California gnatcatcher (*Polioptila californica californica*), and least Bell's vireo (*Vireo bellii pusillus*) during the period of February 2014 to July 2015. In total, 29 biological surveys were completed in 2014 and 2015. The project site supports 13 vegetation communities/habitat types: non-native vegetation, disturbed wetland, disturbed habitat, urban/developed, Diegan coastal sage scrub, non-native grassland, cismontane alkali marsh, mule fat scrub, southern willow scrub, tamarisk scrub, non-native riparian, *Arundo*-dominated riparian, and *Eucalyptus* woodland. Sensitive natural communities requiring compensatory mitigation for project impacts include Diegan coastal sage scrub, non-native grassland, and disturbed wetland. Such mitigation would reduce impacts to these resources to less than significant levels.

Six special status plant species were confirmed as occurring within the project site during 2015 rare plant surveys: southwestern spiny rush (*Juncus acutus* ssp. *leopoldii*); graceful tarplant (*Holocarpha virgata* ssp. *elongata*); Munz's sage (*Salvia munzii*); San Diego County sunflower (*Bahiopsis laciniata*); San Diego marsh-elder (*Iva hayesiana*), and ashy spike-moss (*Selaginella cinerascens*). The project would preserve the entirety of the on-site populations of graceful tarplant, San Diego marsh-elder, and ashy spike-moss within biological open space. The project would impact relatively low numbers of southwestern spiny rush and San Diego County sunflower. This impact is considered less than significant because most of the on-site population of these two species will be preserved within biological open space. The project would impact three Munz's sage and preserve the remaining eight that occur on site within biological open space. This, too, is considered a less than significant impact.

Four special status bird species were determined to be breeding on the project site during 2015 surveys: coastal California gnatcatcher; Cooper's hawk (*Accipiter cooperi*), least Bell's vireo, and yellow warbler (*Setophaga petechia*). In addition, four special status animal species were observed foraging and/or moving through or over the project site during 2015 surveys: monarch butterfly (*Danaus plexippus*), turkey vulture (*Cathartes aura*), northern harrier (*Circus cyaneus*), and red-shouldered hawk (*Buteo lineatus*). The project would avoid and preserve within biological open space all occupied gnatcatcher breeding habitat on site and additional habitat for foraging and dispersal. The project would further avoid and preserve within biological open space all suitable and occupied breeding habitat for Cooper's hawk, least Bell's vireo, yellow warbler, monarch butterfly, and red-shouldered hawk. The project would preserve potential foraging habitat for turkey vulture and northern harrier. Impacts to special status bird species would be mitigated to less than significant levels.

The project site supports a reach of Hansen's Creek and Little Hansen's Creek, in addition to an unnamed, man-made ephemeral drainage feature created by a storm drain outlet that is tributary to Hansen's Creek. These features would qualify as wetland and non-wetland waters of the U.S. subject to the regulatory jurisdiction of the U.S. Army Corps of Engineers (USACE) pursuant to Section 404 of the federal Clean Water Act (CWA); wetland and non-wetland waters of the State subject to the regulatory jurisdiction of the Regional Water Quality Control Board (RWQCB) pursuant to Section 401 of the CWA; riparian-vegetated and unvegetated streambed subject to the regulatory jurisdiction of the California Department of Fish and Wildlife (CDFW) pursuant to Sections 1600 *et seq*. of California Fish and Game Code (CFG Code); and wetlands subject to the regulatory jurisdiction of the County pursuant to the Resource Protection Ordinance (RPO). As explained below, the mitigation measures recommended in the report would reduce project impacts to wetlands and other jurisdictional waters to less than significant levels.

The project site occurs within the boundaries of the adopted South County Multiple Species Conservation Program (MSCP) Subarea Plan, within both the South County Segment and Metro-Lakeside-Jamul Segment. Development has been specifically sited within Take Authorized Area and areas outside of Pre-Approved Mitigation Area. Limited impacts would occur to 2.1 acres of disturbed habitat within Hardline Preserve. The project proposes preservation of equivalent or superior habitat for a Hardline Preserve boundary adjustment on site. The project preserves the highest quality Biological Resource Core Area (BRCA) habitat on site that supports multiple sensitive species and contributes to an existing constrained linkage in the local area. With the incorporation of the proposed conservation design and biological open space, the project would be consistent with the MSCP and Biological Mitigation Ordinance (BMO).

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1.0 INTRODUCTION

1.1 PURPOSE OF THE REPORT

The purpose of this report is to document the existing biological conditions within the approximately 51.9-acre project site and provide an analysis of potential impacts to sensitive biological resources with respect to local, state, and federal policy. This report provides the biological resources technical documentation necessary for review under the California Environmental Quality Act (CEQA) by County of San Diego (County) Planning & Development Services (PDS).

1.2 PROJECT LOCATION AND DESCRIPTION

1.2.1 Project Location

The 51.9-acre project site is generally located north of Sweetwater Reservoir, south and west of State Route 94, and east of State Route 125 in the unincorporated community of Spring Valley in San Diego County, California (Figure 1). Specifically, the site is located southwest and southeast of the intersection of Jamacha Boulevard and Sweetwater Springs Boulevard (Figure 2). It is located within the San Diego land grant in unsectioned lands of the U.S. Geological Survey (USGS) 7.5-minute Jamul Mountains quadrangle map (Figure 3). The project site is located on unincorporated lands within the South County and Metro-Lakeside-Jamul segments of the County's Multiple Species Conservation Program (MSCP) Subarea Plan (Figure 4). The site is part of a previously approved Specific Plan known as The Pointe.

1.2.2 Project Description

The proposed project would (i) develop 23.1 acres into a new master planned community consisting of 218 multi-family residential units and (ii) place 27.9 acres into biological open space. This project is a significant departure from the previously approved Specific Plan, which would have disturbed approximately 51.5 acres and left only 0.4 acre in open space. The proposed residential development would occur on the 43.4-acre parcel west of Jamacha Boulevard and be divided into three planning areas (Lots 1, 2, and 3). The 8.6-acre parcel east of Jamacha Boulevard, herein referred to as the "eastern parcel" and "mitigation parcel," would be placed in biological open space. The project is anticipated to require a General Plan Amendment, Specific Plan Amendment, Rezone, MSCP Boundary Line Adjustment, Tentative Map, and Major Use Permit. Refer to Figure 5 for the location of proposed uses.

The General Plan Amendment would update the Spring Valley Community Plan map and text. The proposed amendment would change the land use designation from Specific Plan to Village Residential and Open Space-Conservation (OS-C) and would delete language related to the "promised resort, restaurants, and businesses" in the text of the Spring Valley Community Plan. The Specific Plan Amendment would update The Pointe San Diego Specific Plan to delete language related to the resort. The proposed land use designation for the parcel west of Jamacha Boulevard would be Village Residential 15 (VR-15) and the proposed land use designation for

the mitigation parcel would be OS-C. The proposed zoning for these parcels would be Urban Residential (RU) and Open Space (S80), respectively.

The 27.9-acre biological open space will be managed by a County-approved Resource Manager according to the project's Conceptual Resource Management Plan (RMP). The RMP includes area-specific management directives, including maintenance, monitoring, and reporting directives that will be implemented within the biological open space in perpetuity. There are several existing and proposed sewer and water facilities on and in the immediate vicinity of the proposed biological open space, including storm drain outlets and a culvert inlet, that will be the responsibility of the Homeowner's Association (HOA) to maintain. Maintenance of these facilities by the HOA will be conducted in coordination with the Resource Manager.

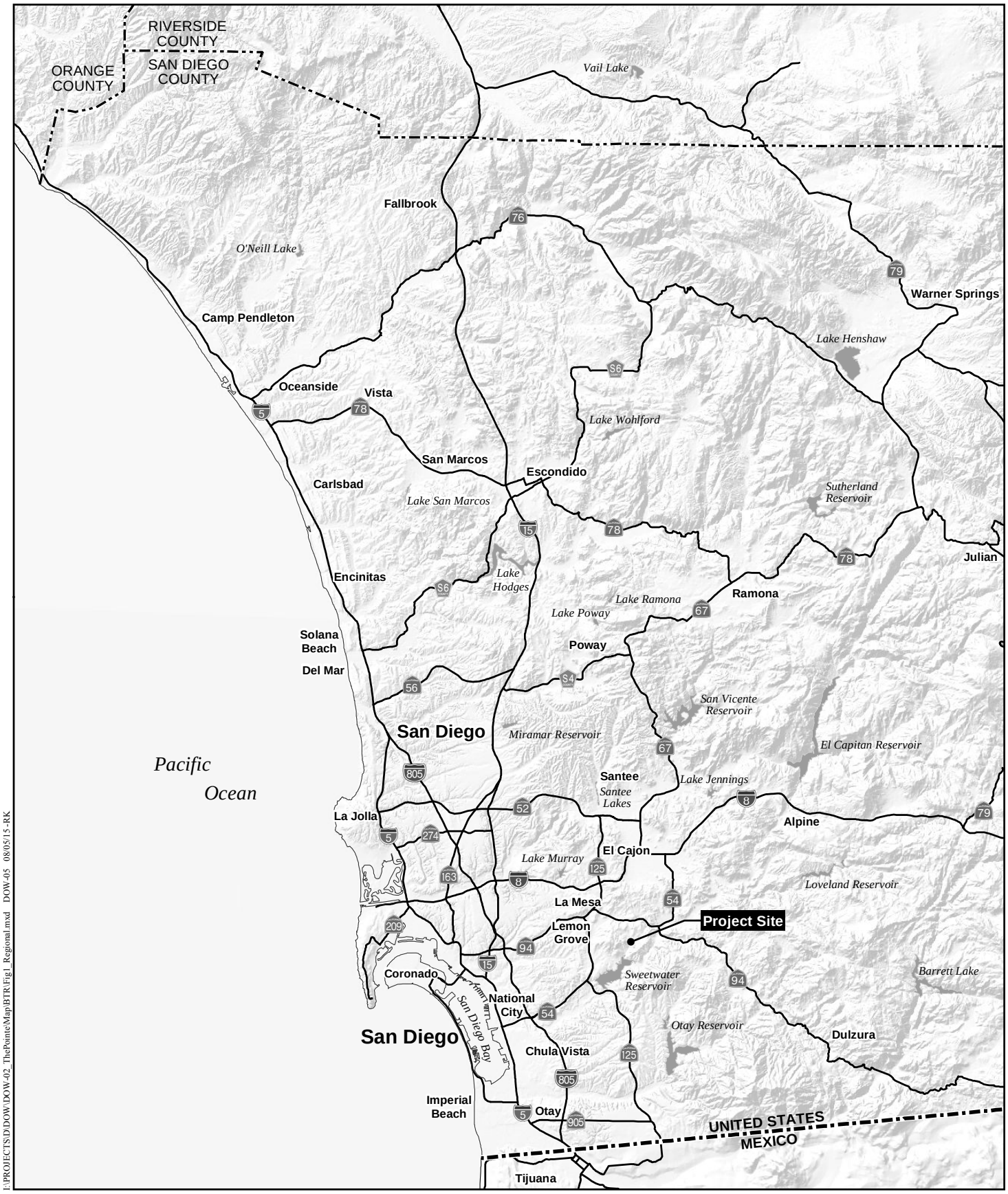
1.3 METHODS

1.3.1 Literature Review

Prior to conducting biological field surveys in 2014 and 2015, HELIX conducted a search of the California Natural Diversity Database (CNDDB) for information regarding sensitive species known to occur within 2 miles of the project site, as well as a review of USFWS, SanBIOS, and MSCP sensitive species databases. A search of the San Diego Plant Atlas (San Diego Natural History Museum [SDNHM] 2010) was also conducted.

1.3.2 General Biological Surveys

HELIX biologists conducted a general biological survey of the project site on February 11, 2014 (Table 1) according to County Requirements. Vegetation was mapped on a 1"=100' scale aerial of the site. A minimum mapping unit size of 0.10 acre was used when mapping upland habitat; 0.01 acre was used when mapping wetland and riparian habitat. The study area was surveyed on foot and with the aid of binoculars. Plant and animal species observed or otherwise detected were recorded in field notebooks (Appendix A and B). Animal identifications were made in the field by direct, visual observation or indirectly by detection of calls, burrows, tracks, or scat. Plant identifications were made in the field or in the lab through comparison with voucher specimens or photographs. A list of special status plant and animal species with potential to occur was compiled and reviewed for habitat suitability (Appendix C and D). Special status species definitions are included in Appendix E. The locations of special status plant and animal species incidentally observed or otherwise detected were mapped. Representative photographs of the site were taken, with select photographs included in this report as Appendix F. The study area was also examined for evidence of potential jurisdictional waters and wetlands, including vernal pools. In addition to the general biological surveys, HELIX conducted a formal jurisdictional delineation, rare plant surveys, and year 2015 protocol-level surveys for coastal California gnatcatcher (*Polioptila californica californica;* Appendix G), Quino checkerspot butterfly (*Euphydryas editha quino;* Appendix H), and least Bell's vireo (*Vireo bellii pusillus;* Appendix I). Table 1 provides a summary of biological surveys conducted for the project.



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Regional Location Map

SWEETWATER VISTAS

HELIX Environmental Planning

N 0 8 Miles

Figure 1



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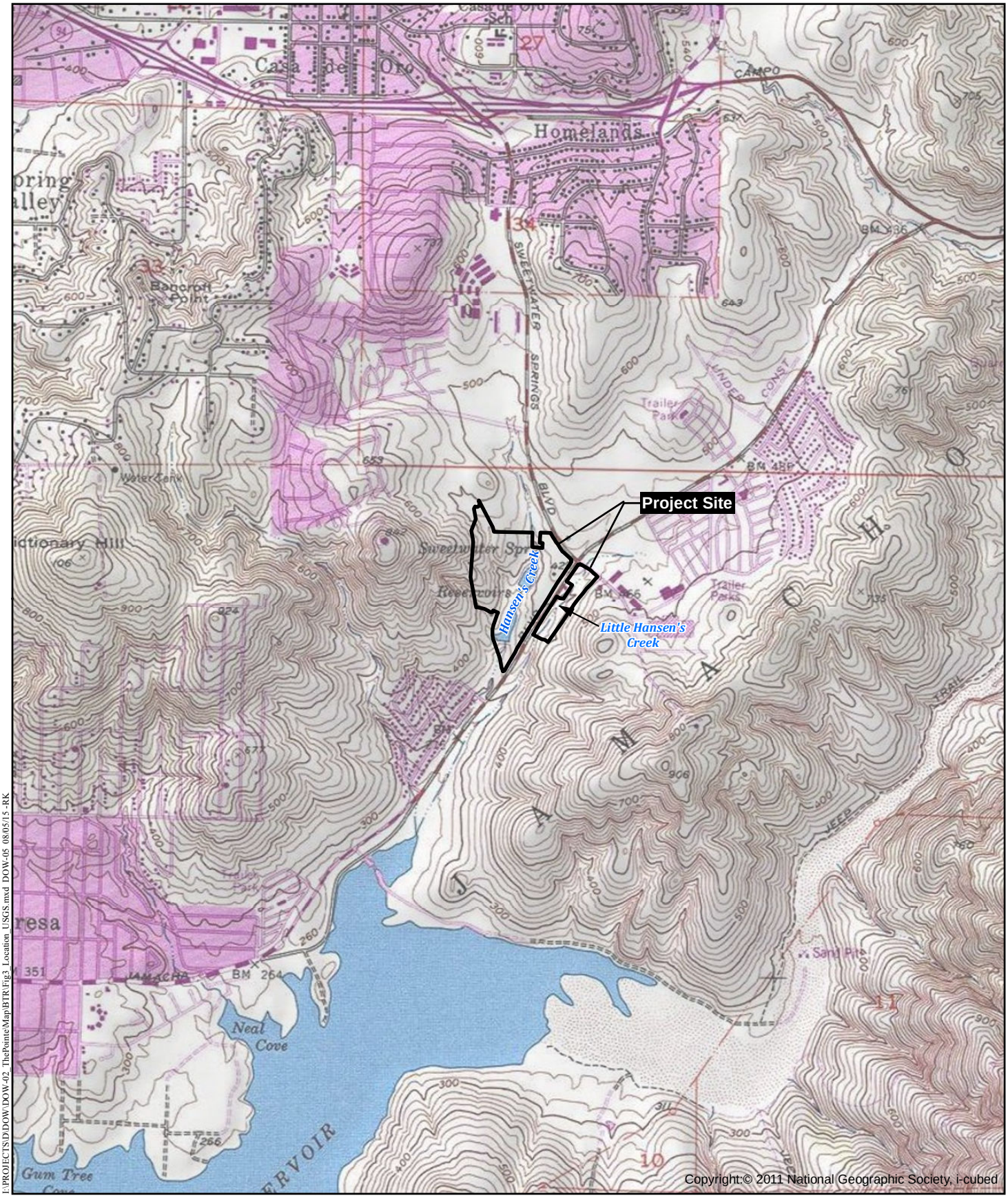
Project Vicinity Map (Aerial Photograph)

SWEETWATER VISTAS

HELIX Environmental Planning

N 0 2,000 Feet

Figure 2



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Project Vicinity Map (USGS Topography)

SWEETWATER VISTAS

HELIX Environmental Planning

N 0 2,000 Feet

Figure 3



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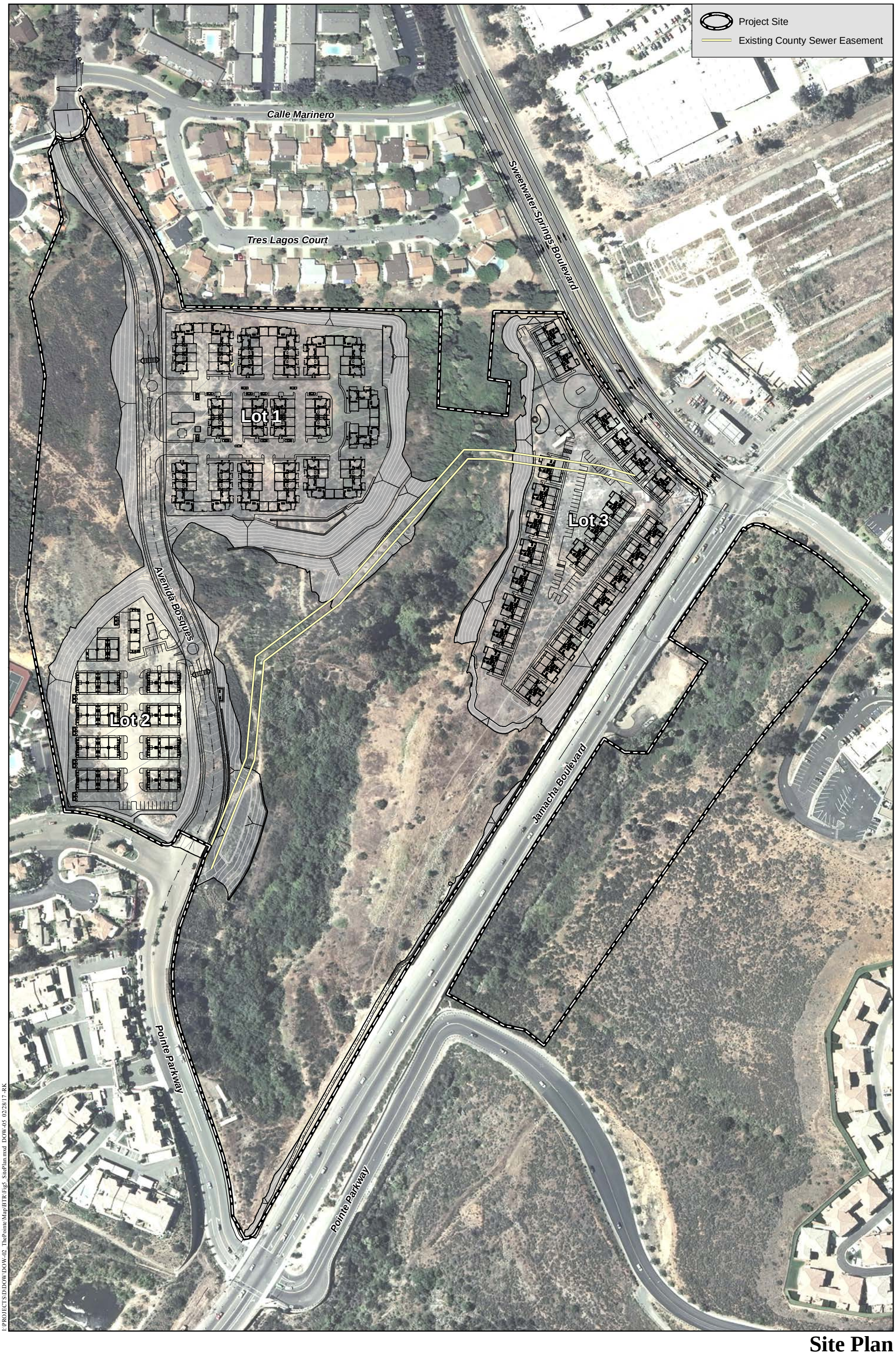
MSCP Designations

SWEETWATER VISTAS

HELIX Environmental Planning

Figure 4



Site Plan

SWEETWATER VISTAS

HELIX Environmental Planning

N 0 200 Feet

Figure 5

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Table 1
BIOLOGICAL SURVEYS

SURVEY TYPE	DATE	HELIX PERSONNEL
Year 2014		
General biological survey, vegetation community/habitat type mapping, habitat assessment, and basic wetland delineation	February 11	Stacy Nigro, George Aldridge
Formal jurisdictional delineation	October 16	Stacy Nigro, George Aldridge
Year 2015		
Rare plant	March 24	Larry Sward
	May 27	Larry Sward
Quino checkerspot butterfly	February 20	Amy Mattson
	February 25	Amy Mattson
	March 6	Stacy Nigro
	March 13	Erica Harris
	March 20	Amy Mattson
	March 27	Amy Mattson
	April 2	Stacy Nigro
	April 10	Erica Harris
	April 17	Amy Mattson, Laura Moreton*
	April 27	Jasmine Bakker
	April 29	Erica Harris
	May 4	Amy Mattson, Laura Moreton*
Coastal California gnatcatcher	April 6	Jason Kurnow
	April 14	Jason Kurnow, Talaya Rachels*
	April 27	Jason Kurnow, Erica Harris, Talaya Rachels*
Least Bell's vireo	April 13	Laura Moreton
	April 23	Laura Moreton
	May 4	Ben Rosenbaum, Talaya Rachels
	May 14	Laura Moreton
	May 27	Ben Rosenbaum
	June 8	Laura Moreton
	June 25	Ben Rosenbaum
	July 6	Laura Moreton
Fall rare plants and check jurisdictional delineation	October 13	Larry Sward
General biological survey	December 4	Beth Ehsan
Year 2016		
Check jurisdictional delineation	August 16	Beth Ehsan

*Supervised Individual

1.3.3 Focused Species Surveys

Rare Plant Surveys

HELIX biologists conducted an initial rare plant survey on the portion of the project site west of Jamacha Boulevard on March 24, 2015 (Table 1). A follow-up survey for Otay tarplant (*Deinandra conjugens*) was conducted on May 27. Opportunistic inspections for target rare plant species were also made during the other biological surveys performed in 2014 and 2015 (Table 1). Searches were made for those species that are listed as threatened or endangered by the USFWS or the CDFW; those with a Rare Plant Rank 1 through 4 designated by the California Native Plant Society (CNPS); and those that are on the County Sensitive Plant List (County 2010a). The surveys were conducted on foot and included 100 percent visual coverage of the project site. Special status plant species encountered were mapped using a hand-held Global Positioning System (GPS) unit and/or on an aerial photograph.

A final rare plant survey targeting late summer/fall-blooming species [e.g., decumbent goldenbush (*Isocoma menziesii* var. *decumbens*) and Palmer's goldenbush (*Ericameria palmeri*)] was conducted on October 13, 2015.

Quino Checkerspot Butterfly

HELIX biologists conducted a survey for the Quino checkerspot butterfly in accordance with Quino Checkerspot Butterfly Survey Guidelines (USFWS 2014). The survey consisted of 12 site visits between February 20 and May 4, 2015 (Table 1). The survey area consisted of potential Quino checkerspot butterfly habitat in the project site (i.e., Diegan coastal sage scrub, non-native grassland, and disturbed habitat [including dirt roads and trails]). The survey was conducted by walking through appropriate habitat and identifying all butterflies observed by sight and with the aid of binoculars. Larval host plants were mapped with the aid of hand-held GPS units, and potential nectar plant species also were documented.

Least Bell's Vireo

HELIX biologists conducted a survey for the least Bell's vireo in accordance with Least Bell's Vireo Survey Guidelines (USFWS 2001). The survey consisted of eight site visits made from April 13 through July 6, 2015 (Table 1). The survey area consisted of potential least Bell's vireo riparian habitat in the project site (i.e., southern willow scrub, mule fat scrub, arundo-dominated riparian, non-native riparian, freshwater marsh, cismontane alkali marsh, and tamarisk scrub). The survey was conducted by walking along the edges of, as well as within, potential least Bell's vireo habitat while listening for least Bell's vireo vocalizations and viewing birds with the aid of binoculars. All least Bell's vireo locations, along with other special status riparian bird species locations, were mapped on an aerial photograph.

Coastal California Gnatcatcher

HELIX biologists conducted a survey for the coastal California gnatcatcher in accordance with the Coastal California Gnatcatcher Presence/Absence Survey Protocol (USFWS 1997). The survey consisted of three site visits made during the breeding season from April 6 through April 27, 2015 (Table 1). The survey area consisted of potential coastal California gnatcatcher habitat in the project site and immediate vicinity (i.e., Diegan coastal sage scrub and Diegan coastal sage scrub-disturbed). The survey was conducted by walking through the vegetation or on adjacent paths, and birds were viewed with the aid of binoculars, where necessary. If the coastal California gnatcatcher was not detected passively, a digital coastal California gnatcatcher call-prompt was briefly played. Coastal California gnatcatcher locations were mapped on an aerial photograph.

1.3.4 Jurisdictional Delineation

HELIX biologists performed a basic wetland delineation of the entire project site on February 11, 2014, and a formal jurisdictional delineation of the areas west of Jamacha Boulevard on October 16, 2014, with a follow-up visit on October 13, 2015 to clarify the delineation at sampling point 7 and a follow-up visit to the area east of Jamacha Boulevard on August 16, 2016 to verify the current conditions of the channel (Table 1). The basic wetland delineation differs from the formal delineation in that it focuses on habitat types, topography, and other data, but does not include excavation of soil pits. Data sheets are included as Appendix J.

Prior to beginning fieldwork, aerial photographs (1"=100' scale), topographic maps (1"=100' scale), and National Wetland Inventory (NWI) maps were reviewed to assist in determining the location of potential jurisdictional areas in the project site. The field delineation was conducted to identify and map water and wetland resources potentially subject to U.S. Army Corps of Engineers (USACE) jurisdiction pursuant to Section 404 of the Clean Water Act (CWA; 33 USC 1344) and streambed habitats potentially subject to CDFW jurisdiction pursuant to Sections 1600 *et seq.* of the California Fish and Game Code (CFG Code). The delineation was also conducted to determine the presence or absence of County Resource Protection Ordinance (RPO) wetlands. Areas generally characterized by depressions, drainage features, and riparian and wetland vegetation were evaluated.

Waters of the U.S.

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

Waters of the State

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

County Resource Protection Ordinance Wetlands

Areas were considered County wetlands if they met one of the three following attributes pursuant to the County RPO (County 2011): (1) at least periodically, the land supports a predominance of hydrophytes (plants whose habitat is water or very wet places); (2) the substratum is predominantly undrained hydric soil; or (3) an ephemeral or perennial stream is present, whose substratum is predominately non-soil and such lands contribute substantially to the biological functions or values of wetlands in the drainage system.

1.3.5 Survey Limitations

While 2015 was a year of low rainfall, some of the special status plant species with potential to occur in the project site (based on geographic range, habitat and soil requirements, and database records) are perennial species (and many are shrubs), and as such, are readily identifiable year-round and in low rainfall years.

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

1.3.6 Nomenclature

Nomenclature used in this report generally comes from Holland (1986) and Oberbauer (2008) for vegetation; Baldwin et al. (2012) for plants; Glassberg (2001) for butterflies; Collins and Taggart (2006) for reptiles and amphibians; American Ornithologists' Union (2013) for birds; and Baker et al. (2003) for mammals. Plant species status is from the CNPS (2015), CDFW (2015a), and County (2010a). Animal species status is from CDFW (2015b and 2015c) and County (2010a).

1.4 ENVIRONMENTAL SETTING

1.4.1 Regional Context

The project site is generally located within south San Diego County, within the boundaries of the Spring Valley Community Planning Area. Generalized climate in the region is regarded as dry, subhumid mesothermal, with warm dry summers and cold moist winters. Mean annual precipitation is between 14 and 18 inches, and the mean annual temperature is between 60 and 62 degrees Fahrenheit. The frost-free season is 260 to 300 days.

Important biological resources in the region generally include core blocks of coastal sage scrub and chaparral, in addition to perennial waters and riparian habitat associated with Sweetwater River and Otay River corridors and Sweetwater and Otay Reservoirs, as well as open space conserved within the San Diego National Wildlife Refuge and Otay Valley Regional Park. The region hosts core populations of sensitive plants, including Dean's milk-vetch (*Astragalus deanei*), Orcutt's brodiaea (*Brodiaea orcuttii*), and felt-leaved monardella (*Monardella hypoleuca* ssp. *lanata*), in addition to important habitat for several sensitive animals, including coastal California gnatcatcher and least Bell's vireo, among others.

The project site occurs within both the northern portion of the South County Segment and southwestern portion of the Metro-Lakeside-Jamul Segment of the adopted County MSCP Subarea Plan. A good portion of the intact habitat within the site is designated as Very High on Attachment J (Habitat Evaluation Map) of the Biological Mitigation Ordinance (BMO [County 2010c]); however, the majority of this habitat is also designated as being included within Take Authorized Areas depicted on Attachment B (County MSCP Sub-Area Take Authorized Areas) of the BMO. The MSCP Hardline is mapped within approximately 5.0 acres in the western portion of the site (Figure 4). This MSCP Hardline continues off site to the west toward the Bancroft Creek and Dictionary Hill open space blocks. The MSCP Hardline is further mapped off site to the east, within HOA-maintained open space, and then stretches even further east toward the San Diego National Wildlife Refuge. Pre-Approved Mitigation Area (PAMA) is mapped in the extreme eastern portion of the site.

1.4.2 General Land Uses

General land uses in the project site include undeveloped land, much of which has been subject to repeated mechanical disturbance over the last several decades. A graded pad is present on the western portion of the site, accessible by a locked gate. Diegan coastal sage scrub covers approximately half of the site, much of which is disturbed, with non-native grassland and disturbed habitat comprising the next largest habitat areas. The project site contains two stream corridors supporting wetland and riparian habitats, Hansen's Creek (located west of Jamacha Boulevard) and Little Hansen's Creek (located east of Jamacha Boulevard). These creeks traverse the parcels from north to south and are tributary to the Sweetwater River. The remains of a historic spring water bottling plant (formerly Isham Spring) are located immediately off site to the north, at the headwaters of Hansen's Creek. Surrounding land uses generally include residential development to the north and south, residential development and undeveloped lands in MSCP hardline preserve to the west, and a combination of undeveloped land, and commercial

and residential development to the east. Sweetwater Reservoir is located approximately one-half mile south of the site.

1.4.3 Disturbance

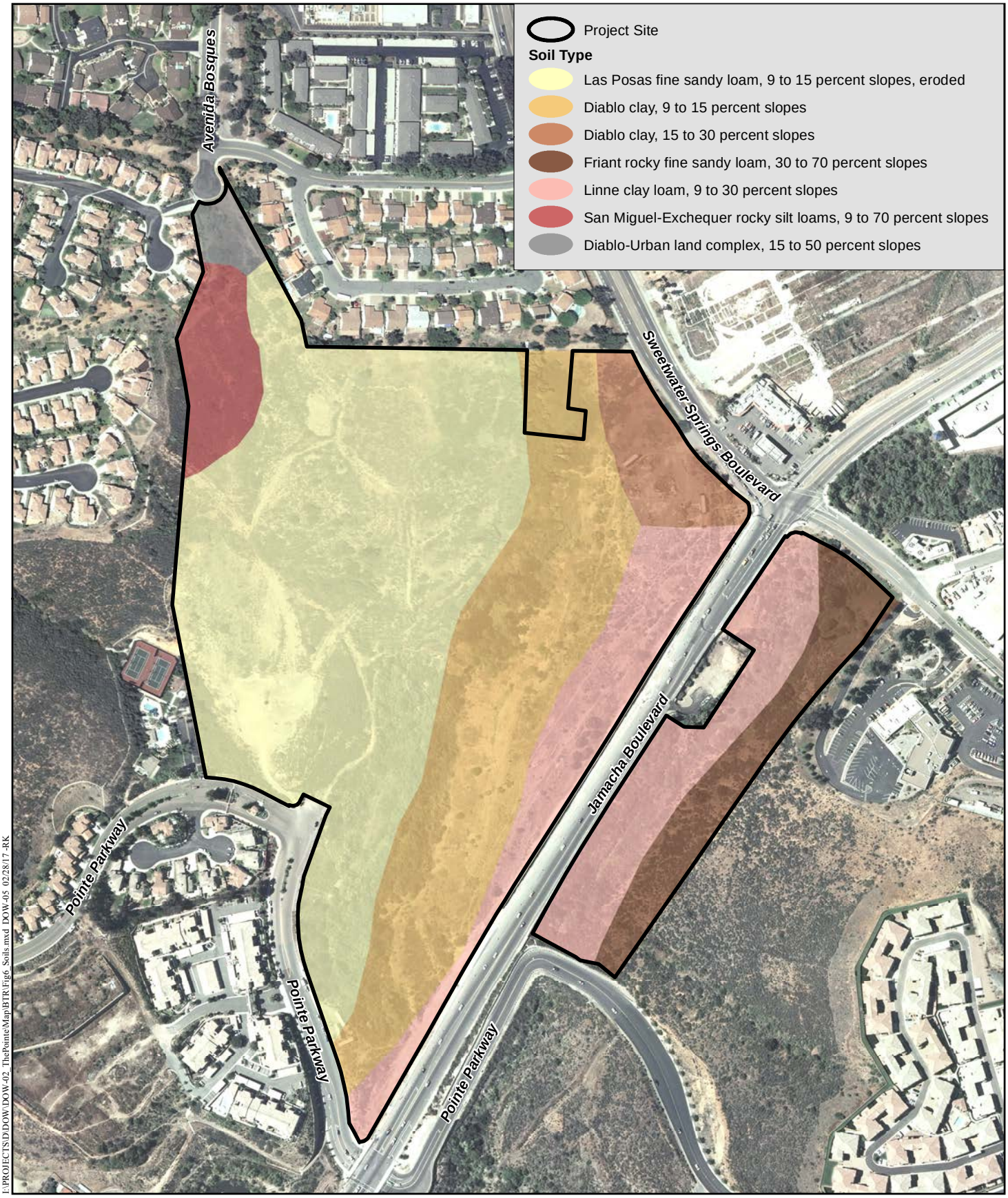
Much of the project site west of Jamacha Boulevard has been subjected to past human disturbance, including previous clearing and grading, which has resulted in some areas now supporting disturbed habitat, non-native grassland, and other non-native vegetation communities. Non-native invasive vegetation is prevalent throughout the site, with the highest concentrations within Hansen's Creek. Human disturbance is evident not only from the numerous dirt roads and trails, but also spoil piles, rock mounds, a large graded pad, widespread trash and debris, as well as a homeless encampment within the riparian corridor of Hansen's Creek. A small plateau adjacent to the western edge of Jamacha Boulevard has been previously cleared and graded and is characterized by sparse, weedy vegetation, with small inclusions of baccharis-dominated sage scrub that are colonizing following the past disturbance.

The mitigation parcel on the east side of Jamacha Boulevard is relatively undisturbed, with native vegetation communities and scattered evidence of human disturbance, including pockets of non-native vegetation, small areas of trash, and narrow foot trails.

1.4.4 Topography and Soils

The project site contains mostly undeveloped land with varied topography, comprised of hilly terrain with steep slopes rising upward from Hansen's Creek, and gradual slopes rising upward from Little Hansen's Creek. Elevations range from approximately 320 feet (98 meters) above mean sea level (amsl) to 540 feet (165 meters) amsl, with the lowest elevation occurring in Hansen's Creek and the highest elevation in the northwest corner. Elevation generally increases from east to west on the parcel west of Jamacha Boulevard and from west to east on the mitigation parcel. The project site generally contains a narrow south trending canyon, surrounded by hills to the east and west. Hansen's Creek and Little Hansen's Creek converge off site to the south of the project site and drain southward, before discharging into Sweetwater River and Sweetwater Reservoir.

Seven soil types have been mapped in the project site (Natural Resource Conservation Service [NRCS] 2015a; Figure 6). Those soils types covering the most area included: Las Posas fine sandy loam, 9 to 15 percent slopes, eroded; Diablo clay, 9 to 15 percent slopes; and Linne clay loam, 9 to 30 percent slopes. Less common in the project site were Diablo clay, 15 to 30 percent slopes; Friant rocky fine sandy loam, 30 to 70 percent slopes; San Miguel-Exchequer rocky silt loams, 9 to 70 percent slopes; and Diablo-Urban land complex, 15 to 50 percent slopes. None of the named soils mapped in the project site are listed as hydric (NRCS 2015b). The majority of the surface soils on the site west of Jamacha Boulevard appear to have been subject to previous grading and filling disturbance.



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Soils Map

SWEETWATER VISTAS

HELIX Environmental Planning

Figure 6

1.4.5 Vegetation Communities/Habitat Types

Fourteen vegetation communities/habitat types, in addition to urban/developed land, occur in the project site, as presented in Table 2 and shown on Figure 7. The numeric codes in parentheses following each community type name are from the Holland classification system (Holland 1986) and as added to by Oberbauer (2008) as presented in the County's Biology Guidelines (County 2010a). The communities are presented in Table 2 in order by MSCP Tier and Holland code, and separated by MSCP Segment.

Table 2
VEGETATION COMMUNITIES/HABITAT TYPES

VEGETATION COMMUNITY/ HABITAT TYPE (HOLLAND CODE)	EXISTING ACRES[1]
MSCP South County Segment	
Tier I	
Disturbed wetland (11200)	0.02
Cismontane alkali marsh (52310)	--
Freshwater marsh (52400)	--
Mule fat scrub (63310)	0.11
Southern willow scrub (63320)	1.76
Tamarisk scrub (63810)	0.32
Non-native riparian (65000)	0.12
Arundo-dominated riparian (65100)	0.49
Tier II	
Diegan coastal sage scrub (32500)	18.5
Diegan coastal sage scrub – disturbed (32500)	2.0
Tier III	
Non-native grassland (42200)	3.0
Tier IV	
Disturbed habitat (11300)	5.5
Eucalyptus woodland (79100)	0.7
Non-native vegetation (11000)	1.5
N/A	
Urban/developed (12000)	1.3
Subtotal MSCP South County Segment	***35.2***

Table 2 (cont.) **VEGETATION COMMUNITIES/HABITAT TYPES**	
VEGETATION COMMUNITY/ HABITAT TYPE (HOLLAND CODE)	**EXISTING ACRES[1]**
MSCP Metro-Lakeside-Jamul-Segment	
Tier I	
Disturbed wetland (11200)	--
Cismontane alkali marsh (52310)	1.17
Freshwater marsh (52400)	0.02
Mule fat scrub (63310)	0.22
Southern willow scrub (63320)	2.0
Tamarisk scrub (63810)	0.09
Non-native riparian (65000)	0.2
Arundo-dominated riparian (65100)	--
Tier II	
Diegan coastal sage scrub (32500)	7.0
Diegan coastal sage scrub – disturbed (32500)	0.2
Tier III	
Non-native grassland (42200)	0.6
Tier IV	
Disturbed habitat (11300)	3.7
Eucalyptus woodland (79100)	--
Non-native vegetation (11000)	1.5
N/A	
Urban/developed (12000)	--
Subtotal MSCP Metro-Lakeside-Jamul Segment	***16.7***
TOTAL	**51.9**

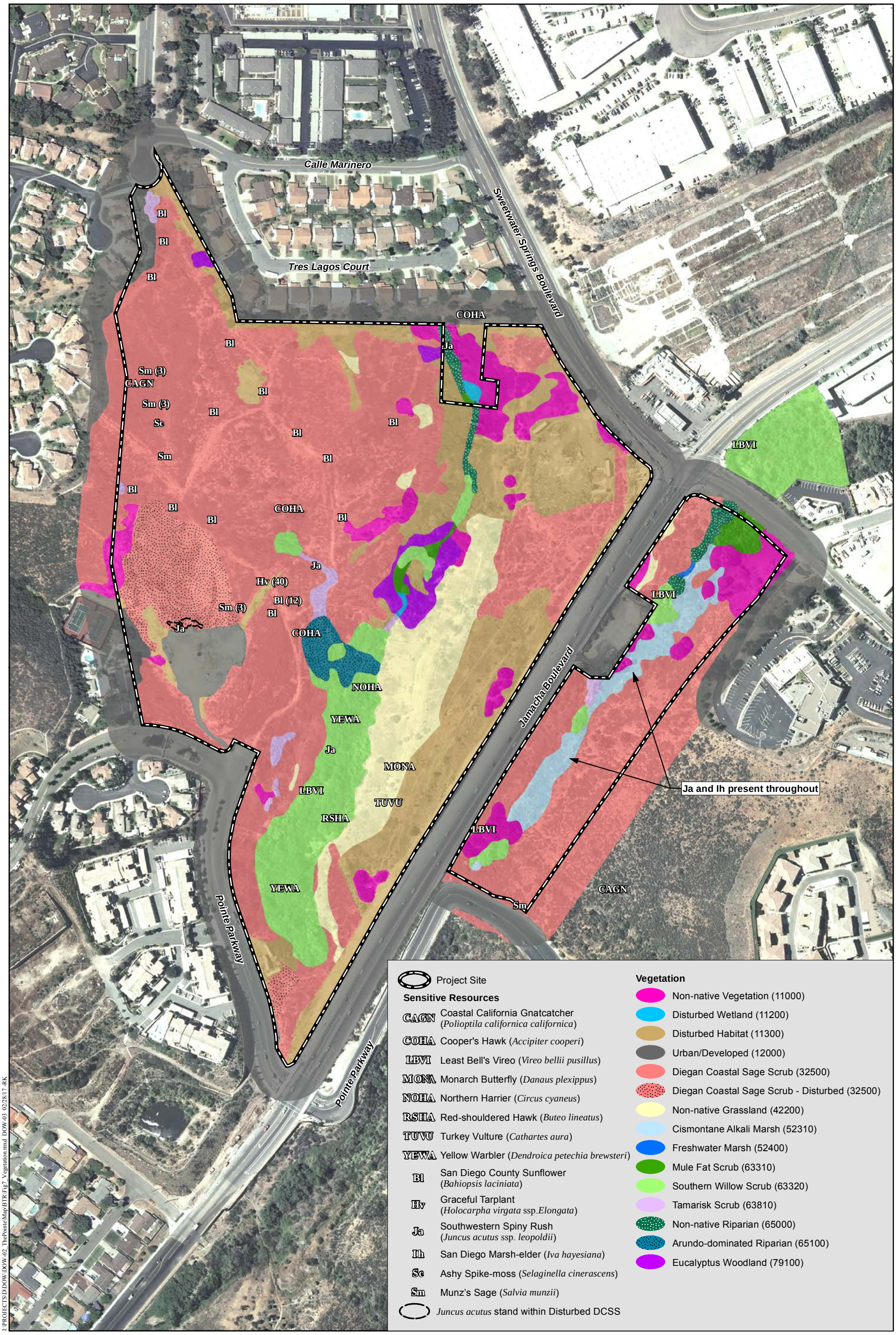
[1] Upland communities/habitat types are rounded to the nearest 0.1 acre, while wetland communities are rounded to the nearest 0.01; totals do not reflect rounding.

Non-native Vegetation

Non-native vegetation is a category describing stands of naturalized trees and shrubs (e.g., acacia [*Acacia* sp.], peppertree [*Schinus* sp.]), many of which are also used in landscaping. Non-native vegetation on the project site consists primarily of acacia, with lesser coverage by hottentot-fig (*Carpobrotus* sp.). Approximately 3.0 acres of non-native vegetation are mapped within the project site.

Disturbed Wetland

Disturbed wetland is dominated by exotic wetland species that invade areas that have been previously disturbed or undergone periodic disturbances. These non-natives become established more readily following natural or human-induced habitat disturbance than the native wetland flora. Characteristic species of disturbed wetlands include giant reed (*Arundo donax*), cocklebur (*Xanthium strumarium* var. *canadense*), umbrella sedge (*Cyperus involucratus*), wild celery


Calle Marinero
Tres Lagos Court
Sweetwater Springs Boulevard
Jamacha Boulevard
Pointe Parkway
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(*Apium graveolens*), and tamarisk (*Tamarix* sp.). Disturbed wetland on site consists of areas within Hansen's Creek that are dominated by umbrella sedge. A small, isolated area of pampas grass (*Cortaderia* sp.), southwestern spiny rush (*Juncus acutus* ssp. *leopoldii*), and tamarisk occurs along the periphery of the graded pad in the western portion of the site where the previous grading and compaction resulted in formation of a human-induced low-spot in a historically upland area, measuring approximately 0.03 acre in size. A sampling point was taken at this location due to the presence of rush and marginal sign of seasonal wetland conditions. The primary hydrology source is suspected to be nuisance runoff from off-site, developed landscaped areas to the west. The soils in this area have been heavily compacted by previous grading activities, impeding drainage and causing rainfall and runoff coming from adjacent slopes to collect on the surface. There are no streambeds or other potentially jurisdictional features that connect to this area. It was preliminarily mapped as disturbed wetland, but based on subsequent field work on October 13, 2015, this isolated, man-made area does not function as a wetland or provide ecosystem services of a wetland, and was remapped as disturbed coastal sage scrub consistent with its surroundings. Wetland conditions were confirmed to be absent and the area was verified to be within an upland landscape position. Approximately 0.02 acre of disturbed wetland is mapped within the project site.

Disturbed Habitat

Disturbed habitat includes areas in which the vegetative cover makes up less than 10 percent of the surface area (disregarding natural rock outcrops) and where there is evidence of soil surface disturbance. Disturbed habitat supports a predominance of non-native and/or weedy species that are indicators of such surface disturbance (County 2010b). Disturbed habitat in the project site includes unvegetated areas such as dirt roads and rock piles, in addition to areas of disturbed land vegetated by non-native forbs such as star-thistle (*Centaurea melitensis*) and garland daisy (*Glebionis coronaria*). Disturbed habitat also occurs along the northern reach of Hansen's Creek, as well as on previously graded land adjacent to Jamacha Boulevard. Approximately 9.1 acres of disturbed habitat are mapped within the project site.

Urban/Developed

Urban/developed land includes areas that have been constructed upon or otherwise covered with a permanent, unnatural surface and may include, for example, structures, pavement, irrigated landscaping, or hardscape to the extent that no natural land is evident. These areas no longer support native or naturalized vegetation (County 2010b). Urban/developed land in the project site consists of a graded and graveled pad and corresponding access road in the western portion of the site, small graded area near the southern tip of the site, and two stands of irrigated ornamental vegetation along the western site boundary. Approximately 1.3 acres of urban/developed land are mapped within the project site.

Diegan Coastal Sage Scrub (including Disturbed)

Coastal sage scrub is one of the two major shrub types that occur in southern California, occupying xeric sites characterized by shallow soils (the other is chaparral). Diegan coastal sage scrub may be dominated by a variety of species depending upon soil type, slope, and aspect.

Typical species found within Diegan coastal sage scrub include California sagebrush (*Artemisia californica*), California buckwheat (*Eriogonum fasciculatum*), laurel sumac (*Malosma laurina*), lemonadeberry (*Rhus integrifolia*), white sage (*Salvia apiana*), and black sage (*Salvia mellifera*; Holland 1986). The disturbed phase of Diegan coastal sage scrub contains many of the same shrub species as undisturbed Diegan coastal sage scrub, but is sparser and has a higher proportion of disturbance-tolerant and non-native species.

A total of 27.6 acres of Diegan coastal sage scrub (including disturbed phase) were mapped on site. Non-native fountain grass (*Pennisetum setaceum*) and broom baccharis (*Baccharis sarothroides*) are prevalent throughout the coastal sage scrub on site, which are typically associated with areas subject to surface soil disturbance. Other species observed include traditional coastal sage scrub associates, such as California sagebrush and California buckwheat. This community occurs throughout the western portion of the site and adjacent to both sides of Hansen's Creek. The highest quality stand occurs in the extreme northwest portion of the site, where constituent species California sagebrush and California buckwheat are dominant and there is less evidence of previous disturbance. This scrub is within Hardline Preserve and was determined to support a breeding pair of coastal California gnatcatchers in 2015. The remaining Diegan coastal sage scrub on the site is lower quality due to prevalence of broom baccharis and fountain grass, sparseness, and evidence of previous disturbance. One exception is the scrub located in the extreme eastern portions of the site, which is located within PAMA and extends further off site to the east where a second breeding pair of gnatcatchers was confirmed in 2015.

Non-native Grassland

Non-native grassland is a mixture of annual grasses and broad-leaved, herbaceous species. Annual species make up 50 percent to more than 90 percent of the vegetative cover, and most annuals are non-native species. Non-native grasses typically make up at least 30 percent of the vegetative cover, although this percentage can be much higher in some years and lower in others, depending on land use and climatic conditions. Usually, the grasses are less than 3 feet in height and form a continuous or open cover. Emergent shrubs and trees may be present but do not make up more than 15 percent of the total cover (County 2010b). Most of the non-native grasses originated from the Mediterranean region, an area with a long history of agriculture and a climate similar to California. Non-native grassland on the project site is dominated by common ripgut grass (*Bromus diandrus*), red brome (*Bromus madritensis*), oats (*Avena* sp.), and shortpod mustard (*Hirschfeldia incana*). A variety of other non-native grasses and forbs are also present. Approximately 3.6 acres of non-native grassland occur on site, the majority of which occur in a roughly 50- to 200-foot-wide swath along the steep eastern slope of the Hansen's Creek corridor.

Cismontane Alkali Marsh

Cismontane alkali marsh is characterized by wet or inundated areas dominated by emergents, but often with an understory of grasses or sedges. Standing water or saturated soil is present during the entire or majority of the year. High evaporation and low input of fresh water result in high salinity, especially during the summer (Holland 1986). Characteristic species include yerba mansa (*Anemopsis californica*), salt grass (*Distichlis spicata*), cattails (*Typha* sp.), and rushes (*Juncus* sp.). San Diego marsh-elder (*Iva hayesiana*) is the dominant species occurring within

this habitat on site, with scattered individuals of southwestern spiny rush. This habitat occurs over approximately 1.17 acres along Little Hansen's Creek.

Freshwater Marsh

Freshwater marsh is dominated by perennial, emergent monocots, 5 to 13 feet tall, forming incomplete to completely closed canopies. This vegetation type occurs along the coast and in coastal valleys near river mouths and around the margins of lakes and springs, freshwater or brackish marshes. These areas are semi- or permanently flooded yet lack a significant current (Holland 1986). Dominant species include cattails and bulrushes (*Scirpus* sp.), along with umbrella sedges (*Cyperus* sp.), rushes, and spike-sedge (*Eleocharis* sp.). Cattails and San Diego sedge (*Carex spissa*) are the dominant species occurring within this habitat on site. This habitat occurs over approximately 0.02 acre along Little Hansen's Creek.

Mule Fat Scrub

Mule fat scrub is a depauperate, shrubby, riparian scrub community dominated by mule fat and interspersed with small willows. This vegetation community occurs along intermittent stream channels with a fairly coarse substrate and moderate depth to the water table. This early seral community is maintained by frequent flooding, the absence of which could lead to a riparian woodland or forest (Holland 1986). In some environments, limited hydrology may favor the persistence of mule fat. Mule fat scrub on the project site occurs as three small stands of mule fat within Hansen's Creek and Little Hansen's Creek, with scattered umbrella sedge, tamarisk (*Tamarix ramosissima*), and red gum eucalyptus (*Eucalyptus camaldulensis*) also present. A total of 0.33 acre of mule fat scrub is mapped on site.

Southern Willow Scrub

Southern willow scrub consists of dense, broadleaved, winter-deciduous stands of trees dominated by shrubby willows (*Salix* sp.) in association with mule fat (*Baccharis salicifolia*), and with scattered emergent western cottonwood (*Populus fremontii*) and western sycamore (*Platanus racemosa*). This vegetation community occurs on loose, sandy or fine gravelly alluvium deposited near stream channels during flood flows. Frequent flooding maintains this early seral community, preventing succession to a riparian woodland or forest (Holland 1986). In the absence of periodic flooding, this early seral type would be succeeded by southern cottonwood or western sycamore riparian forest. Southern willow scrub on site is characterized by dense stands of arroyo willow with a mix of other native and non-native riparian species occurring throughout, including black willow (*Salix gooddingii*), red willow (*Salix laevigata*), Mexican fan palm (*Washingtonia robusta*), giant reed, cattail, mule fat, wild celery, California bulrush (*Schoenoplectus californicus*), castor-bean (*Ricinus communis*), and pampas grass. This habitat occurs along both on-site creeks, although it is more prevalent within Hansen's Creek. A total of 3.76 acres of southern willow scrub is mapped on site.

Tamarisk Scrub

Tamarisk scrub typically comprises shrubs and/or small trees of exotic tamarisk species but may also contain willows, salt bushes (*Atriplex* spp.), and salt grass. This habitat occurs along intermittent streams in areas where high evaporation rates increase the salinity level of the soil. Tamarisk is a phreatophyte, a plant that can obtain water from an underground water table. Because of its deep root system and high transpiration rates, tamarisk can substantially lower the water table to below the root zone of native species, thereby competitively excluding them. As a prolific seeder, it may rapidly displace native species within a stream channel (Holland 1986). Tamarisk scrub on site is dominated by tamarisk with occasional southwestern spiny rush and broom baccharis. It is found in six general locations on site, three of which occur in association with riparian habitat, and three of which occur on hill slopes in upland landscape positions. A total of 0.41 acre of tamarisk scrub is mapped on site.

Non-native Riparian

Non-native riparian comprises densely vegetated riparian thickets dominated by non-native, invasive species. Characteristic species include: giant reed, tamarisk, eucalyptus (*Eucalyptus* sp.), palms (*Phoenix* spp. and *Washingtonia* spp.), Bermuda grass (*Cynodon dactylon*), castor-bean (*Ricinus communis*), and pampas grass (*Cortaderia* spp.), along with natives such as arrowweed (*Pluchea sericea*), western cottonwood, and willows. Non-native riparian habitat on site is dominated by Mexican fan palm, with occasional Brazilian pepper (*Schinus terebinthifolius*). This habitat is found along the northern reaches of Hansen's Creek and Little Hansen's Creek. Approximately 0.32 acre of non-native riparian is mapped on site.

Arundo-dominated Riparian

Arundo-dominated riparian consists of densely vegetated riparian thickets dominated almost exclusively by giant reed. It occurs along disturbed water courses. On site, this habitat occurs as a near monoculture of giant reed within a portion of Hansen's Creek and an associated tributary. A total of 0.49 acre of arundo-dominated riparian is mapped on site.

Eucalyptus Woodland

Eucalyptus woodland is dominated by eucalyptus (*Eucalyptus* sp.), an introduced genus that produces a large amount of leaf and bark litter. The chemical and physical characteristics of this litter, combined with the shading effects of the trees, limit the ability of other species to grow in the understory, and floristic diversity decreases. If sufficient moisture is available, eucalyptus becomes naturalized and is able to reproduce and expand its cover. Eucalyptus woodland occurs adjacent to riparian habitat in the central portion of the site, as well as a small stand in the northwest corner. Approximately 0.7 acre of this habitat type is mapped in the project site.

1.4.6 Flora

HELIX identified a total of 137 plant species on the project site, of which 61 (45 percent) are non-native species (Appendix A).

1.4.7 Fauna

A total of 82 animal species were observed or otherwise detected in the project site during the biological surveys, including 20 invertebrate, 3 reptile, 54 bird, and 5 mammal species (Appendix B).

1.4.8 Sensitive Vegetation Communities/Habitat Types

Sensitive vegetation communities/habitat types are defined as land that supports unique vegetation communities or the habitats of rare or endangered species or subspecies of animals or plants as defined by Section 15380 of the State CEQA Guidelines. Table 5 of the County guidelines (County 2010a, 2010b) provides a list of habitat mitigation ratios for each vegetation community type.

Sensitive vegetation communities/habitat types mapped in the project site include freshwater marsh, cismontane alkali marsh, southern willow scrub, mule fat scrub, disturbed wetland, tamarisk scrub, non-native riparian, arundo-dominated riparian, Diegan coastal sage scrub (including disturbed), and non-native grassland. Non-native vegetation, disturbed habitat, urban/developed, and eucalyptus woodland do not meet the definition of sensitive.

1.4.9 Special Status Plant Species

Special status plant species have been afforded special status and/or recognition by the USFWS, CDFW, and/or the County and may also be included in the CNPS' Inventory of Rare and Endangered Plants (see Section 1.3.5 for references). Their status is often based on one or more of three distributional attributes: geographic range, habitat specificity, and/or population size. A species that exhibits a small or restricted geographic range (such as those endemic to the region) is geographically rare. A species may be more or less abundant but occur only in very specific habitats. Lastly, a species may be widespread but exists naturally in small populations.

Special Status Plant Species Observed

Six special status plant species were observed in the project site, as listed below in alphabetical order by common name. Each is also described below and shown on Figure 7.

Ashy spike-moss (*Selaginella cinerascens*)
Status: CNPS Rare Plant Rank 4.1; County List D (Appendix E)
Distribution: Orange and San Diego counties; northwestern Baja California, Mexico.
Habitat(s): This perennial, rhizomatous herb can be found on flat mesas in coastal sage scrub and chaparral.
Presence in the Project Site: Species was present in small numbers in undisturbed areas of sage scrub in the far western portion of the site.

Graceful tarplant (*Holocarpha virgata* ssp. *elongata*)
Listing: CNPS Rare Plant Rank 4.2; County List D (Appendix E).
Distribution: San Diego, Orange, and Riverside counties.
Habitat: Coastal mesas and foothills with grassland habitats.
Presence in the Project Site: Approximately 40 individuals were observed in disturbed habitat adjacent to coastal sage scrub in the central western portion of the site.

Munz's sage (*Salvia munzii*)
Listing: CNPS Rare Plant Rank 2B.2; County List B (Appendix E).
Distribution: Southern foothill and coastal region of San Diego County below approximately 1,640 feet in elevation; Baja California, Mexico.
Habitat: Chaparral and Diegan coastal sage scrub are both utilized by this perennial evergreen shrub that may bloom from February to April.
Presence in the Project Site: Eleven individuals were observed on the site, including ten in the northwestern portion of the site and one in the southeastern portion.

San Diego County sunflower (*Bahiopsis laciniata*)
Listing: CNPS Rare Plant Rank 4.2; County List D (Appendix E).
Distribution: San Diego and Orange County; Baja California, Mexico.
Habitat(s): Diegan coastal sage scrub is the preferred habitat of this perennial shrub that may bloom from February to August.
Presence in the Project Site: San Diego County sunflower was observed in scattered patches and as individuals intermixed within the coastal sage scrub throughout the site. This species is relatively common in the local area and often found at disturbed locations, such as the project site.

San Diego marsh-elder (*Iva hayesiana*)
Listing: CNPS Rare Plant Rank 2B.2; County List B (Appendix E).
Distribution: San Diego County; Baja California, Mexico.
Habitat(s): Creeks of intermittent streambeds are the preferred habitat of this conspicuous perennial herb. Typically, the riparian canopy is open, allowing substantial sunlight to reach this species. Sandy alluvial embankments with cobbles are frequently utilized.
Presence in the Project Site: This species is present throughout the cismontane alkali marsh habitat along Little Hansen's Creek in the eastern portions of the site.

Southwestern spiny rush (*Juncus acutus* ssp. *leopoldii*)
Status: CNPS Rare Plant Rank 4.2; County List D (Appendix E).
Distribution: Los Angeles, San Bernardino, San Luis Obispo, Ventura, and San Diego counties; Baja California, Mexico.
Habitat(s): Moist, saline, or alkaline soils in coastal salt marshes and riparian marshes are the preferred habitats of this perennial, rhizomatous herb that may bloom from March to June.
Presence in the Project Site: Relatively low numbers of spiny rush was found in several concentrations on the western portions of the site, with the highest concentrations in Hansen's Creek. This species is also present throughout the cismontane alkali marsh habitat along Little Hansen's Creek in the eastern portions of the site.

1.4.10 Special Status Animal Species

Special status animal species include those that have been afforded special status and/or recognition by the USFWS, CDFW, and/or the County. In general, the principal reason an individual taxon (species or subspecies) is given such recognition is the documented or perceived decline or limitations of its population size or geographical extent and/or distribution, resulting in most cases from habitat loss.

Special Status Animals Determined to Occupy the Site (Breeding)

Four special status animal (bird) species were determined to be breeding on the project site during 2015 surveys. Three of the four species are MSCP Covered Species. Each species is listed below in alphabetical order by common name, is described, and is shown on Figure 7.

Coastal California gnatcatcher (*Polioptila californica californica*)
Status: Federal Listed Threatened; State Species of Special Concern; County Group 1; MSCP Covered Species (Appendix E).
Distribution: In San Diego County, occurs throughout coastal lowlands.
Habitat(s): Coastal sage scrub, coastal bluff scrub, and coastal sage-chaparral scrub.
Presence in the Project Site: Gnatcatcher was confirmed to be breeding in the northwestern portion of the site and immediately east of the southeastern portion of the site.

Cooper's hawk (*Accipiter cooperi*)
Status: State Watch List; County Group 1, MSCP Covered Species (Appendix E).
Distribution: Widespread throughout San Diego County.
Habitat(s): Tends to inhabit lowland riparian areas and oak woodlands in proximity to suitable foraging areas such as scrublands or fields.
Presence in the Project Site: Cooper's hawk was observed in areas surrounding Hansen's Creek consistently during 2015 surveys and is presumed to be using the area for breeding.

Least Bell's vireo (*Vireo bellii pusillus*)
Status: Federal Listed Endangered; State Listed Endangered; County Group 1. MSCP Covered Species (Appendix E).
Distribution: Observed throughout coastal southern California in the breeding season, south of Santa Barbara, but in smaller numbers in foothills and mountains.
Habitat(s): Riparian woodland, riparian forest, mule fat scrub, and southern willow scrub.
Presence in the Project Site: Least Bell's vireo was confirmed to be breeding at multiple locations within Hansen's and Little Hansen's Creeks.

Yellow warbler (*Setophaga petechia*)
Status: Federal Bird of Conservation Concern, State Species of Special Concern; County Group 2 (Appendix E).
Distribution: Observed throughout California during the breeding season with rare sightings in winter.
Habitat(s): Riparian woodland, riparian forest, mule fat scrub, and southern willow scrub.

Presence in the Project Site: Yellow warbler was observed in Hansen's Creek during the 2014 surveys and is presumed to be using the area for breeding.

Special Status Animals Observed on the Site (Non-Breeding)

Four special status animal species were observed foraging and/or moving through or over the project site during 2015 surveys. These species were determined not to use the site for breeding. One of the four species is a MSCP Covered Species. Each species is listed below in alphabetical order by common name, is described, and is shown on Figure 7.

Monarch butterfly (*Danaus plexippus*)
Status: --/--, County Group 2
Distribution: Winter roost sites extend along the coast from northern Mendocino to Baja California, Mexico.
Habitat: Roosts located in wind-protected tree groves (eucalyptus, Monterey pine, cypress), with nectar and water sources nearby. Larval host plants consist of milkweeds (*Asclepias* sp.).
Presence in the Project Site: This species was observed flying through the project site during 2015 surveys. This species is not likely to roost on the site.

Northern harrier (*Circus cyaneus*)
Status: State Species of Special Concern; County Group 1, MSCP Covered Species (Appendix E).
Distribution: Scattered throughout San Diego County lowlands.
Habitat(s): Nests on ground in shrubby vegetation, usually at marsh edge; nest built of a large mound of sticks in wet areas. Typical habitat consists of open grassland and marsh.
Presence in the Project Site: A single harrier was observed flying over the site on a single occasion during the 2015 surveys. No suitable nesting habitat occurs. Marginal foraging habitat occurs.

Red-shouldered hawk (*Buteo lineatus*)
Status: County Group 1 (Appendix E).
Distribution: Widespread throughout San Diego County.
Habitat(s): Riparian woodland, oak woodland, orchards, eucalyptus groves, or other areas with tall trees.
Presence in the Project Site: Red-shouldered hawk was observed in areas surrounding Hansen's Creek on a single occasion during 2015 surveys. Suitable nesting habitat occurs.

Turkey vulture (*Cathartes aura*)
Status: County Group 1 (Appendix E).
Distribution: Observed throughout San Diego County with the exception of extreme coastal San Diego where development is heaviest.
Habitat(s): Foraging habitat includes most open habitats with breeding occurring in crevices among boulders.
Presence in the Project Site: Turkey vulture was observed soaring over the site during 2015 surveys. No nesting habitat occurs. Marginal foraging habitat occurs.

Special Status Animal Species with Potential to Occur

Six additional special status animal species that were not observed, but still considered to have a high potential to occur, are dun skipper (*Euphys vestries harbisoni*), orange-throated whiptail (*Aspidoscelis hyperythra*), white-tailed kite (*Elanus caeruleus*), yellow-breasted chat (*Ictera virens*), San Diego black-tailed jackrabbit (*Lepus californicus bennettii*), and San Diego desert woodrat (*Neotoma lepida intermedia*). Special status species evaluated for potential to occur are listed in Appendix D.

Raptor Foraging

Several raptors were observed, on occasion, during the 2015 biological surveys. On most occasions, these raptors were observed flying and soaring over the project site or perching on taller trees in stands of riparian habitat. Raptors observed during surveys include turkey vulture, Cooper's hawk, red-shouldered hawk, red-tailed hawk, northern harrier, and American kestrel. Cooper's hawk was observed on multiple occasions and is expected to reside (breed) within Hansen's Creek.

The County (2010b) defines raptor foraging habitat as, "Land that is a minimum of 5 acres (not limited to project boundaries) of fallow or open areas with any evidence of foraging potential (i.e., burrows, raptor nests, etc.)." The non-native grassland and disturbed habitat on the project site could be considered raptor foraging habitat based on this definition since, collectively, it occupies greater than 5 acres, and it evidently supports burrows of common small mammals, namely, California ground squirrel. The overall foraging value of the site is relatively low considering the hilly terrain and dominance of dense scrub-type vegetation. Better quality raptor foraging habitat occurs off site further to the south and southwest within land surrounding Sweetwater Reservoir.

1.4.11 Jurisdictional Waters and Wetlands

Waters of the U.S.

Potential waters of the U.S. under the jurisdiction of the USACE in the project site include (i) wetland and non-wetland waters of the U.S. west of Jamacha Boulevard within Hansen's Creek, (ii) a small unnamed ephemeral tributary to Hansen's Creek in the northern portion of the site that was created as a result of a storm drain outfall directed onto the site, (iii) a small unnamed ephemeral tributary to Hansen's Creek in the central portion of the site, and (iv) wetland and non-wetland waters of the U.S. east of Jamacha Boulevard within Little Hansen's Creek (Table 3; Figure 8). These features are tributary to the Sweetwater River and Sweetwater Reservoir.

Table 3 POTENTIAL WATERS OF THE U.S.	
USACE JURISDICTION	**AREA** (acres)
Wetland Waters of the U.S.	4.03
Non-Wetland Waters of the U.S.	0.19
TOTAL	**4.22**

A sampling point was taken within an isolated stand of spiny rush in the western portion of the site within Lot 2. Further investigation of this area confirmed that this area does not function as a wetland and does not support wetland conditions. It does not provide habitat to wetland-dependent animal species, filter water, stabilize a shoreline, or slow down storm flows. Review of historic aerial photos shows that prior to grading of the site, this area was an upland slope with no sign of a stream or riparian vegetation. In the current condition, this area is located on the edge of a hardened pad that slows down water flow enough to support a small area of spiny rush and tamarisk, both species which can occur either within or outside of wetlands. They are evenly mixed with upland species including pampas grass and acacia. Therefore, this area is mapped as disturbed coastal sage scrub, consistent with its surroundings.

Waters of the State

Potential waters of the State under the jurisdiction of the CDFW within the project site consist of southern willow scrub, mule fat scrub, freshwater marsh, cismontane alkali marsh, arundo-dominated riparian, non-native riparian, tamarisk scrub (riparian landscape position only), disturbed wetland, and unvegetated streambed as presented in Table 4 and shown on Figure 9. The waters of the U.S. summarized above would also represent waters of the State subject to Regional Water Quality Control Board (RWQCB) jurisdiction pursuant to CWA Section 401. There are no isolated waters of the State subject to RWQCB jurisdiction, exclusively, pursuant to the State Porter-Cologne Water Quality Control Act.



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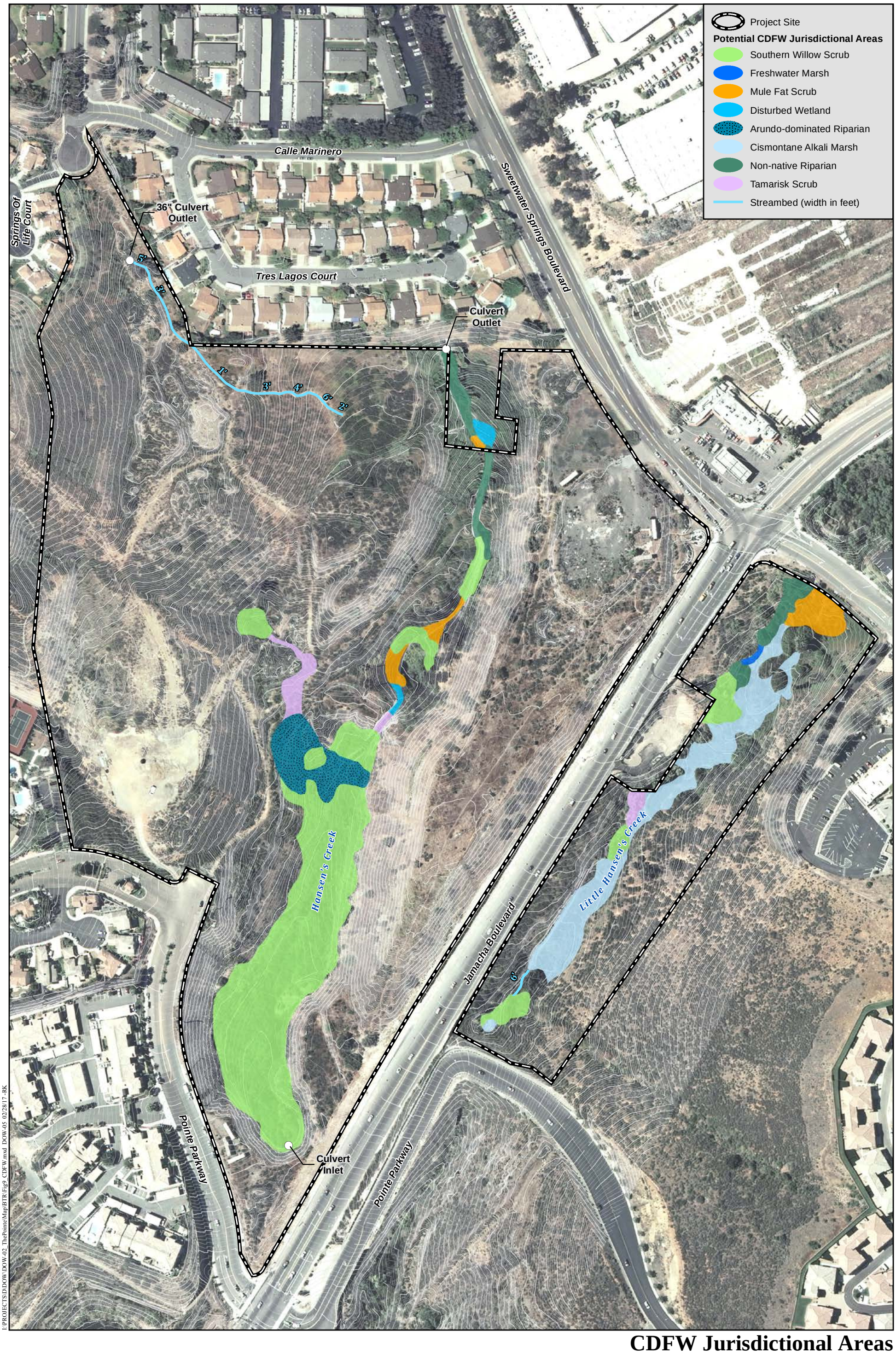
USACE Jurisdictional Areas

SWEETWATER VISTAS

Figure 8



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CDFW Jurisdictional Areas

SWEETWATER VISTAS

HELIX Environmental Planning

N 0 200 Feet

Figure 9

Table 4 POTENTIAL WATERS OF THE STATE	
CDFW JURISDICTION	**AREA** (acres)
Vegetated Streambed	
Southern willow scrub	3.76
Mule fat scrub	0.33
Freshwater marsh	0.02
Cismontane alkali marsh	1.17
Arundo-dominated riparian	0.49
Non-native riparian	0.32
Tamarisk scrub	0.23
Disturbed wetland	0.02
Unvegetated Streambed	
Streambed	0.15
TOTAL	**6.49**

County Resource Protection Ordinance Wetlands

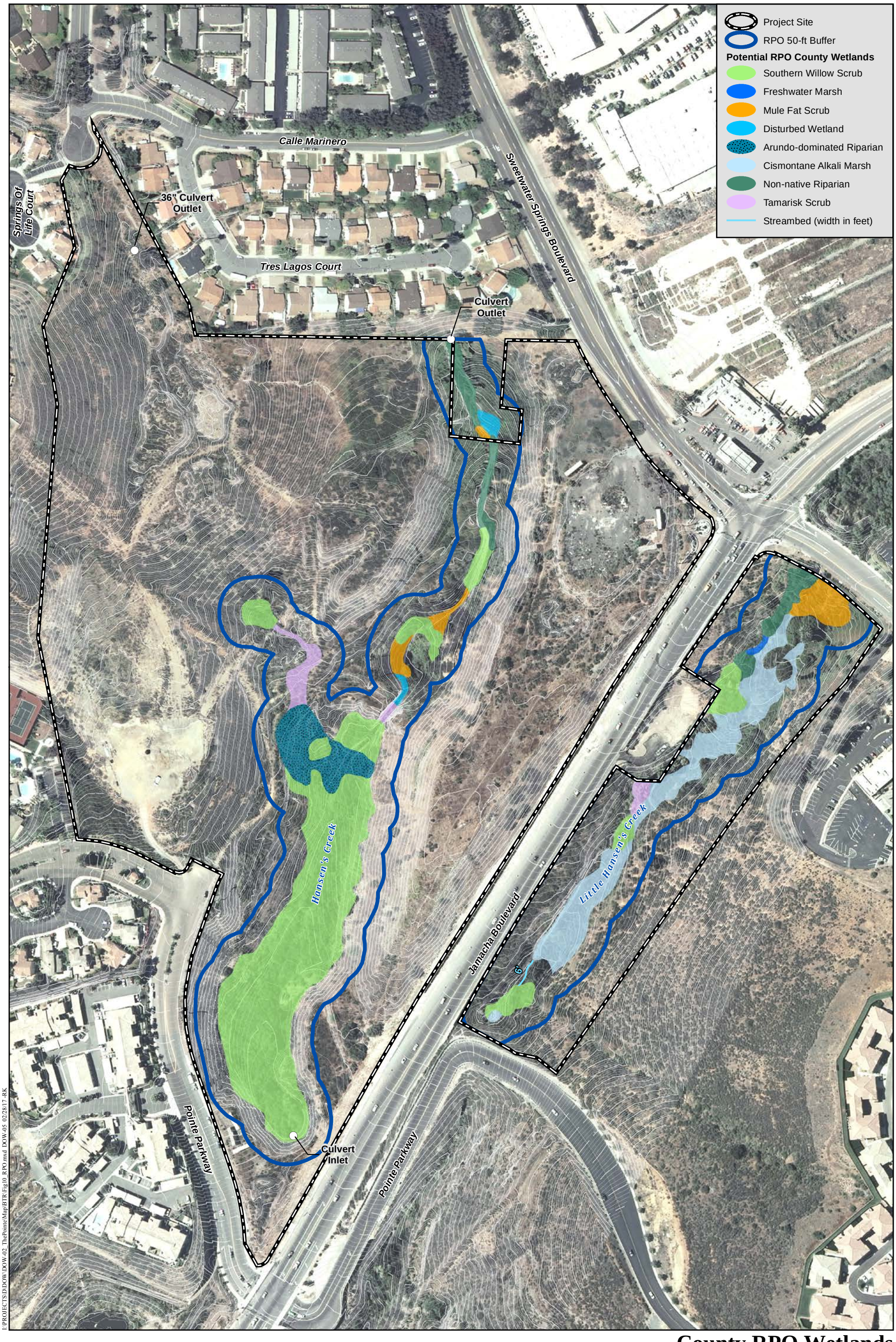
Areas meeting the criteria to be considered County RPO wetlands (County 2011) in the project site include southern willow scrub, mule fat scrub, freshwater marsh, cismontane alkali marsh, arundo-dominated riparian, non-native riparian, tamarisk scrub (riparian landscape position only), disturbed wetland, and unvegetated portions of Little Hansen's Creek (Table 5; Figure 10). A 50-foot wetland buffer is appropriate for both Hansen's Creek and Little Hansen's Creek because they connect only through culverts, both upstream and downstream, and they do not serve as wildlife movement corridors; and because the proposed residential land use will not have substantial edge effects that cannot be mitigated. The unnamed ephemeral drainage feature in the western portion of the site does not meet the criteria to be considered County RPO wetlands, as detailed below.

Table 5 POTENTIAL RPO WETLANDS	
COUNTY JURISDICTION	**AREA** (acres)
RPO Wetland	
Southern willow scrub	3.76
Mule fat scrub	0.33
Freshwater marsh	0.02
Cismontane alkali marsh	1.17
Arundo-dominated riparian	0.49
Non-native riparian	0.32
Tamarisk scrub	0.23
Disturbed wetland	0.02
Unvegetated streambed	0.01
TOTAL	**6.34**

The northwestern portion of the project site supports one unnamed ephemeral tributary. This drainage feature originates at an on-site culvert in the northwest corner of the site and conveys storm water runoff southeast across the site before dissipating approximately 300 feet west of Hansen's Creek. This ephemeral feature occurs within upland habitat types and is characterized by short duration flows. As such, hydrophytic vegetation is not present and the underlying soils are not inundated or saturated for sustained periods of time. The substratum is composed of non-hydric, sandy loam soil and is not predominately non-soil, and does not contribute substantially to the biological functions or values of wetlands in the drainage system. As such, this drainage does not meet the RPO wetland definition.

1.4.12 Habitat Connectivity and Wildlife Corridors

Wildlife corridors connect otherwise isolated pieces of habitat and allow movement or dispersal of plants and animals. Local wildlife corridors allow access to resources such as food, water, and shelter within the framework of their daily routine. Regional corridors provide these functions over a larger scale and link two or more large habitat areas, allowing the dispersal of organisms and the consequent mixing of genes between populations. A corridor is a specific route that is used for the movement and migration of species, and may be different from a linkage in that it represents a smaller or narrower avenue for movement. A linkage is an area of land that supports or contributes to the long-term movement of animals and genetic exchange by providing live-in habitat that connects to other habitat areas. The MSCP defines corridors as narrower connections of undeveloped land that allow for movement and dispersal only. The MSCP defines a linkage as an area of habitat that not only provides connectivity between core areas but also provides breeding and foraging habitat for resident species. Many linkages occur as stepping-stone linkages that are comprised of a fragmented archipelago arrangement of habitat over a linear distance. Important corridors and linkages have been identified on a local and regional scale throughout the MSCP in south San Diego County. The planning objectives of most corridors and



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County RPO Wetlands

SWEETWATER VISTAS

HELIX Environmental Planning

N

0 200 Feet

Figure 10

linkages in western San Diego County include establishing a connection between regional populations of the coastal California gnatcatcher, in addition to facilitating movement and connectivity of habitat for large mammals and riparian bird species.

Expected wildlife movement trends in the local and regional area are conceptually depicted on Figure 11, with the most significant features being undeveloped land associated with the Sweetwater River, Sweetwater Reservoir, San Diego National Wildlife Refuge, Hansen's Creek, and Dictionary Hill. The Sweetwater River and Sweetwater Reservoir are expected to be key components to the movement of wildlife in the region, and namely, birds and mammals. These resources support permanent water sources and cover for a wide range of species known to the region. Sensitive species such as least Bell's vireo, yellow warbler, and others use Hansen's Creek and Little Hansen's Creek for various life cycle needs. The creeks provide shelter and resources for breeding and rearing young, a year-round water source and prey items for foraging, and a linear corridor of habitat for dispersal and migration. Large mammals, such as southern mule deer (*Odocoileus hemionus fuliginata*) and coyote (*Canis latrans*), would be expected to travel to and from the Sweetwater River/Sweetwater Reservoir and expansive habitat blocks associated with the San Diego National Wildlife Refuge. Large mammals would also be expected to travel along the Sweetwater River valley and riparian corridor. Birds would be expected to move unobstructed between key habitat blocks of coastal sage scrub and riparian habitat providing important breeding, foraging and dispersal functions. Key blocks of coastal sage scrub where gnatcatchers are known to occur include the San Diego National Wildlife Refuge, with additional habitat extending further to the southeast into Proctor Valley and areas surrounding Jamul Mountain. Dictionary Hill represents a smaller block of habitat that is largely surrounded by development. Decades of development have fragmented and impeded the connection between Dictionary Hill and the San Diego National Wildlife Refuge. Large mammal movement to and from Dictionary Hill is constrained by existing roadway impediments. Bird movement to and from Dictionary Hill is relatively unconstrained, although the habitat is disturbed and fragmented.

The project site is not part of a known regional linkage or corridor identified in the County MSCP Subarea Plan. The County MSCP Subarea Plan references preserved lands within Pointe San Diego (the approved Specific Plan development that the proposed project falls within) that extend on both sides of Jamacha Boulevard to the lower slopes of Dictionary Hill. It also references the off-site mitigation parcels acquired by Pointe San Diego (and Hidden Valley Estates, as well as Sweetwater II part of the Rancho San Diego/RTC purchase) east and south of Sweetwater Reservoir. The site is generally situated along an east-west arrangement of developed and undeveloped land separating Dictionary Hill from the San Diego National Wildlife Refuge. Only pockets of undeveloped land remain along this east-west path. This arrangement of land serves as a conceptual "stepping stone" linkage, primarily for birds, such as coastal California gnatcatcher. Wildlife could also move through this area to reach the water supply in Hansen's Creek and Little Hansen's Creek. Impediments to wildlife movement along this path include Jamacha Boulevard, which bisects the site; Fabled Waters Drive and existing "Pointe" developments to the west; and Pointe Parkway and existing "Pointe" developments to the south and east. The only large mammal expected to regularly move through the project site is coyote based on sign and direct observation during 2015 surveys, existing impediments, disturbance, and surrounding developments. Mule deer is not likely to move through the site due

to existing developments, disturbance (e.g., regular human activity), and distance from expansive undeveloped areas that likely support the species. The terrestrial sensitive species considered high potential on the site are orange-throated whiptail, San Diego black-tailed jackrabbit, and San Diego desert woodrat. Movement of these species through the local area is already constrained by the streets and surrounding development mentioned above, but the site does provide potential live-in habitat with access to water sources in the two creeks.

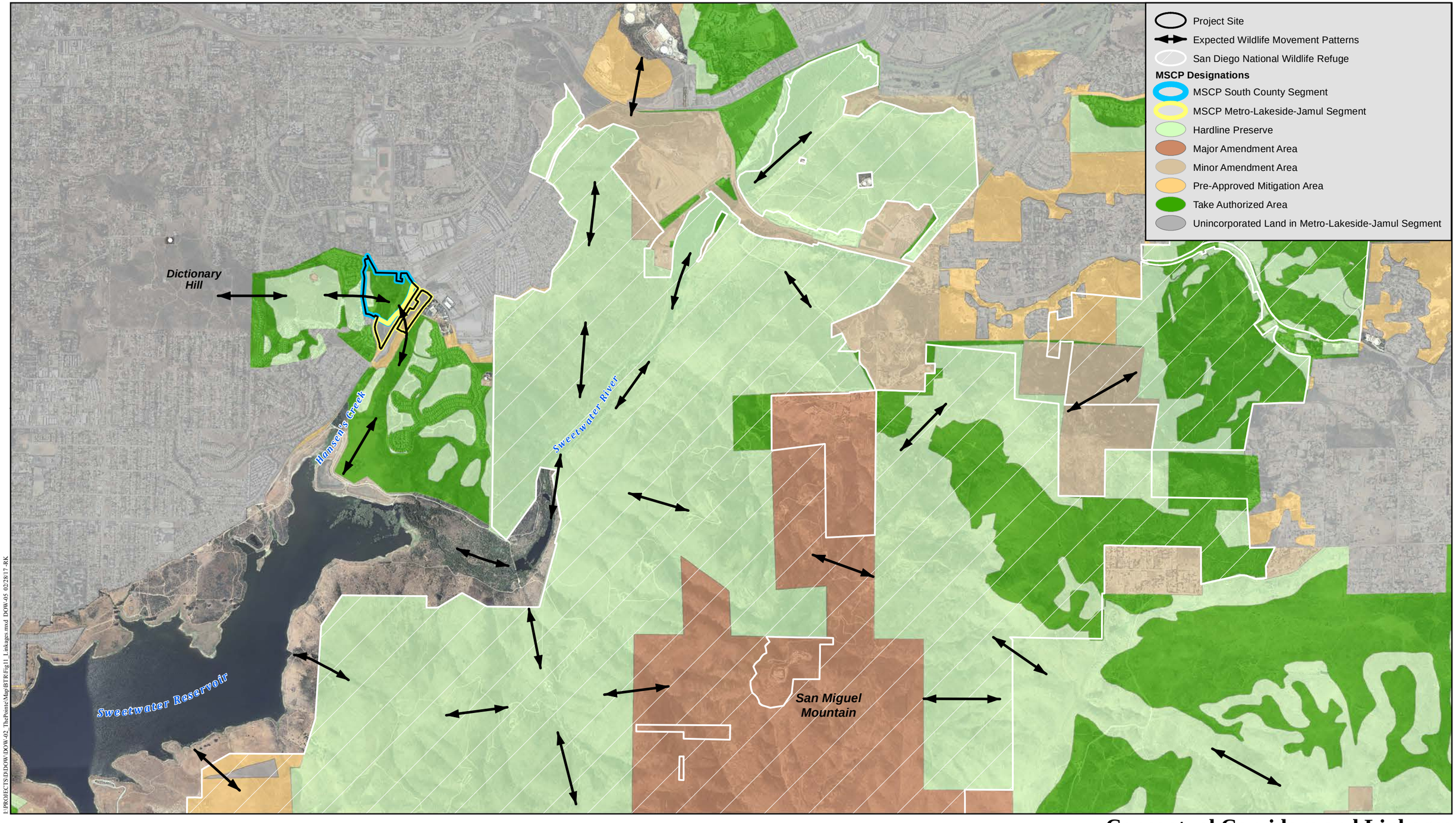
Birds and butterflies, including the observed monarch butterfly and potential dun skipper, are expected to move freely through the site. Coastal California gnatcatcher likely disperses through the site, as evidenced by the 2015 surveys, which concluded the presence of a breeding pair at locations on either side of the site: one in the northwestern portion of the site and another just off site to the immediate southeast. Gnatcatchers likely enter and exit the site from the southern portion of the eastern boundary and middle portion of the western boundary. These locations are least constrained by surrounding developments and support favorable topography and suitable habitat for short flights. In addition, least Bell's vireo likely disperses through the site, as evidenced by existing data and the 2015 surveys, which concluded the presence of several breeding territories in portions of Hansen's Creek and Little Hansen's Creek. Vireo likely moves onto the site and disperses from the site where Hansen's Creek and Little Hansen's Creek exit the southern boundary.

1.5 APPLICABLE REGULATIONS

Biological resources in the study area are subject to regulatory review by federal, State, and local agencies. Under CEQA, impacts associated with a proposed project are assessed with regard to significance criteria determined by the CEQA Lead Agency (in this case, the County) pursuant to CEQA Guidelines. Biological resources-related laws and regulations that apply include federal Endangered Species Act (FESA), Migratory Bird Treaty Act (MBTA), CWA, CEQA, California Endangered Species Act (CESA), CFG Code, County BMO, and County RPO.

The USFWS will be responsible for reviewing issues related to migratory birds pursuant to the MBTA and project consistency with the adopted South County MSCP Subarea Plan. The USACE will be responsible for reviewing issues related to waters of the U.S. The RWQCB will be responsible for reviewing issues related to waters of the State pursuant to the CWA. The State Porter-Cologne Water Quality Control Act would not apply as there are no isolated waters of the State in the study area. The CDFW will be responsible for reviewing issues related to riparian habitat and streambeds pursuant CFG Code, nesting birds and raptors pursuant to CFG Code, and project consistency with the adopted South County MSCP Subarea Plan.

The County is the lead agency for the CEQA environmental review process in accordance with State law and local ordinances. During CEQA review, the County will be responsible for reviewing project issues per the Guidelines for Determining Significance for Biological Resources (County 2010a) and the County RPO. The County will also be responsible for reviewing the project with respect to consistency with the County BMO and adopted South County MSCP Subarea Plan, County RPO, and consistency with biological goals and policies of the General Plan and Spring Valley Community Plan.



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Conceptual Corridors and Linkages

SWEETWATER VISTAS

HELIX Environmental Planning

N 0 2,500 Feet

Figure 11

1.5.1 Federal Government

Federal Endangered Species Act

Administered by the USFWS, the FESA provides the legal framework for the listing and protection of species (and their habitats) that are identified as being endangered or threatened with extinction. Actions that jeopardize endangered or threatened species and the habitats upon which they rely are considered a 'take' under the ESA. Section 9(a) of the ESA defines take as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to engage in any such conduct." "Harm" and "harass" are further defined in federal regulations and case law to include actions that adversely impair or disrupt a listed species' behavioral patterns.

The USFWS designates critical habitat for endangered and threatened species. Critical habitat is defined as areas of land that are considered necessary for endangered or threatened species to recover. The ultimate goal is to restore healthy populations of listed species within their native habitats so they can be removed from the list of threatened or endangered species. Once an area is designated as critical habitat pursuant to the FESA, all federal agencies must consult with the USFWS to ensure that any action they authorize, fund, or carry out is not likely to result in destruction or adverse modification of the critical habitat. There is no designated critical habitat on the site. The nearest critical habitat is for the coastal California gnatcatcher, approximately 0.4 mile to the south at Sweetwater Reservoir and east at the San Diego National Wildlife Refuge.

Sections 7 and 10(a) of the FESA regulate actions that could jeopardize endangered or threatened species. Section 7 describes a process of federal interagency consultation for use when federal actions may adversely affect listed species. In this case, take can be authorized via a letter of biological opinion issued by the USFWS for non-marine related listed species issues. A Section 7 consultation (formal or informal) is required when there is a nexus between endangered species' use of a site and impacts to USACE jurisdictional areas. Section 10(a) allows issuance of permits for incidental take of endangered or threatened species with preparation of a Habitat Conservation Plan (HCP) when there is no federal nexus. The term "incidental" applies if the taking of a listed species is incidental to, and not the purpose of, an otherwise lawful activity. An HCP demonstrating how the taking would be minimized and how steps taken would ensure the species' survival must be submitted for issuance of Section 10(a) permits. The MSCP is a regional HCP that was developed pursuant to Section 10(a) of the ESA.

Migratory Bird Treaty Act

All migratory bird species that are native to the United States or its territories are protected under the federal MBTA, as amended under the Migratory Bird Treaty Reform Act of 2004 (FR Doc. 05-5127). The MBTA is generally protective of migratory birds but does not actually stipulate the type of protection required. In common practice, the MBTA is now used to place restrictions on disturbance of active bird nests during the nesting season (generally February 1 to August 31). In addition, the USFWS commonly places restrictions on disturbances allowed near active raptor nests.

Clean Water Act

Federal wetland regulation in non-tidal (non-marine) settings is guided by the CWA. The purpose of the CWA is to restore and maintain the chemical, physical, and biological integrity of all waters of the U.S. Permitting for projects filling waters of the U.S. is overseen by the USACE under Section 404 of the CWA. Most development projects are permitted using Individual Permit or Nationwide Permit instruments.

1.5.2 State of California

California Environmental Quality Act

Primary environmental legislation in California is found in CEQA and its implementing guidelines (State CEQA Guidelines), which require that projects with potential adverse effects (or impacts) on the environment undergo environmental review. Adverse environmental impacts are typically mitigated as a result of the environmental review process in accordance with existing laws and regulations.

California Endangered Species Act

The CESA established that it is State policy to conserve, protect, restore, and enhance State endangered species and their habitats. Under State law, plant and animal species may be formally designated rare, threatened, or endangered by official listing by the California Fish and Game Commission. The CESA authorizes that private entities may "take" plant or wildlife species listed as endangered or threatened under the FESA and CESA, pursuant to a federal Incidental Take Permit if the CDFW certifies that the incidental take is consistent with CESA (CFG Code Section 2080.1[a]). For State-only listed species, Section 2081 of CFG Code authorizes the CDFW to issue an Incidental Take Permit for State listed threatened and endangered species if specific criteria are met. The MSCP is a regional Natural Communities Conservation Plan that was granted take coverage under Section 2081 of the CESA.

Native Plant Protection Act

Sections 1900–1913 of the CFG Code (Native Plant Protection Act; NPPA) direct the CDFW to carry out the State Legislature's intent to "…preserve, protect, and enhance endangered or rare native plants of this state." The NPPA gives the California Fish and Game Commission the power to designate native plants as "endangered" or "rare" and protect endangered and rare plants from take.

California Fish and Game Code

The CFG Code provides specific protection and listing for several types of biological resources. Section 1600 of CFG Code requires a Streambed Alteration Agreement (SAA) for any activity that would alter the flow of, change, or use any material from the bed, channel, or bank of any perennial, intermittent, or ephemeral river, stream, and/or lake. Typical activities that require an SAA include excavation or fill placed within a channel, vegetation clearing, structures for

diversion of water, installation of culverts and bridge supports, cofferdams for construction dewatering, and bank reinforcement. Notification is required prior to any such activities.

Pursuant to CFG Code Section 3503, it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by this code or any regulation made pursuant thereto. Raptors and owls and their active nests are protected by CFG Code Section 3503.5, which states that it is unlawful to take, possess, or destroy any birds of prey or to take, possess, or destroy the nest or eggs of any such bird unless authorized by the CDFW. Section 3513 states that it is unlawful to take or possess any migratory non-game bird as designated in the MBTA. These regulations could require that construction activities (particularly vegetation removal or construction near nests) be reduced or eliminated during critical phases of the nesting cycle unless surveys by a qualified biologist demonstrate that nests, eggs, or nesting birds will not be disturbed, subject to approval by CDFW and/or USFWS.

Natural Communities Conservation Planning Act

The Natural Communities Conservation Planning (NCCP) program is a cooperative effort to protect habitats and species. It began under the State's NCCP Act of 1991, legislation broader in its orientation and objectives than the CESA or FESA. These laws are designed to identify and protect individual species that have already declined significantly in number. The NCCP Act of 1991 and the associated Southern California Coastal Sage Scrub NCCP Process Guidelines (1993), Southern California Coastal Sage Scrub NCCP Conservation Guidelines (1993), and NCCP General Process Guidelines (1998) have been superseded by the NCCP Act of 2003.

The primary objective of the NCCP program is to conserve natural communities at the ecosystem level while accommodating compatible land use. The program seeks to anticipate and prevent the controversies and gridlock caused by species' listings by focusing on the long-term stability of wildlife and plant communities and including key interests in the process.

This voluntary program allows the State to enter into planning agreements with landowners, local governments, and other stakeholders to prepare plans that identify the most important areas for a threatened or endangered species, and the areas that may be less important. These NCCP plans may become the basis for a State permit to take threatened and endangered species in exchange for conserving their habitat. The CDFW and USFWS worked to combine the NCCP program with the federal HCP process to provide take permits for State and federal listed species. Under the NCCP, local governments, such as the County, can take the lead in developing these NCCP plans and become the recipients of State and federal take permits. The County MSCP Subarea Plan is an NCCP plan adopted for South County.

1.5.3 County of San Diego

Multiple Species Conservation Program

The California Natural Communities Conservation Planning (NCCP) Act of 1991 (Section 2835) allows the CDFW to authorize take of species covered by plans in agreement with NCCP guidelines. A Natural Communities Conservation Program initiated by the State of California

focuses on conserving coastal sage scrub, and in concert with the USFWS and the federal ESA, is intended to avoid the need for future federal and state listing of coastal sage scrub dependent species.

The San Diego MSCP Plan for the southwestern portion of San Diego County was approved in August 1998 and covers 85 species (County 1998). The City of San Diego, portions of the unincorporated County, and ten additional city jurisdictions make up the San Diego MSCP Plan area. It is a comprehensive, long-term habitat conservation plan that addresses the needs of multiple species by identifying key areas for preservation as open space in order to link core biological areas into a regional wildlife preserve.

County MSCP Subarea Plan

The County MSCP Subarea Plan (County 1997) implements the MSCP within the unincorporated areas under County jurisdiction. It was adopted by the Board of Supervisors in March 1998. The County Subarea Plan is divided into three Segments: Lake Hodges, Metropolitan-Lakeside-Jamul, and South County. The Plan addresses areas authorized for take and planned for conservation, including portions of the South County Segment which are conserved subject to agreements with the Wildlife Agencies. Take of covered species and their habitat is authorized for projects that satisfy the requirements of the County's BMO.

The project site is located within both the South County Segment and the Metro-Lakeside-Jamul Segment of the County's MSCP Subarea Plan (Figure 4). Within the South County Segment, the site primarily occurs within Take Authorized Area. Limited portions occur within Hardline Preserve. Within the Metro-Lakeside-Jamul Segment, the site primarily occurs within Unincorporated Land within the Metro-Lakeside-Jamul Segment. Approximately half of the portions of the site east of Jamacha Boulevard occur within PAMA. A very small sliver of PAMA occurs within portions of the site west of the Jamacha Boulevard. Portions of the site are shown as Very High or High on the County's Habitat Evaluation Map from the BMO.

Biological Mitigation Ordinance

The BMO is the ordinance by which the County implements the County MSCP Subarea Plan at the project level within the unincorporated area to attain the goals set forth in the County MSCP Subarea Plan. The BMO contains design criteria and mitigation standards that, when applied to projects requiring discretionary permits, protect habitats and species and ensure that a project does not preclude the viability of the MSCP Preserve System. In this way, the BMO promotes the preservation of lands that contribute to contiguous habitat core areas or linkages.

Resource Protection Ordinance

The County regulates natural resources (among other resources) as sensitive biological resources via the RPO (County 2011), the regulations of which cover wetlands, wetland buffers, sensitive plant and animal species, sensitive vegetation communities/habitat types, and habitats containing sensitive animals or plants.

RPO Wetlands

RPO wetlands are defined as lands having one or more of the following attributes:

- At least periodically, the land supports a predominance of hydrophytes (plants whose habitat is water or very wet places);
- The substratum is predominantly undrained, hydric soil; or
- An ephemeral or perennial stream is present, whose substratum is predominately non-soil, and such lands contribute substantially to the biological functions or values of wetlands in the drainage system.

According to the RPO, the following are not considered RPO wetlands:

- Lands which have attribute(s) specified above, solely due to man-made structures (e.g., culverts, ditches, road crossings, or agricultural ponds), provided that the Director of PDS determines that they:
  - Have negligible biological function or value as wetlands;
  - Are small and geographically isolated from other wetland systems;
  - Are not vernal pools; and
  - Do not have substantial or locally important populations of wetland dependent sensitive species.

- Lands that have been degraded by past legal land disturbance activities to the point that they meet the following criteria as determined by the Director of PDS:
  - Have negligible biological function or value as wetlands even if restored to the extent feasible; and,
  - Do not have substantial or locally important populations of wetland dependent sensitive species.

Sensitive Habitat Lands

Sensitive Habitat Lands are defined by the RPO as:

- Land which supports unique vegetation communities, or the habitats of rare or endangered species or sub-species of animals or plants as defined by Section 15380 of the State CEQA Guidelines (14 Cal. Admin. Code Section 15000 *et seq*.), including the area which is necessary to support a viable population of any of the above species in perpetuity, or which is critical to the proper functioning of a balanced natural ecosystem or which serves as a functioning wildlife corridor.
  - "Unique vegetation community" refers to associations of plant species which are rare or substantially depleted. These may contain rare or endangered species, but other species may be included because they are unusual or limited due to a number of factors, for example: (a) they are only found in the San Diego region; (b) they are a local representative of a species or association of species not generally found in San Diego County; or (c) they are outstanding examples of the community type as identified by the CDFW listing of community associations.

2.0 PROJECT EFFECTS

Direct impacts are immediate impacts resulting from permanent habitat removal. Direct impacts were quantified by overlaying the limits of ground disturbance (i.e., grading and fuel modification) on the biological resources map for the site. Limited building zones and areas where development would result in small, isolated stands of habitat were considered to be "directly" impacted. Indirect impacts are actions that are not direct removal of habitat, but affect the surrounding biological resources either as a secondary effect of the direct impacts (e.g., construction noise, runoff, nighttime lighting, fugitive dust, etc.) or as the cause of degradation of a biological resource over time (e.g., edge effects and adjacency issues). Cumulative impacts are those caused by numerous projects in the region and their additive effect of multiple direct and indirect impacts to biological resources over time.

In summary, the project has been specifically designed to:

- Avoid impacts to wetlands, consistent with the no-net-loss-standard;
- Maximize diversity of conserved habitat areas within the biological open space, including important soils (e.g., Las Posas sandy loam, Diablo clay, Linne clay, San Miguel-Exchequer rock), various phases of upland scrub and riparian habitat, and unique topographic and drainage features (e.g., Hansen's Creek and Little Hansen's Creek);
- Site development within the least sensitive habitat areas, including previously disturbed uplands;
- Preserve High and Very High biological value habitat;
- Consolidate development to reduce edge effects and maximize the ratio of surface area to the perimeter of conserved habitats consistent with MSCP design criteria;
- Avoid direct impacts and preserve all occupied habitat for narrow endemic species (i.e., least Bell's vireo);
- Contribute 27.9 acres of preserved habitat to the region, including land both inside and outside of PAMA, and land designated as Hardline Preserve and Take Authorized Area;
- Conserve live-in and dispersal habitat for coastal California gnatcatcher and least Bell's vireo, including key habitat located along an existing constrained linkage connecting Dictionary Hill with the San Diego National Wildlife Refuge; and
- Achieve the conservation goals for covered species and habitats.

Following County Guidelines, the project would impact 23.1 acres of the approximately 51.9-acre project site, either by direct physical removal of the habitat or by further fragmenting and isolating the habitat. Of the 23.1 acres of impact, 0.5 acre would be restored to coastal sage scrub and placed into biological open space. Areas of existing fire clearing and an existing County sewer easement (1.3 acres) were mapped as impact neutral.

A total of 27.9 acres within the project site would be placed in biological open space, which includes the 0.5 acre of impact area that will be restored to coastal sage scrub. The proposed

project would further restore an additional 3.2 acres of disturbed habitat and non-native vegetation within the biological open space to coastal sage scrub, and enhance 0.4 acre of existing disturbed coastal sage scrub within the biological open space. These restoration and enhancement actions are fundamental components of the project's proposal to improve habitat quality and function for wildlife movement through the site, particularly for the coastal California gnatcatcher. Considering the total biological open space area, the proposed project's conservation percentage is 54 percent.

A total of 0.3 acre of off-site impacts would occur as a result of minor roadway improvements and for a required trail that will run along Jamacha Boulevard. Off-site impact areas would occur entirely within existing disturbed habitat and developed (paved) roadways, and as such, are expected to have no effect on biological resources. Figure 12 depicts the direct impact areas of the project, including both on- and off-site impact areas. Figure 13 depicts the areas to be preserved in biological open space.

The 27.9-acre biological open space will be managed by a County-approved Resource Manager according to the Conceptual RMP (Appendix M). There are several existing and proposed sewer and water facilities on and in the immediate vicinity of the proposed biological open space, including storm drain outlets and a culvert inlet. Hansen's Creek flows into an existing 84-inch reinforced concrete pipe culvert underneath Pointe Parkway and Jamacha Boulevard at the south end of the site (Figure 8). The culvert has been functioning for many years without maintenance; therefore, future maintenance, if any, is anticipated to be minimal. The HOA would be responsible for any maintenance that might be needed in the future. Any maintenance work done on or in the immediate vicinity of the biological open space would be done in coordination with the Resource Manager in order to avoid significant impacts to sensitive biological resources, as stated in the Conceptual RMP. This will ensure that potential future maintenance activities are done in compliance with regulatory requirements and in conformance with the RMP.

2.1 SPECIAL-STATUS SPECIES

Special-Status Plant Species

Six special status plant species were observed on the project site during 2014 and 2015 surveys: ashy spike-moss (County List D), graceful tarplant (County List D), Munz's sage (County List B), San Diego County sunflower (County List D), San Diego marsh-elder (County List B), and southwestern spiny rush (County List D). The effects of the project on these species are discussed in further detail below.

Ashy Spike-Moss

Ashy spike-moss was observed during 2014 and 2015 surveys in small numbers within undisturbed areas of coastal sage scrub in the northwestern portion of the site. The project would avoid and place all occupied habitat on site for this species within biological open space. Therefore, no impacts would occur.

Graceful Tarplant

Approximately 40 graceful tarplant individuals were observed in disturbed habitat adjacent to coastal sage scrub in the central western portion of the site. The project would avoid and place all occupied habitat on site for this species within biological open space. Therefore, no impacts would occur.

Munz's Sage

Eleven Munz's sage individuals were observed on the site, including 10 in the northwestern portion of the site and one in the southeastern portion. The project would impact three of the 11 individuals on site; the remaining eight would be preserved within biological open space. The project's impacts on this List B species relative to the on-site population is greater than 5 percent; however, impacts to three individuals would not have a substantial adverse effect on the local long-term survival of the species. This species was reported as being "frequent" and "common" within the Pointe Specific Plan Area, including coastal sage scrub and chamise chaparral within mitigation land that is now preserved open space near Dictionary Hill. This species is also preserved within the San Diego National Wildlife Refuge at a location within 3.0 miles of the project site. The project would preserve the majority of on-site concentrations of this species in addition to extensive suitable habitat (i.e., coastal sage scrub supported by suitable soils, hydrology, slope, aspect, and topography). The project would restore non-native habitat within biological open space to native coastal sage scrub habitat, and locally-sourced seed and/or container plants for this species would be used in the restoration plant palette. Therefore, impacts are considered less than significant.

San Diego County Sunflower

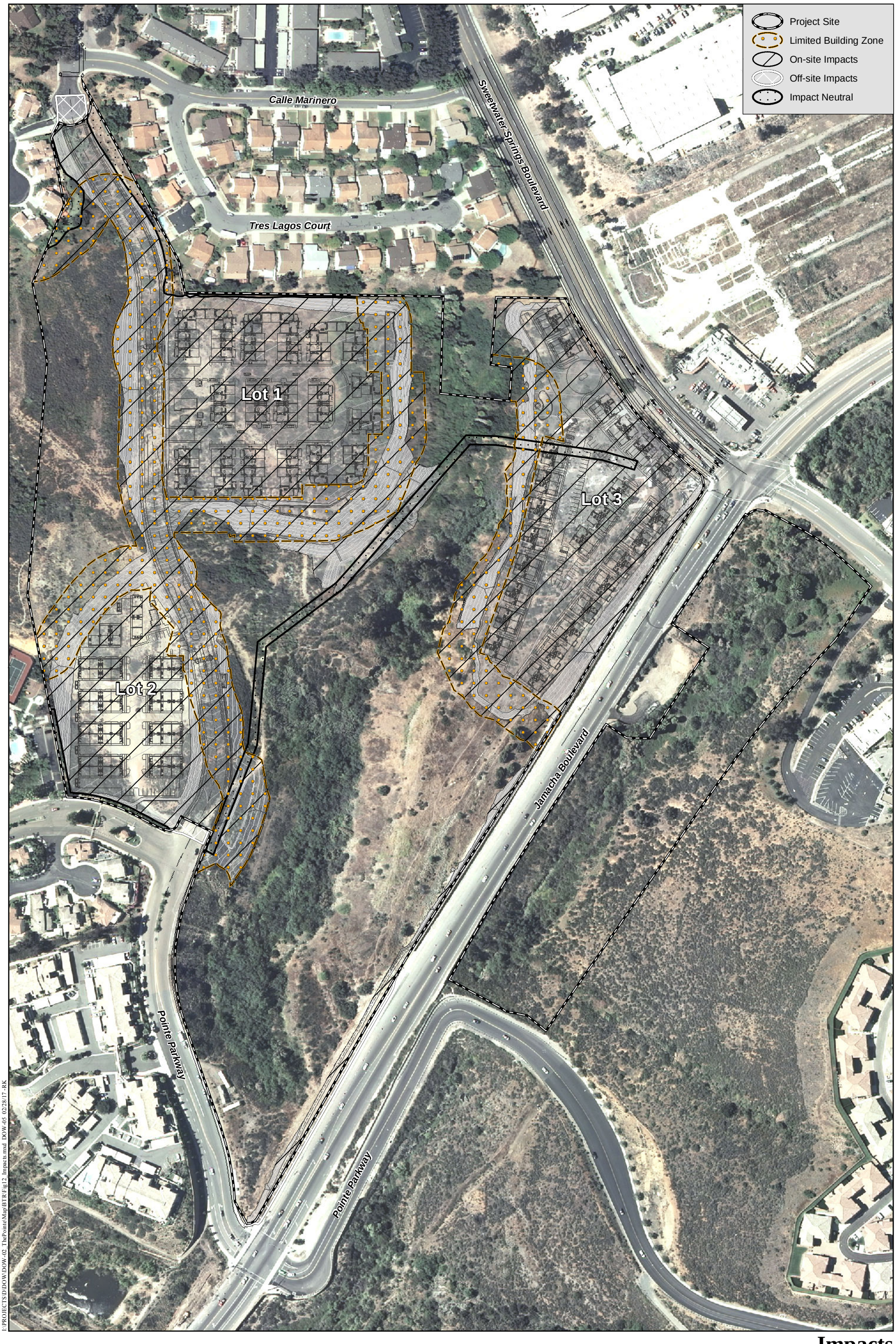
San Diego County sunflower was observed in scattered patches and as individuals intermixed within the coastal sage scrub throughout the site. This species is relatively common in the local area and often found at disturbed locations, such as the project site. The project would preserve extensive habitat occupied by this relatively common species. Therefore, impacts are considered less than significant.

San Diego Marsh-Elder

This species is present throughout the cismontane alkali marsh habitat along Little Hansen's Creek in the eastern portions of the site. The project would avoid and place all occupied habitat on site for this species within biological open space. Therefore, no impacts would occur.

Southwestern Spiny Rush

Relatively low numbers of spiny rush was found in several concentrations on the western portions of the site, with the highest concentrations in Hansen's Creek. This species is also present throughout the cismontane alkali marsh habitat along Little Hansen's Creek in the eastern portions of the site. Unavoidable impacts would occur to a small concentration in the western portion of the site within Lot 2. However, the project would avoid and place the large



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Impacts

SWEETWATER VISTAS

HELIX Environmental Planning

N 0 200 Feet

Figure 12



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Biological Open Space

SWEETWATER VISTAS

HELIX Environmental Planning

Figure 13

majority of occupied habitat on site for this species within biological open space. Therefore, impacts are considered less than significant.

Special-Status Animal Species

Four special status bird species were determined to be breeding on the project site during 2015 surveys: coastal California gnatcatcher (Group 1, MSCP Covered Species), Cooper's hawk (Group 1, MSCP Covered Species), least Bell's vireo (Group 1, MSCP Covered Species, Narrow Endemic Species), and yellow warbler (Group 2). In addition, four special status animal species were observed foraging and/or moving through or over the project site during 2015 surveys: monarch butterfly (Group 2), turkey vulture (Group 2), northern harrier (Group 1, MSCP Covered Species), and red-shouldered hawk (Group 1). The effects of the project on these species are discussed in further detail below.

Coastal California Gnatcatcher

Coastal California gnatcatcher was confirmed to be breeding at two locations during 2015 surveys: (1) relatively undisturbed coastal sage scrub in the northwestern portion of the site; and (2) relatively undisturbed coastal sage scrub immediately east of the southeastern portion of the site. The project would avoid and place both of these areas in biological open space. The potential for gnatcatchers to breed at other locations on the site is considered low based on low quality and fragmentation of habitat, lack of constituent vegetative elements (e.g., the areas are dominated by broom baccharis), and the fact that gnatcatchers were not observed using the areas during the 2015 protocol surveys. Therefore, no impacts to on-site occupied breeding habitat are anticipated to occur. Gnatcatchers could breed at off-site locations within 500 feet of areas to be developed on the project site. Project construction within 500 feet of off-site breeding habitat could result in adverse indirect impacts related to construction noise. These impacts would be considered significant but mitigable, as discussed below.

Gnatcatchers evidently have the potential to forage and disperse through the site to get to and from off-site habitat in the local area. The coastal sage scrub throughout the site therefore functions to provide foraging habitat and facilitate gnatcatcher dispersal. The project has been specifically designed to avoid key stands of coastal sage scrub in order to conserve gnatcatcher foraging and movement functions. Unavoidable impacts will occur to 14.9 acres of the coastal sage scrub on the site; however, the large majority (12.5 acres) of the scrub to be impacted is designated as Take Authorized Area under the MSCP. The project would further restore 3.7 acres of coastal sage scrub and enhance an additional 0.4 acre within biological open space to improve overall quality and functionality of gnatcatcher habitat. Unavoidable impacts to coastal sage scrub outside of Take Authorized Area and within Hardline Preserve would be considered significant but mitigable, as discussed below.

Cooper's Hawk

Cooper's hawk was observed in areas surrounding Hansen's Creek consistently during 2015 surveys. Although no nests were found, this species is presumed to be using habitat associated with Hansen's Creek for breeding. The project would avoid and place all suitable habitat for

Cooper's hawk within Hansen's Creek into biological open space. Therefore, no direct impacts to occupied Cooper's hawk habitat would occur. Project construction within 500 feet of breeding habitat for this raptor could result in adverse indirect impacts related to construction noise. These impacts would be considered significant but mitigable, as discussed below.

Least Bell's Vireo

Least Bell's vireo was confirmed during the 2015 surveys to be breeding at multiple locations within better quality riparian habitat associated with Hansen's and Little Hansen's Creeks. The habitat is estimated to support up to three vireo breeding territories based on consistent observations within specific portions of the Creeks. The project would avoid and place all suitable vireo habitat within Hansen's and Little Hansen's Creek into biological open space. Therefore, no direct impacts to occupied habitat for this species would occur. Adequate setbacks and project design features have been incorporated into the project to ensure vireo breeding sites are buffered and protected from potential indirect effects of project operation. Project construction within 500 feet of breeding habitat for this sensitive bird species could result in adverse indirect impacts related to construction noise. These impacts would be considered significant but mitigable, as discussed below.

Monarch Butterfly

Monarch butterfly was observed flying through the project site during 2015 surveys. This species is expected to migrate through the region, but would not roost on the site due to its location. Extensive habitat for the monarch is already preserved throughout the region and within the San Diego National Wildlife Refuge in the local area. The project would contribute additional preserved habitat within biological open space. Impacts on this species are less than significant.

Northern Harrier

A single harrier was observed flying over the site on a single occasion during the 2015 surveys. The site is too hilly and too disturbed to support breeding habitat for this species. Marginal foraging habitat occurs and this species is likely to forage over open habitat in the local area. Better quality foraging habitat occurs to the south and southeast of the site in the expansive grassland that surrounds Sweetwater Reservoir. The project would preserve marginal foraging habitat within biological open space that could be used by this species. Impacts on this MSCP Covered Species due to loss of foraging habitat are less than significant.

Red-Shouldered Hawk

Red-shouldered hawk was observed in areas surrounding Hansen's Creek on a single occasion during 2015 surveys. Although no nests were observed, suitable nesting habitat occurs and this species has the potential to breed within trees associated with Hansen's Creek. The project would avoid and preserve suitable habitat for this species within Hansen's Creek. Therefore, no direct impacts would occur. Project construction within 500 feet of breeding habitat for this raptor could result in adverse indirect impacts related to construction noise. These impacts would be considered significant but mitigable, as discussed below.

Turkey Vulture

Turkey vulture was observed soaring over the site during 2015 surveys. No nesting habitat occurs on the site. Marginal foraging habitat occurs on site; however, there are no biologically-based reasons as to why this species would specifically select the site for foraging. The project would preserve potential foraging habitat within biological open space that could be used by this species. Impacts on this relatively common species due to loss of foraging habitat are less than significant.

Yellow Warbler

Yellow warbler was observed in Hansen's Creek during the 2015 surveys. The species is presumed to be using the better quality riparian habitat within Hansen's Creek for breeding. The project would avoid and place all suitable habitat for yellow warbler within Hansen's Creek into biological open space. Therefore, no direct impacts to occupied habitat for this species would occur. Project construction within 500 feet of breeding habitat for this sensitive bird species could result in adverse indirect impacts related to construction noise. These impacts would be considered significant but mitigable, as discussed below.

Raptor Foraging

Several raptors were observed, on occasion, during the 2015 biological surveys. The overall foraging value of the site is relatively low considering the hilly terrain and dominance of dense scrub-type vegetation. Better quality raptor foraging habitat occurs off site further to the south and southwest within land surrounding Sweetwater Reservoir. Nevertheless, the non-native grassland and disturbed habitat on the project site could be considered raptor foraging habitat. Impacts to raptor foraging habitat would be considered significant but mitigable, as discussed below.

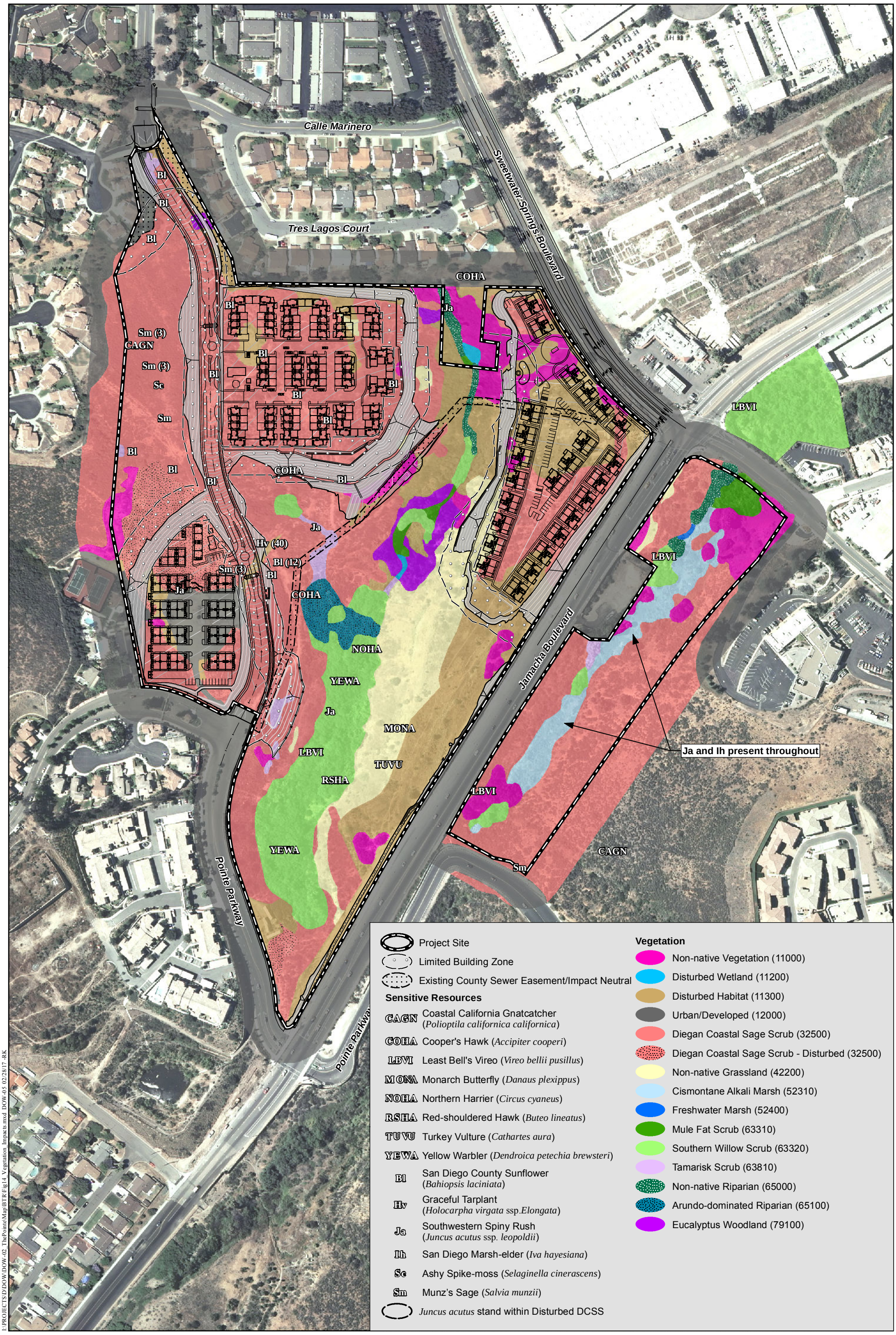
2.2 RIPARIAN HABITAT AND SENSITIVE NATURAL COMMUNITIES

The project would avoid and preserve within biological open space all riparian habitat on site; therefore, no impacts to riparian habitat would occur. The project would result in unavoidable impacts to sensitive natural communities, including 14.9 acres of Diegan coastal sage scrub (Tier II) and 0.9 acre of non-native grassland (Tier III). Figure 14 depicts the direct impact areas of the proposed project in relation to the existing biological resources inventoried for this study.

Table 6 summarizes project impacts on vegetation communities, including sensitive natural communities, separated by MSCP Tier and Segment. Impacts to sensitive natural communities would be considered significant but mitigable, as discussed below.

Table 6
IMPACTS TO VEGETATION COMMUNITIES[1]

VEGETATION COMMUNITY	PROJECT SITE EXISTING	PROJECT SITE IMPACTS	OFF-SITE IMPACTS	TOTAL IMPACTS
MSCP South County Segment				
Tier I				
Disturbed wetland (11200)	0.02	--	--	--
Cismontane alkali marsh (52310)	--	--	--	--
Freshwater marsh (52400)	--	--	--	--
Mule fat scrub (63310)	0.11	--	--	--
Southern willow scrub (63320)	1.76	--	--	--
Tamarisk scrub (63810)	0.32	0.1[2]	--	0.1[2]
Non-native riparian (65000)	0.12	--	--	--
Arundo-dominated riparian (65100)	0.49	--	--	--
Tier II				
Diegan coastal sage scrub (32500)	18.5	12.5	--	12.5
Diegan coastal sage scrub – disturbed (32500)	2.0	1.6	--	1.6
Tier III				
Non-native grassland (42200)	3.0	0.9	--	0.9
Tier IV				
Disturbed habitat (11300)	5.5	3.4	--	3.6
Eucalyptus woodland (79100)	0.7	0.1	--	0.1
Non-native vegetation (11000)	1.5	1.0	--	1.0
N/A				
Urban/developed (12000)	1.3	1.1	0.2	1.3
Subtotal	***35.2***	***20.8***	***0.2***	***20.9***


Calle Marinero
Tres Lagos Court
Sweetwater Springs Boulevard
Jamacha Boulevard
Pointe Parkway
Pointe Parkway
Bl
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Bl
Bl
Bl
Bl
Bl (12)
Sm (3)
Sm (3)
Sm
Sc
Hv (40)
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Table 6 (cont.)
IMPACTS TO VEGETATION COMMUNITIES[1]

VEGETATION COMMUNITY	PROJECT SITE EXISTING	PROJECT SITE IMPACTS	OFF-SITE IMPACTS	TOTAL IMPACTS
MSCP Metro-Lakeside-Jamul Segment				
Tier I				
Disturbed wetland (11200)	--	--	--	--
Cismontane alkali marsh (52310)	1.17	--	--	--
Freshwater marsh (52400)	0.02	--	--	--
Mule fat scrub (63310)	0.22	--	--	--
Southern willow scrub (63320)	2.0	--	--	--
Tamarisk scrub (63810)	0.09	0.01[2]	--	0.01[2]
Non-native riparian (65000)	0.2	--	--	--
Arundo-dominated riparian (65100)	--	--	--	--
Tier II				
Diegan coastal sage scrub (32500)	7.0	0.7	--	0.7
Diegan coastal sage scrub – disturbed (32500)	0.2	--	--	--
Tier III				
Non-native grassland (42200)	0.6	--	--	--
Tier IV				
Disturbed habitat (11300)	3.7	1.4	--	1.4
Eucalyptus woodland (79100)	--	--	--	--
Non-native vegetation (11000)	1.5	0.1	--	0.1
N/A				
Urban/developed (12000)	--	--	0.1	0.1
Subtotal	***16.7***	***2.3***	***0.1***	***2.4***
TOTAL	**51.9**	**23.1**	**0.3**	**23.4**

[1] Upland communities/habitat types are rounded to the nearest 0.1 acre, while wetland communities are rounded to the nearest 0.01; totals do not reflect rounding.

[2] Impacts to tamarisk scrub at this location are within an upland landscape position and not associated with a streambed, riparian habitat, or wetlands. They are, therefore, considered Tier IV impacts not Tier I impacts.

2.3 JURISDICTIONAL WETLANDS AND WATERWAYS

The project would avoid and preserve all federally-protected wetlands that occur on site within biological open space; therefore, no impacts to federally-protected wetlands would occur.

Unavoidable impacts would occur to 0.03 acre of non-wetland waters of the U.S. subject to USACE jurisdiction associated with a nuisance-fed, ephemeral, unnamed tributary to Hansen's Creek. The impacted non-wetland waters of the U.S. would also constitute non-wetland waters of the State subject to RWQCB jurisdiction. A total of 0.04 acre of unvegetated streambed subject to CDFW jurisdiction will be impacted within the same unnamed tributary. Figures 15 and 16 depict the project impacts and open space in relation to potential waters of the U.S. and State. Impacts to jurisdictional non-wetland waters would be considered significant but mitigable, as discussed below.

Table 7 provides a summary of project impacts to jurisdictional waters and wetlands.

Table 7
IMPACTS TO JURISDICTIONAL WETLANDS AND WATERWAYS

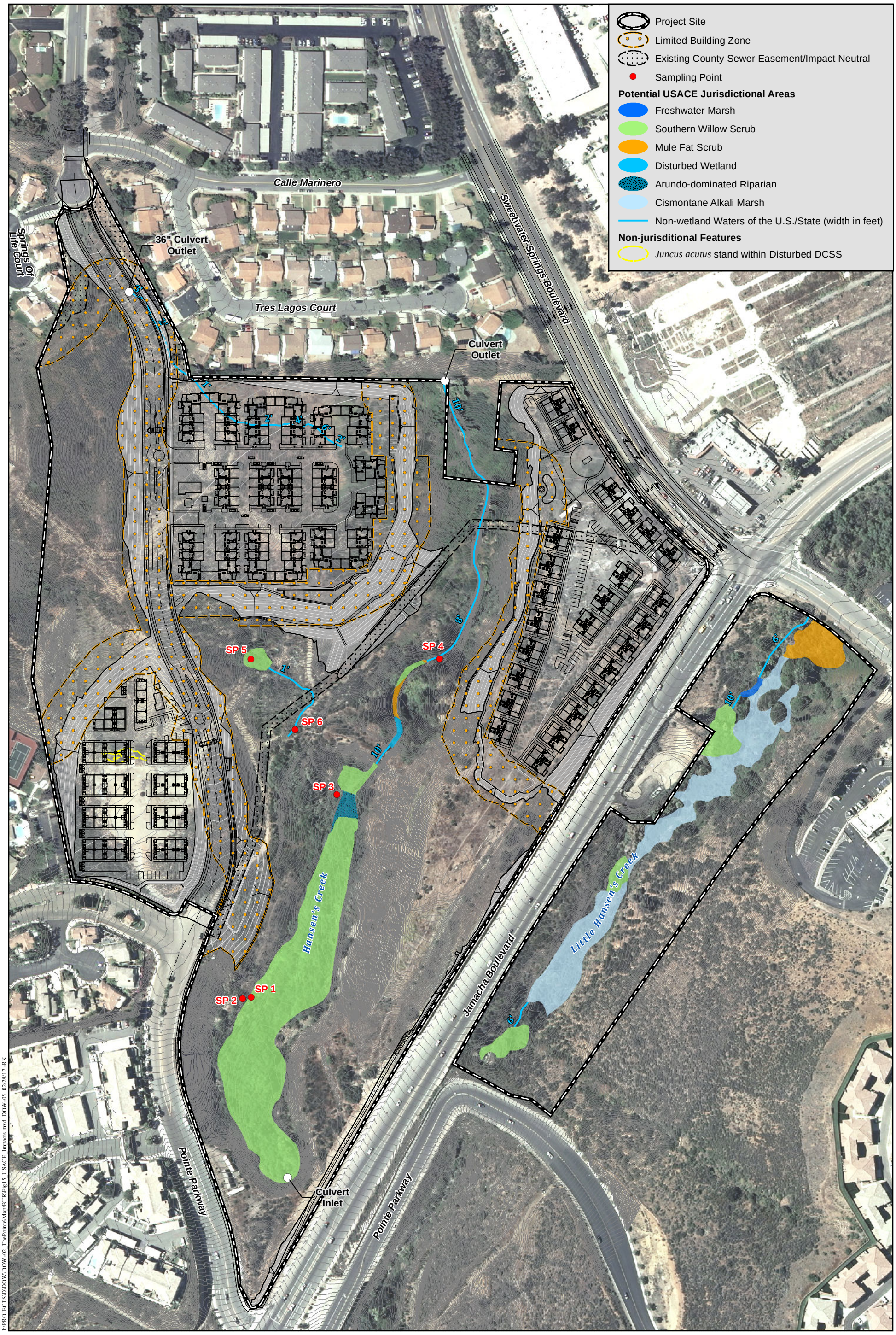
JURISDICTIONAL RESOURCES	PROJECT SITE IMPACTS	OFF-SITE IMPACTS	TOTAL
USACE/RWQCB			
Non-Wetland Waters of the U.S./State	0.03	--	0.03
TOTAL	**0.03**	**--**	**0.03**
CDFW			
Unvegetated Streambed	0.04	--	0.04
TOTAL	**0.04**	**--**	**0.04**

[1] Acreages are rounded to the nearest 0.01; therefore, totals reflect rounding.

2.4 WILDLIFE MOVEMENT CORRIDORS AND LINKAGES

The project site does not support or contribute to a designated wildlife movement corridor; however, it is situated along the path of a constrained archipelago or stepping-stone linkage in the local area, and supports wildlife movement including large mammals and sensitive birds. The project would conserve existing wildlife movement functions through the site. Figure 17 depicts the project's biological open space contribution to the conceptual constrained linkage that occurs in the local area and connects habitat between Dictionary Hill and the San Diego National Wildlife Refuge.

The project would not adversely affect the constrained linkage and would contribute 27.9 acres of preserved habitat to the linkage. The project's contribution includes land both inside and outside of PAMA, and land designated as Hardline Preserve and Take Authorized Area. Mammals such as mule deer and bobcat would not be expected to move through the site due to several factors; however, coyote is expected and the project would conserve movement functions for coyote. Coyotes were observed entering the project site from the west, in the area of proposed open space between Areas 1 and 2. This is the most logical movement route onto the site because



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USACE Jurisdictional Area Impacts

SWEETWATER VISTAS

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N 0 200 Feet

Figure 15

Project Site
Limited Building Zone
Existing County Sewer Easement/Impact Neutral

Potential CDFW Jurisdictional Areas

Southern Willow Scrub
Freshwater Marsh
Mule Fat Scrub
Disturbed Wetland
Arundo-dominated Riparian
Cismontane Alkali Marsh
Non-native Riparian
Tamarisk Scrub
Streambed (width in feet)

Calle Marinero
Springs Of Life Court
36" Culvert Outlet
Tres Lagos Court
Sweetwater Springs Boulevard
Culvert Outlet
5'
3'
1'
3'
4'
6'
2'
Hansen's Creek
Little Hansen's Creek
Jamacha Boulevard
6'
Pointe Parkway
Culvert Inlet
Pointe Parkway

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CDFW Jurisdictional Area Impacts

SWEETWATER VISTAS

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N 0 200 Feet

Figure 16



*Photos 1 through 4 are included in Appendix F as photos 15 through 18, with project features labeled.

Linkage Conservation

SWEETWATER VISTAS

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0 300 Feet

Figure 17

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it avoids the steep graded slope on the western edge of the project in Lot 2; and because the existing homes and tennis court immediately west of the project site limit access. The proposed open space widens quickly past the pinch point, facilitating movement across the site. The terrestrial sensitive species considered high potential on the site are orange-throated whiptail, San Diego black-tailed jackrabbit, and San Diego desert woodrat. Movement of these species is expected to follow similar pathways for the same reasons discussed above, although smaller species would not be moving as far as larger species on a daily basis.

Coastal California gnatcatcher was determined to use portions of the site for breeding and the site likely functions to facilitate gnatcatcher dispersal in the local area. The project would conserve high quality habitat determined to be used by gnatcatchers for breeding and maintain an east-west linkage across the site to allow for gnatcatcher dispersal. The project would further restore additional coastal sage scrub habitat along the linkage and preserve key habitat in perpetuity. The proposed project would restore 3.7 acres of Diegan coastal sage scrub in areas of disturbed habitat, non-native vegetation, and graded slopes outside of the fuel management zone, as shown on Figure 18.

The restoration plant palette is expected to include the following coastal sage scrub constituents, at a minimum:

- California sagebrush
- California buckwheat
- black sage
- Munz's sage
- bush sunflower (*Encelia californica*)
- San Diego County sunflower
- coyote brush (*Baccharis pilularis*)
- coastal goldenbush (*Isocoma menziesii*)
- laurel sumac
- lemonadeberry
- blue elderberry (*Sambucus nigra* ssp. *caerulea*)
- red monkeyflower (*Mimulus aurantiacus* var. *puniceus*)
- deerweed (*Acmispon glaber*)
- miniature lupine (*Lupinus bicolor*)
- arroyo lupine (*Lupinus succulentus*)
- fascicled tarplant (*Deinandra fasciculata*)
- Parry's phacelia (*Phacelia parryi*)
- purple needlegrass (*Stipa pulchra*)
- golden yarrow (*Eriophyllum confertiflorum*)

The proposed project would also enhance the area of highly disturbed coastal sage scrub in the biological open space just north of Lot 2 at the pinch point. The fountain grass and other non-native plants would be removed, and the area would be planted and/or seeded with the restoration plant palette. As with the restoration areas, the enhancement areas would be subject to

monitoring, maintenance, and performance standards. Details of the restoration will be provided in Appendix L.

Finally, the plant palette for the Limited Building Zone / fuel modification zone is designed to maximize its habitat function and value while avoiding highly flammable plants. The Limited Building Zone plant palette is expected to include the following native plant species:

- California sycamore (*Platanus racemosa*) (in bioretention areas only)
- scrub oak (*Quercus dumosa*)
- coast live oak (*Quercus agrifolia*)
- Douglas mugwort (*Artemisa douglasiana*) (in bioretention areas only)
- Yankee Point ceanothus (*Ceanothus 'Yankee Point'*)
- bush sunflower
- deerweed
- scarlet bugler (*Penstemon centranthifolius*)
- San Diego County sunflower
- our lord's candle (*Hesperoyucca whipplei*)
- coyote brush (*Baccharis pilularis*)
- coastal goldenbush (*Isocoma menziesii*)
- laurel sumac
- lemonadeberry
- dwarf coyote brush (*Baccharis pilularis 'Twin Peaks'*)
- San Diego marsh-elder (in bioretention areas only)
- red monkeyflower (*Mimulus aurantiacus* var. *puniceus*)
- miniature lupine
- arroyo lupine
- scarlet monkeyflower (*Mimulus cardinalis*) (in bioretention areas only)
- fascicled tarplant
- Parry's phacelia (*Phacelia parryi*)
- purple needlegrass
- golden yarrow
- Spanish lotus (*Acmispon americanus*)
- California plantain (*Plantago erecta*)
- blue-eyed grass (*Sisyrinchium bellum*)

Using native plants in the Limited Building Zone will improve conditions for wildlife movement through the site and enhance the function and value of the adjacent biological open space.

Similarly, least Bell's vireo was determined to use portions of the site for breeding and the site functions to facilitate vireo dispersal in the local area. The project would conserve high quality riparian habitat determined to be used by vireo for breeding and maintain a north-south connection of Hansen's Creek and Little Hansen's Creek to off-site habitat that eventually connects with the Sweetwater River.



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Coastal Sage Scrub Restoration and Enhancement Areas

SWEETWATER VISTAS

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Figure 18

2.5 LOCAL POLICIES, ORDINANCES, AND ADOPTED PLANS

MSCP and BMO Consistency

The project would be consistent with the adopted County MSCP Subarea Plan and BMO, as described in the draft MSCP findings attached in Appendix K. The majority of the project site is designated Take Authorized, and most of the proposed impacts would be within the Take Authorized area of the South County segment or the non-PAMA area of the Metro-Lakeside-Jamul segment; however, the impact area would encroach into the Hardline Preserve area by 2.1 acres. The project would contribute 25.1 acres to Hardline Preserve, including areas currently designated Take Authorized, non-PAMA, and PAMA. The habitats within the Hardline Take and Hardline Give areas are described below. The proposed MSCP findings for this project are equivalency findings demonstrating that the proposed preserve design provides superior function and value compared to the current MSCP designations.

Equivalency Analysis for Hardline Adjustment (MSCP Subarea Plan Section 1.2)

The project would include two modifications to the MSCP: a Hardline Adjustment, which will be processed as a Minor Amendment, and a Boundary Line Adjustment to move the Metro-Lakeside-Jamul portion of the site into the South County Segment. The CDFW and USFWS will need to approve both actions, based on the relevant findings. The following equivalency analysis is provided in support of the project's proposed adjustment to MSCP South County Segment Hardline Preserve and to demonstrate consistency with MSCP Subarea Plan Section 1.2.

The project would result in 2.1 acres of impacts or Hardline Take of disturbed portions of the site that occur within the Hardline Preserve area. To compensate for the Hardline Take, the project would contribute 25.1 acres of high quality biological open space to the MSCP South County Segment preserve configuration. Figure 19 depicts the proposed Hardline Adjustment for the project. Table 8 provides a summary of the proposed Hardline Preserve adjustment.

Table 8
MSCP PROPOSED HARDLINE ADJUSTMENT
SWEETWATER VISTAS PROJECT[1]

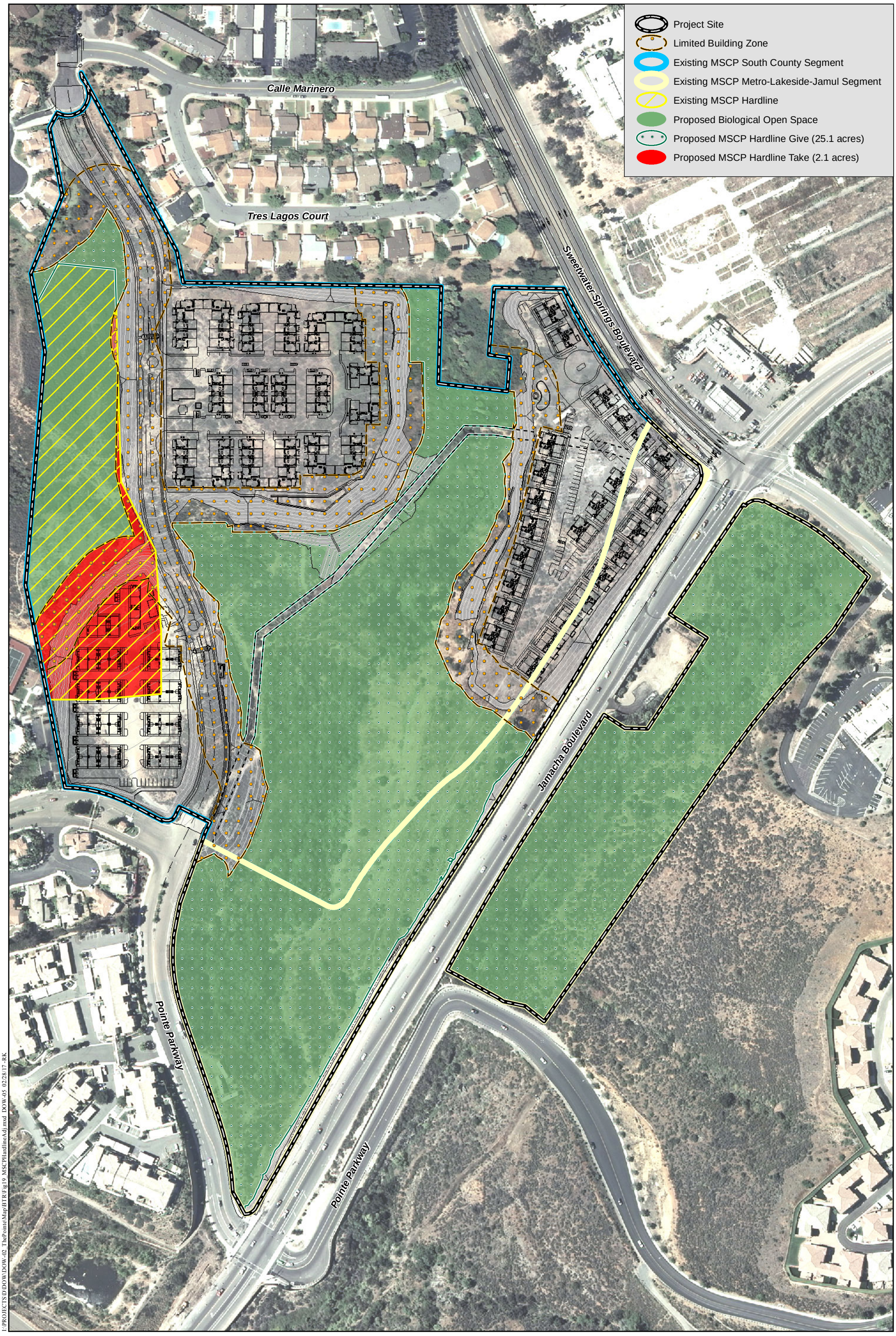
VEGETATION COMMUNITY	EXISTING HABITAT (BOTH SEGMENTS)	EXISTING HARDLINE	REMOVED FROM PRESERVE (HARDLINE TAKE)	ADDED TO PRESERVE (HARDLINE GIVE)	NET CHANGE
Tier I					
Arundo-dominated Riparian (65100)	0.49	0	--	0.49	0.49
Cismontane Alkali Marsh (52300)	1.17	0	--	1.17	1.17
Disturbed Wetland (11200)	0.02	0	--	0.02	0.02**
Freshwater Marsh (52400)	0.02	0	--	0.02	0.02
Mule Fat Scrub (63310)	0.33	0	--	0.33	0.33
Non-native Riparian (65000)	0.32	0	--	0.31	0.31**
Southern Willow Scrub (63320)	3.76	0	--	3.75	3.75
Tamarisk Scrub (63810)[2]	0.41	0.02	--	0.21	0.21**
Tier II					
Diegan coastal sage scrub (32500)	25.5	2.5	0.2	9.7	9.5
Diegan coastal sage scrub - disturbed (32500)	2.1	1.8	1.5	0.2	-1.3
Tier III					
Non-native grassland (42200)	3.6	0	--	2.7	2.7**
Tier IV					
Disturbed Habitat (11300)	9.1	0.1	0.1	3.7	3.6**
Eucalyptus Woodland (79100)	0.7	0	--	0.6	0.6**
Non-native Vegetation (11000)	3	0.2	--	1.8	1.8**
N/A					
Urban/Developed (12000)	1.3	0.4	0.3		-0.3
TOTAL	**51.9**	**5.0**	**2.1**	**25.1**	**22.9**

[1] Upland communities/habitat types are rounded to the nearest 0.1 acre, while wetland communities are rounded to the nearest 0.01; totals do not reflect rounding.

[2] Tamarisk scrub at this location is within an upland landscape position and not associated with a streambed, riparian habitat, or wetlands.

* This stand of southern willow scrub supports wetland conditions and provides superior functions and values compared to the disturbed wetland proposed for Hardline Take.

** Area is identified as candidate for potential restoration to demonstrate equivalent or superior preservation.



MSCP Hardline Adjustment

SWEETWATER VISTAS

HELIX Environmental Planning

N 0 200 Feet

Figure 19

Hardline Take Summary:

- Hardline Take is restricted to 2.1 acres of disturbed portions of the site, including 1.7 acres of Diegan coastal sage scrub, the large majority of which is disturbed and contains a high percentage of fountain grass and broom baccharis; 0.1 acre of disturbed habitat, which provides limited biological function and value; and 0.3 acre of developed land, which provides negligible function and value.

- Out of the 1.7 acres of coastal sage scrub in the hardline take area, 1.5 acres are highly disturbed as a result of previous grading, vegetation clearing, and excavation activities. It is dominated by fountain grass, broom baccharis, and California buckwheat. It does not provide suitable nesting habitat for gnatcatcher, although it may provide temporary foraging and dispersal habitat.

- The 0.1 acre of disturbed habitat consists primarily of bare earth leftover from previous grading, clearing, and excavation activities. It provides very low biological function and value.

- The 0.3 acre of developed land consists entirely of compacted bare earth and provides very low biological function and value.

- In conclusion, the Hardline Take area does not support high quality habitat and does not substantially contribute to the long-term conservation of target species or help achieve the MSCP South County Subarea Plan objectives.

Hardline Give Summary:

- Hardline Give has been targeted as higher quality habitat providing equivalent or superior function to Hardline Take areas. The Hardline Give areas include 0.49 acre of arundo-dominated riparian, 1.17 acres of cismontane alkali marsh, 0.02 acre of disturbed wetland, 0.02 acre of freshwater marsh, 0.33 acre of mule fat scrub, 0.31 acre of non-native riparian, 3.75 acres of southern willow scrub, 0.21 acre of tamarisk scrub, 9.7 acres of Diegan coastal sage scrub, 2.7 acres of non-native grassland, 3.7 acres of disturbed habitat, 0.6 acre of eucalyptus woodland, and 1.8 acres of non-native vegetation.

- The wetland/riparian habitats being added to the preserve are natural areas along and tributary to Hansen's Creek and Little Hansen's Creek. Although there are no wetland/riparian habitats within the Hardline Take area, there are 6.11 acres of wetland/riparian habitats in the Hardline Give area.

- The 0.21 acre of tamarisk scrub is part of a natural drainage course that is tributary to Hansen's Creek. The stand does not support wetland conditions, but is a candidate area for restoration to southern willow scrub.

- The 9.4 acres of coastal sage scrub are of much higher quality than the scrub within Hardline Take. It is dominated by California sagebrush and California buckwheat. It provides marginal breeding functions for gnatcatcher, but also good quality temporary foraging and dispersal habitat. It also supports southwest spiny rush.

- The 2.7 acres of non-native grassland occur primarily along the steep eastern slope of the Hansen's Creek corridor. Non-native grassland is a habitat that does not occur within the Hardline Take area.

- The 3.7 acres of disturbed habitat consist of bare earth and patches of non-native annuals, including previously graded areas along Jamacha Boulevard and Pointe Parkway. It provides very low biological function and value, but portions of this area will be restored back to coastal sage scrub (Figure 18).

- The Hardline Give area also includes 0.6 acre of eucalyptus woodland and 1.8 acres of non-native vegetation. These habitats are not considered sensitive because they provide low biological function and value, although portions of the non-native vegetation will be restored to coastal sage scrub. Neither habitat occurs within Hardline Take.

- The proposed project includes both restoration and enhancement of coastal sage scrub within the Hardline Give area.

- In conclusion, the Hardline Give area supports higher quality habitat and represents superior preservation compared to the Hardline Take area.

RPO Consistency

The project would be consistent with the RPO, as described in the draft RPO findings below.

RPO Wetlands

The site supports RPO wetlands associated with Hansen's Creek and Little Hansen's Creek. The project avoids these RPO wetlands and no impacts would occur. All RPO wetlands on the site will be placed within biological open space with adequate buffers. Minimum 50-foot buffers have been incorporated over the RPO wetlands, with buffers reaching 375 feet at their maximum.

There are two locations where the project will require a reduced limited building zone in order to accommodate minimum 50-foot buffers. These locations are at the southern boundary of Lot 1 and at the western boundary of Lot 3. Retaining walls are incorporated at both of these locations to ensure the 50-foot buffers are protected. Non-combustible view walls are also proposed to mitigate for the reduced limited building zone with respect to fuel modification requirements. With the non-combustible view walls in place at these locations, the areas within the reduced limiting building zones would not be subject to additional fuel modification extending into the 50-foot RPO wetland buffer. Therefore, the reduced limited building zone at these two locations would not result in an adverse condition for RPO wetlands and required buffers.

RPO Sensitive Habitat Lands

As described above for the Biological Resource Core Area (BRCA), several areas qualify as RPO sensitive habitat lands on the site. The high quality stand of coastal sage scrub within the northwestern portion of the site is considered RPO sensitive habitat lands because it was confirmed to support rare plants, including Munz's sage; confirmed to support a breeding territory of gnatcatcher; is located within Hardline Preserve; and is designated as Very High value habitat on the BMO Habitat Evaluation Map. These RPO sensitive habitat lands will be avoided and preserved by the project.

The coastal sage scrub in the southeastern portion of the site on the mitigation parcel is also considered RPO sensitive habitat lands because it was confirmed to support a breeding territory of gnatcatcher; is located within PAMA; and is designated as Very High habitat on the BMO Habitat Evaluation Map. These RPO sensitive habitat lands will be avoided and preserved by the project.

Last, the dense riparian habitat in the central and lower project reach of Hansen's Creek, west of Jamacha Boulevard, is considered RPO sensitive habitat lands because it was confirmed to support breeding least Bell's vireo and other sensitive birds; provides a perennial water source for the local area; is designated as Very High value habitat on the BMO Habitat Evaluation Map; and is relatively free of non-native invasives. The riparian habitat in the entire project reach of Little Hansen's Creek, east of Jamacha Boulevard, is also considered RPO sensitive habitat lands because it was confirmed to support rare plants, confirmed to support breeding least Bell's vireo; is designated as PAMA; and is characterized by a unique arrangement of native habitat types. These RPO sensitive habitat lands will be avoided and preserved by the project.

2.6 INDIRECT IMPACTS

Indirect impacts may also occur as a result of project construction and placement of residential development adjacent to open space.

Noise

Short-term noise from operating heavy equipment during construction could temporarily and adversely affect certain wildlife. Breeding birds and mammals may temporarily or permanently leave their territories to avoid disturbances from construction activities. Noise effects would be considered significant if construction noise levels exceed 60 dB L_{eq} hourly average or ambient adjacent to sensitive bird species, including raptors, during their respective breeding seasons.

Human Activity

The project would introduce new residential uses to the site that are expected to increase human activity in the local area. If measures aren't taken to prevent humans from entering sensitive areas within project open space, the activities could result in degradation of habitat and indirect impacts on sensitive species. In addition, illegal dumping of lawn and garden clippings, trash, and other refuse could occur. However, it is noted that the site is surrounded by existing

residential uses and is already subject to human intrusion, as evidenced by sign of foot traffic and homeless encampments. The project would protect the site from unauthorized uses and open space areas would be protected within fencing and signage and actively managed in perpetuity under an RMP including regular patrols and reporting (Appendix M).

Domestic Pets

Domestic pets (e.g., dogs and cats) may also be brought onto the site as a result of new residential uses. Such introductions have potential to harm native wildlife species. However, it is noted that the site is adjacent to existing residential uses and is very likely already subject to some level of disturbance and predation by domestic animals. The project would protect open space with fencing and would actively manage the areas in perpetuity.

Non-Native Plants

Non-native plants could potentially colonize and spread into native habitats as a result of new residential uses. Many non-native plants typical of residential landscaping are invasive and can displace native vegetation (reducing native species diversity), potentially increase flammability and fire frequency, change ground and surface water levels, and potentially adversely affect native wildlife dependent on native plant species. However, project landscaping is required to prevent the use of non-native, invasive plants and the open space areas would be actively managed with regular weed removal to control non-natives. Further, the site is already heavily infested by non-native vegetation and the project would implement enhancement measures to restore native habitats in open space.

Night Lighting

Last, night lighting that extends from development onto adjacent wildlife habitat can discourage nocturnal wildlife and can provide nocturnal predators with an unnatural advantage over their prey. However, the project is required to direct all lighting that must occur adjacent to open space areas in a downward direction with appropriate shielding and illumination technology to prevent adverse spillover of light.

3.0 SPECIAL STATUS SPECIES

3.1 GUIDELINES FOR DETERMINING SIGNIFICANCE

Would the project 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 the USFWS or CDFW?

Any of the following conditions would be considered significant if:

A. The project would impact 1 or more individuals of a species listed as federally or state endangered or threatened.

B. The project would impact an on-site population of a County List A or B plant species, or a County Group 1 animal species, or a species listed as a state Species of Special Concern.

C. The project would impact the local long-term survival of a County List C or D plant species or a County Group 2 animal species.

D. The project may impact arroyo toad aestivation, foraging, or breeding habitat.

E. The project would impact golden eagle habitat.

F. The project would result in a loss of functional foraging habitat for raptors.

G. The project would impact the viability of a core wildlife area, defined as a large block of habitat (typically 500 acres or more not limited to project boundaries, though smaller areas with particularly valuable resources may also be considered a core wildlife area) that supports a viable population of a sensitive wildlife species or supports multiple wildlife species.

H. The project would cause indirect impacts, particularly at the edge of proposed development adjacent to proposed or existing open space or other natural habitat areas, to levels that would likely harm sensitive species over the long term.

I. The project would impact occupied burrowing owl habitat.

J. The project would impact occupied cactus wren habitat, or formerly occupied coastal cactus wren habitat that has been burned by wildfire.

K. The project would impact occupied Hermes copper butterfly habitat.

L. The project would impact nesting success of the following sensitive bird species through grading, clearing, fire fuel modification, and/or other noise generating activities such as construction:

- Coastal cactus wren
- Coastal California gnatcatcher
- Least Bell's vireo
- Southwestern willow flycatcher
- Tree-nesting raptors
- Ground-nesting raptors
- Golden eagle
- Light-footed clapper rail

3.2 ANALYSIS OF PROJECT EFFECTS

The project would result in significant impacts under the above guidelines for the following reasons:

A. Absent mitigation, the project would impact 1 or more individuals of a species listed as federally or state endangered or threatened.

Coastal California Gnatcatcher

The project would avoid direct impacts to the two locations on and off site where coastal California gnatcatcher was confirmed to be breeding during the 2015 breeding season protocol surveys. These two locations to be avoided include the coastal sage scrub within existing Hardline Preserve in the northwestern portion of the site and the coastal sage scrub in the southeastern portion of the site. Both of these areas will be placed within biological open space and connectivity with additional coastal sage scrub located on and off site will be conserved. The on-site gnatcatcher breeding territory is on a slope above the rest of the site, on a different level from the area of more disturbed coastal sage scrub just to the east. The project design provides vertical separation between the gnatcatcher habitat and proposed development by locating the road and Lot 1 on the lower terrace. This will help maintain the integrity of the gnatcatcher habitat by reducing edge effects.

The potential for gnatcatchers to breed at other locations on the site is considered low based on low quality and fragmentation of habitat, lack of constituent vegetative elements (e.g., the areas are dominated by broom baccharis), and the fact that gnatcatchers were not observed using the areas during the 2015 protocol surveys. Despite the low potential for breeding, gnatcatchers could breed at off-site locations within 500 feet of the project site, where they might be disturbed by project-related construction noise. In addition, gnatcatchers would be expected to use other scrub-vegetated portions of the site for foraging, dispersal, and migration activities. Impacts to breeding gnatcatchers, occupied habitat, and temporary (foraging, migration, and dispersal) habitat would be significant. Mitigation measures **BIO-1** and **BIO-2** would reduce project impacts to less than significant.

Least Bell's Vireo

Up to three least Bell's vireo breeding territories were confirmed during the 2015 surveys within better quality riparian habitat associated with Hansen's and Little Hansen's Creeks.

The project would avoid and place all occupied and suitable vireo habitat within Hansen's and Little Hansen's Creek into biological open space. Therefore, no direct impacts to occupied habitat for this species would occur. Adequate setbacks and project design features have been incorporated into the project to ensure vireo breeding sites are buffered and protected from potential indirect effects of project operation.

Project construction within 500 feet of on- and off-site breeding habitat for this sensitive bird species could result in adverse indirect impacts related to construction noise. These impacts would be considered significant. Mitigation measure **BIO-3** would reduce impacts to less than significant.

B. Absent mitigation, the project would impact an on-site population of a County List A or B plant species, or a County Group 1 animal species, or a species listed as a state Species of Special Concern.

Munz's Sage

The project would impact three Munz's sage individuals of the 11 individuals confirmed on site; the remaining eight individuals would be preserved within biological open space. Project impacts on Munz's sage relative to the on-site population are greater than 5 percent; however, impacts to three individuals would not have a substantial adverse effect on the local long-term survival of the species. This species was reported as being "frequent" and "common" within the Pointe Specific Plan Area, including coastal sage scrub and chamise chaparral within mitigation land that is now preserved open space near Dictionary Hill within 1.0 mile of the site. It is also reported from the San Diego National Wildlife Refuge at a location within 3.0 miles of the project site. The project would preserve the majority of on-site concentrations of this species in addition to extensive suitable habitat (i.e., coastal sage scrub supported by suitable soils, hydrology, slope, aspect, and topography). The project would restore non-native habitat within biological open space to native coastal sage scrub habitat, and locally-sourced seed and/or container plants for this species would be used in the restoration plant palette. Therefore, impacts are considered less than significant.

Red-Shouldered Hawk and Cooper's Hawk

Red-shouldered hawk and Cooper's hawk were observed in areas surrounding Hansen's Creek during 2015 surveys. Although no red-shouldered hawk nests were observed, suitable nesting habitat occurs and this species has the potential to breed within trees associated with Hansen's Creek. Cooper's hawk was observed on multiple occasions and is presumed to be using habitat associated with Hansen's Creek for breeding. The project would avoid and place all suitable habitat for red-shouldered hawk and Cooper's hawk within Hansen's Creek into biological open space. Therefore, no direct impacts to these species or their breeding habitat would occur.

Project construction within 500 feet of breeding habitat for these raptors could result in adverse indirect impacts related to construction noise. These impacts would be considered significant. Mitigation measure **BIO-3** would reduce impacts to less than significant.

Turkey Vulture

Turkey vulture was observed soaring over the site during 2015 surveys. No nesting habitat occurs on the site. Marginal foraging habitat occurs on site; however, there are no biologically based reasons as to why this species would specifically select the site for foraging. The project would preserve potential foraging habitat within biological open space that could be used by this species. Impacts on this relatively common species due to loss of foraging habitat are less than significant.

Northern Harrier

A single harrier was observed flying over the site on a single occasion during the 2015 surveys. The site is too hilly and too disturbed to support breeding habitat for this species. Marginal foraging habitat occurs and this species is likely to forage over open habitat in the local area. Better quality foraging habitat occurs to the south and southeast of the site in the expansive grassland that surrounds Sweetwater Reservoir. The project would preserve marginal foraging habitat within biological open space that could be used by this species. Impacts on this MSCP Covered Species due to loss of foraging habitat are less than significant.

C. Absent mitigation, the project would impact the local long-term survival of a County List C or D plant species or a County Group 2 animal species.

San Diego County Sunflower and Southwestern Spiny Rush

The project would result in less than significant impacts to San Diego County sunflower and southwestern spiny rush, both County List D plant species. Given that these two species are relatively common in the region and the project would preserve the majority of the on-site populations within biological open space, project impacts would not impact their local long-term survival and would be less than significant.

Monarch Butterfly

Monarch butterfly was observed flying through the project site during 2015 surveys. This species is expected to migrate through the region, but would not roost on the site due to its location. Extensive habitat for the monarch is already preserved throughout the region and within the San Diego National Wildlife Refuge in the local area. The project would contribute additional preserved habitat within biological open space. Impacts on this species are less than significant.

Yellow Warbler

Yellow warbler was observed in Hansen's Creek during the 2015 surveys. The project would avoid and place all suitable habitat for yellow warbler within Hansen's Creek into biological open space. Therefore, no direct impacts to occupied habitat for this species would occur.

Project construction within 500 feet of breeding habitat for this sensitive bird species could result in adverse indirect impacts related to construction noise. These impacts would be considered significant. Mitigation measure **BIO-3** would reduce impacts to less than significant.

F. Absent mitigation, the project would result in a loss of functional foraging habitat for raptors.

The project site supports foraging habitat for raptors known to the local area, including common species such as red-tailed hawk and sensitive species such as northern harrier. The project would result in the loss of sparse scrub and grassland habitat that provides foraging habitat for these raptors. Impacts would be significant from the proposed project. Mitigation measure **BIO-2** and **BIO-4** would reduce impacts to less than significant.

L. Absent mitigation, the project would impact nesting success of coastal California gnatcatcher, least Bell's vireo, and tree-nesting raptors through grading, clearing, fire fuel modification, and/or other noise generating activities such as construction.

Project construction could impact the nesting success of coastal California gnatcatcher, least Bell's vireo, and tree-nesting raptors, all of which have the potential to nest on and/or in the immediate vicinity of construction impact areas. Noise from such sources as clearing, grading, and blasting could result in an impact to wildlife. Noise-related impacts would be considered significant if sensitive species (such as coastal California gnatcatcher, least Bell's vireo, and raptors) were displaced from their nests and failed to breed. Raptors or other sensitive bird species nesting within any area impacted by noise exceeding 60 decibels (dB) or ambient could be significantly impacted. If coastal California gnatcatchers, least Bell's vireo or tree-nesting raptors are nesting within 500 ft of the impact area, effects resulting from construction noise could be significant. Impacts would be reduced to less than significant through the implementation of mitigation measure **BIO-3**.

The project would not result in significant impacts under the above guidelines for the following reasons:

D. The project would not impact arroyo toad aestivation, foraging, or breeding habitat.

The site contains no habitat suitable for the arroyo toad. The species is believed to have been extirpated from the local area. The project reach of Hansen's Creek and Little Hansen's Creek do not provide suitable habitat for arroyo toad. No impacts would occur.

E. The project would not impact golden eagle habitat.

The project site does not contain nesting habitat and it is not within any known golden eagle territory. While there is adequate eagle foraging habitat (open non-native grassland) on site, the surrounding habitat is fragmented and subjected to urban uses. Golden eagles are occasional visitors to the San Diego National Wildlife Refuge; however, no active nest sites occur. As reported by County staff, the closest golden eagle nest is the San Miguel Mountain

pair, which nests eight miles to the southeast of the site. A prime foraging area for this pair is the area around Sweetwater Reservoir, south of the project. The scrubland nature over most of the project site and the surrounding urban areas indicate that golden eagle would have a low potential to forage on the site. Therefore, no impacts would occur to golden eagle or its habitat.

G. The project would not impact the viability of a core wildlife area, defined as a large block of habitat (typically 500 acres or more not limited to project boundaries, though smaller areas with particularly valuable resources may also be considered a core wildlife area) that supports a viable population of a sensitive wildlife species or supports multiple wildlife species.

The project site is not located within a core wildlife area; therefore, the project would have no impact on core wildlife areas. The project would contribute 27.9 acres of preserved habitat to the local area through the establishment of on-site biological open space. This open space supports the following target resources and wildlife functions: Diegan coastal sage scrub, including habitat occupied by multiple sensitive plant species and important breeding and dispersal habitat for coastal California gnatcatcher and least Bell's vireo. It provides adequate space and resources, and functions to facilitate bird and mammal movement through the local area, including target species for conservation in the region. The addition of the biological open space to the local area if the project is approved would have a beneficial impact on multiple wildlife species.

H. The project would not cause indirect impacts, particularly at the edge of proposed development adjacent to proposed or existing open space or other natural habitat areas, to levels that would likely harm sensitive species over the long term.

Project developments are proposed adjacent to proposed biological open space; however, adequate setbacks are in place and potential indirect impacts of project operation would be minimized through implementation of project design features. Potentially significant indirect impacts to sensitive species resulting from human access, domestic animals, exotic species, and lighting would be avoided through the following project design features that include: (1) permanent fencing shall be installed around biological open space, and signs precluding access shall be posted; (2) only non-invasive plant species would be included in the landscape plan for the site (species not listed on the California Invasive Plant Inventory prepared by the California Invasive Plant Council [Cal-IPC; 2006]); and (3) all project-related lighting would be required to adhere to Division 9 of the San Diego County Light Pollution Code. Lighting within the proposed project footprint adjacent to undeveloped habitat would be of the lowest illumination allowed for human safety, selectively placed, shielded, and directed away from these areas. Therefore, no significant impact to sensitive species resulting from indirect impacts from human access, domestic animals, exotic species, or lighting would occur over the long term. Potential indirect impacts from construction noise are discussed under Guideline 3.1.L.

I. The project would not impact occupied burrowing owl habitat.

The project site does not support suitable burrowing owl habitat and the project would have no impact on burrowing owl.

J. The project would not impact occupied cactus wren habitat, or formerly occupied coastal cactus wren habitat that has been burned by wildfire.

The project site does not contain suitable habitat for the coastal cactus wren. This species was not observed or otherwise detected during 2015 biological surveys. The project would have no impact on cactus wren.

K. The project would not impact occupied Hermes copper butterfly habitat.

The project site does not support Hermes copper butterfly habitat. Although the species host plant, spiny redberry, was observed at several locations within the site, it was not observed in association with California buckwheat. Therefore, Hermes copper is not likely to occur and the project would have no impact on the species.

3.3 CUMULATIVE IMPACT ANALYSIS

The study area for cumulative biological projects impacts was based on an approximate two-mile radius of the project site (Figure 20), including the PAMA and Preserve areas east and west of the project site and extending south to the northern edge of Sweetwater Reservoir and west to Dictionary Hill. This cumulative study area was chosen because it includes areas with biological resources similar to those found on the project site, including habitat for gnatcatcher and other wildlife that use the project site. The study area includes areas within a reasonable distance from the project site that may have a biologically-based connection to the project site in terms of habitat, connectivity, and development in the watershed.

A total of 25 projects (including the proposed project) were reviewed for this cumulative analysis (Figure 20; Table 9). Of these 25 cumulative projects, many are within the footprint of The Pointe San Diego development, and thus their impacts were covered by The Pointe EIR. This report uses the acreage of coastal sage scrub impacts and mitigation identified in The Pointe Habitat Loss Permit as it is a more updated analysis than The Pointe EIR; however, the number of gnatcatcher pairs impacted is taken from The Pointe EIR since it represents the worst case. Three projects were located outside of The Pointe footprint and would result in significant or potentially significant cumulative impacts to sensitive biological resources. The project is also listed with its own impacts even though it is within The Pointe footprint; this may overstate the total cumulative impact but ensures the impact is not underreported. The remaining projects either would not result in impacts to sensitive biological resources or information on impacts is not available.

The only cumulative project that would impact known gnatcatcher territories was The Pointe San Diego, which, according to The Pointe San Diego EIR, would affect 16 of 18 existing gnatcatcher pairs. The Pointe San Diego EIR determined this impact was significant and

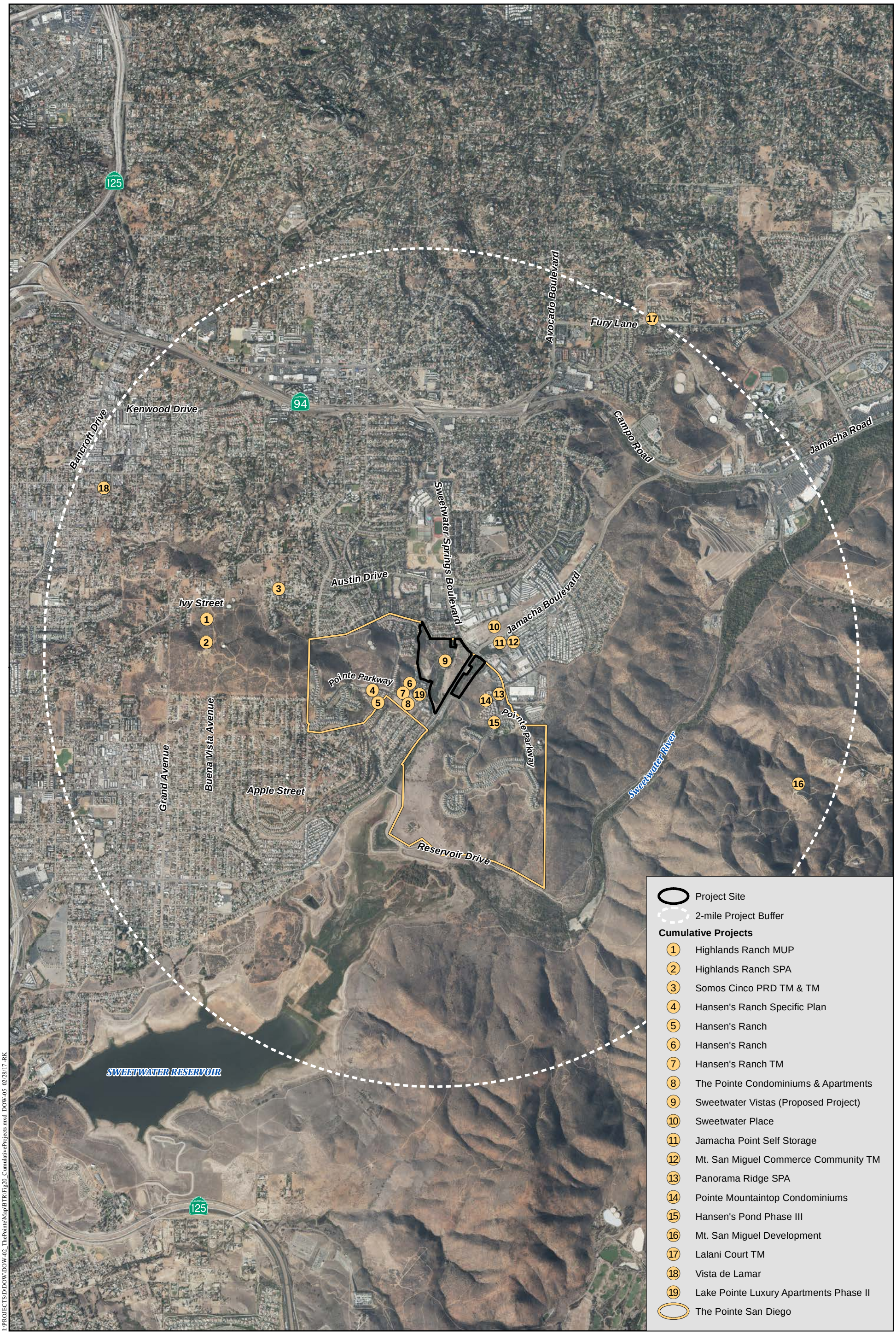
unmitigable. A subsequent gnatcatcher survey conducted for The Pointe San Diego project's Habitat Loss Permit found 24 gnatcatcher territories within The Pointe site: 20 pairs and four individuals. The survey concluded that 11 gnatcatcher territories would be directly impacted by the project, while the other 13 could be indirectly impacted. The proposed mitigation site was surveyed at the same time and determined to support eight territories (five pairs and three individuals), with room for two or three more pairs.

The proposed Sweetwater Vista project is located within The Pointe San Diego footprint, and one gnatcatcher pair was observed on site, with another pair observed adjacent to the site. Both pairs are expected to persist following project development; thus the project would not worsen the significant cumulative loss of gnatcatcher pairs that was disclosed in The Pointe San Diego EIR.

The cumulative projects with available data, including the proposed project, would impact 223.6 acres of coastal sage scrub, which is gnatcatcher habitat. This constitutes a significant cumulative impact, as it would further reduce the amount of nesting and foraging habitat available for the gnatcatcher. The proposed project's contribution to this impact is 14.9 acres. Thus, the proposed project would contribute to significant cumulative impacts to gnatcatcher. However, the project's contribution is only 6.9 percent of this cumulative impact on gnatcatcher habitat, which is considered less than cumulatively considerable. In addition, the project would mitigate for its impacts through on-site preservation and restoration of 22.4 acres of Tier II or better habitat on site.

The cumulative projects with available data, including the proposed project, would impact 223.6 acres of coastal sage scrub and 86.8 acres of non-native grassland, portions of which could be used as raptor foraging habitat. Cumulative impacts to raptor foraging would be significant since the cumulative projects would further reduce the amount of foraging habitat available for raptors. The proposed project's contribution to this impact consists of 14.9 acres of coastal sage scrub and 0.9 acre of non-native grassland. Therefore, the proposed project would contribute to significant cumulative impacts to raptors. However, the project's contribution is only 6.9 percent of the cumulative coastal sage scrub impact and 1.0 percent of the cumulative non-native grassland impact, and thus considered less than cumulatively considerable. In addition, the project would mitigate for its impacts through on-site preservation and restoration of 22.4 acres of Tier II or better habitat and 0.5 acre of Tier III or better habitat on site.

In summary, although the project would contribute to significant cumulative impacts to gnatcatcher habitat and raptor foraging habitat, that contribution is less than cumulatively considerable and, in any event, will be mitigated through habitat preservation and restoration on site.



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Cumulative Projects

SWEETWATER VISTAS

HELIX Environmental Planning

N 0 2,500 Feet

Figure 20

Table 9
CUMULATIVE IMPACTS ON BIOLOGICAL RESOURCES

PROJECT NUMBER†	PROJECT NAME	NOTES	RESOURCE*							
			CSS		CAGN		NNG		Riparian/ Wetland/WUS	
			Impacts (I)	Mitigation (M)	I	M	I	M	I	M
PDS2010-3100-3958	Hansen's Ranch	Approved 1/4/80 but superseded by The Pointe project.	-	-	-	-			-	-
PDS2010-3100-4216	Hansen's Ranch TM	Approved 1/9/81 but superseded by The Pointe project	-	-	-	-			-	-
PDS2010-3100-4252, PDS2010-3181-4252, PDS2010-3300-81-027	Hansen's Pond Phase III	Approved 6/26/81 but superseded by The Pointe project.	-	-	-	-			-	-
PDS2010-3813-85-02, PDS2010-3300-86-064, PDS2010-3100-4616, PDS2010-3813-86-07, PDS2010-3300-79-069, PDS2010-3600-86-047	Hansen Ranch	Approved 7/31/85 but superseded by The Pointe project.	-	-	-	-	-	-	-	-
PDS2011-3100-4640	Mt. San Miguel Development		-	-	-	-			-	-
GPA 90-02, SPA 88-001, R88-001, TM 4828RPL1, P89-014, P89-015, P89-016, Log No. 90-GP-3	The Pointe San Diego	NNG impacts were 85.9 out of 94.2 existing. Impact was considered significant but no mitigation was identified.	190	307.6	16 pairs (out of 18)	unmitigable, but breeding season avoidance	85.9	-	10.8	10.8

Table 9 (cont.)
CUMULATIVE IMPACTS ON BIOLOGICAL RESOURCES

PROJECT NUMBER†	PROJECT NAME	NOTES	RESOURCE*							
			CSS		CAGN		NNG		Riparian/ Wetland/WUS	
			Impacts (I)	Mitigation (M)	I	M	I	M	I	M
PDS1998-3100-4904	Somos Cinco PRD TM & TM/TE4904		0	0	0	0			0	0
PDS2010-3813-88-001, PDS2010-3810-79-06, PDS2010-3813-86-007	Hansen Ranch Specific Plan	Addendum to The Pointe EIR. No new impacts.	0	0	0	0	0	0	0	0
TM 4828R1, MUP 89-014W1	The Pointe San Diego Revised Map	Addendum to The Pointe EIR. No new impacts.	0	0	0	0	0	0	0	0
PDS2010-3813-83-001	Panorama Ridge Specific Plan Amendment	No documents available from the County. This approval was superseded by later projects on the same site.	-	-	-	-			-	-
PDS2012-3950-96-002, Log No. 96-19-5	The Pointe Habitat Loss Permit	Addendum to The Pointe EIR. It was concluded that the amount of Coastal sage scrub impacted had not significantly changed and that the level of significance for the loss of Coastal sage scrub had not significantly increased.	200.2	434	11 (Direct impact to 11 territories out of 24 (20 pairs and 4 individuals). Indirect to the other 13.)	8 territories (5 pairs and 3 individuals, and room for 2-3 more)	-	-	-	-

Table 9 (cont.)
CUMULATIVE IMPACTS ON BIOLOGICAL RESOURCES

PROJECT NUMBER†	PROJECT NAME	NOTES	RESOURCE*							
			CSS		CAGN		NNG		Riparian/ Wetland/WUS	
			Impacts (I)	Mitigation (M)	I	M	I	M	I	M
PDS1999-3300-90-035	Highlands Ranch MUP	Application withdrawn	-	-	-	-			-	-
PDS1999-3813-91-001	Highlands Ranch SPA	Application withdrawn	-	-	-	-			-	-
PDS2002-3300-01-003	The Pointe Apartments	Addendum to The Pointe EIR. No new impacts.	0	0	0	0	0	0	0	0
PDS2002-3100-5170	Mt. Miguel Commerce Community TM	Wetland mitigation of 1.75 acres consisted of 0.63 acre of creation and 1.12 acres of restoration.	0	0	0	0	-	-	0.58	1.75
L12932; Log No. 89-19-015D	The Pointe San Diego Grading Permit	Addendum to The Pointe EIR. No new impacts.	0	0	0	0	0	0	0	0
PDS2003-3100-5297, Log No. 89-19-015G	The Pointe Lakeview Condominiums TM (Pointe Lakeview Multi-Family Phase I)	Addendum to The Pointe EIR. No new impacts.	0	0	0	0	0	0	0	0
PDS2002-3600-02-001, P89-015W2, SPA01-003, Log No. 89-19-015B; TM5296Rp1/Log No. 89-19-015F	Lake Pointe Luxury Apartments Phase II, Pointe Lakeview Phase II	Addendum to The Pointe EIR. No new impacts.	0	0	0	0	0	0	0	0

Table 9 (cont.)
CUMULATIVE IMPACTS ON BIOLOGICAL RESOURCES

PROJECT NUMBER†	PROJECT NAME	NOTES	RESOURCE*							
			CSS		CAGN		NNG		Riparian/ Wetland/WUS	
			Impacts (I)	Mitigation (M)	I	M	I	M	I	M
PDS2003-3100-5103	Lalani Court TM	CSS mitigation is listed as either 1:1 or 1.5:1 depending on location; 1:1 is assumed as the worst case.	8	8	observed foraging but not breeding	breeding season avoidance	-	-	0	0
PDS2002-3300-02-001 (MUP 02-001), TM 5281RPL1, Log No. 89-19-015C	Pointe Mountaintop Condominiums	Addendum to The Pointe EIR. No new impacts.	0	0	0	0	0	0	0	0
PDS2006-3399-00-013	Jamacha Point Self Storage	No documents available from the County.	-	-	-	-	-	-	-	-
PDS2013-TM-5576	Vista Del Lamar Tentative Map	The site is entirely urban/developed.	0	0	0	0	0	0	0	0
PDS2014-GPA-14-003, PDS2014-REZ-14-003, PDS2014-TM-5588, PDS2014-STP-14-015	Sweetwater Place	Finished public review on October 26, 2015.	0	0	0	0			0.64	0.68
		Subtotal	***208.2***	***442***	***16***	***unmitigable***	***85.9***	***0***	***12.02***	***13.23***

Table 9 (cont.)
CUMULATIVE IMPACTS ON BIOLOGICAL RESOURCES

PROJECT NUMBER†	PROJECT NAME	NOTES	RESOURCE*							
			CSS		CAGN		NNG		Riparian/ Wetland/WUS	
			Impacts (I)	Mitigation (M)	I	M	I	M	I	M
PDS2015-ER-89-19-015I, PDS2015-REZ-15-008, PDS2015-TM-5608, PDS2015-SPA-15-002, PDS2015-STP-15-016, PDS2015-MUP-89-015W4, PDS2015-GPA-15-006	Sweetwater Vistas (Proposed Project)		14.9	22.4	0	0	0.9	0.5	0.04	0.04
		TOTAL	**223.6**	**465.1**	**16**	**unmitigable**	**86.8**	**0.5**	**12.06**	**13.27**

* CSS=coastal sage scrub, CAGN=coastal California gnatcatcher, NNG=non-native grassland, WUS=Waters of the U.S.
†TM = Tentative Map; TPM = Tentative Parcel Map; MUP = Major Use Permit; ND = Negative Declaration; EIR = Environmental Impact Report; MND = Mitigated Negative Declaration; SPA = Specific Plan Amendment; - = Information Not Available or Not Applicable.

3.4 MITIGATION MEASURES AND DESIGN CONSIDERATIONS

BIO-1 No grading or clearing of Diegan coastal sage scrub shall occur during the breeding season of the coastal California gnatcatcher (February 15 to August 31). All grading permits, improvement plans, and the final map shall state the same. If clearing or grading would occur during the breeding season for the gnatcatcher, a pre-construction survey shall be conducted to determine whether gnatcatchers occur within the impact area(s). Impacts to occupied habitat shall be avoided. If there are no gnatcatchers nesting (includes nest building or other breeding/nesting behavior) within that area, grading and clearing shall be allowed to proceed. If, however, any gnatcatchers are observed nesting or displaying breeding/nesting behavior within the area, construction in that area shall be postponed until all nesting (or breeding/nesting behavior) has ceased or until after August 31.

BIO-2 Mitigation for 14.9 acres of impacts to Diegan coastal sage scrub, a Tier II habitat on site that provides breeding, foraging, and dispersal habitat for the coastal California gnatcatcher and that may serve as functional foraging habitat for raptors, shall occur at a 1.5:1 ratio through a combination of Tier II and Tier I preservation and 3.7 acres of Diegan coastal sage scrub restoration totaling 22.4 acres, all on site within the biological open space easement to be designated as Hardline preserve.

BIO-3 If operation of construction dozers, excavators, rock crushers, pile drivers, or cast-in-drilled-hole equipment occurs during the breeding seasons for the coastal California gnatcatcher (February 15 to August 31), least Bell's vireo (March 15 to September 15), or nesting raptors (January 15 to July 15), pre-construction survey(s) shall be conducted by a qualified biologist as appropriate to determine whether these species occur within the areas potentially impacted by noise. If it is determined at the completion of pre-construction surveys that active nests belonging to these sensitive species are absent from the potential impact area, construction shall be allowed to proceed. If pre-construction surveys determine the presence of active nests belonging to these sensitive species, then operation of the following equipment shall not occur within the specified distances from an active nest during the respective breeding seasons: a dozer within 400 feet; an excavator within 350 feet; rock crusher equipment within 1,350 feet; a breaker within 500 feet; a pile driver within 2,600 feet; and cast-in-drilled holes equipment within 350 feet. All grading permits, improvement plans, and the final map shall state the same. Construction shall: (1) be postponed until a qualified biologist determines the nest(s) is no longer active or until after the respective breeding season; or (2) not occur until a temporary noise barrier or berm is constructed at the edge of the development footprint and/or around the piece of equipment to ensure that noise levels are reduced to below 60 dBA or ambient. Decibel output will be confirmed by a County-approved noise specialist and intermittent monitoring by a qualified biologist to ensure that conditions have not changed will be required. If pre-construction surveys identify coastal California gnatcatcher, least Bell's vireo, or nesting raptors, any necessary

blasting will be restricted to the non-breeding season for the identified birds (September 1 to February 14 for coastal California gnatcatcher; July 16 to January 14 for nesting raptors; and September 16 to March 14 for least Bell's vireo) or be completed using wholly chemical means.

BIO-4 Mitigation for impacts to 0.9 acre of non-native grassland, a Tier III habitat on site that may serve as foraging habitat for raptor species, shall occur at a 0.5:1 ratio through the preservation of 0.5 acre of Tier III habitat on site within the biological open space easement to be designated as Hardline preserve.

3.5 CONCLUSIONS

The proposed project could result in significant impacts to County Group 1 animals, County Group 2 animals, and raptors with the potential to nest and/or forage over the site and immediate vicinity. Such impacts could result from direct disturbance, loss of foraging habitat, and noise. Implementation of mitigation measures **BIO-1** through **BIO-4,** however, would reduce these impacts to less than significant levels.

4.0 RIPARIAN HABITAT OR SENSITIVE NATURAL COMMUNITY

4.1 GUIDELINES FOR DETERMINING SIGNIFICANCE

Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the USFWS or CDFW?

Any of the following conditions would be considered significant if:

A. Project-related grading, clearing, construction, or other activities would temporarily or permanently remove sensitive native or naturalized habitat (as listed in Table 5 in the County Guidelines for Determining Significance [County 2010b], excluding those without a mitigation ratio) on or off the project site.

B. Any of the following will occur to or within jurisdictional wetlands and/or riparian habitats as defined by the USACE, CDFW, and County: vegetation removal; grading; obstruction or diversion of water flow; adverse change in velocity, siltation, volume of flow, or runoff rate; placement of fill; placement of structures; road crossing construction; placement of culverts or other underground piping; any disturbance of the substratum; and/or any activity that may cause an adverse change in native species composition, diversity, and abundance.

C. The project would draw down the groundwater table to the detriment of groundwater-dependent habitat, typically a drop of 3 feet or more from historical low groundwater levels.

D. The project would cause indirect impacts, particularly at the edge of proposed development adjacent to proposed or existing open space or other natural habitat areas, to levels that would likely harm sensitive habitats over the long term.

E. The project does not include a wetland buffer adequate to protect the functions and values of existing wetlands.

4.2 ANALYSIS OF PROJECT EFFECTS

The project would result in significant impacts under the above guidelines for the following reasons:

A. Absent mitigation, project-related grading, clearing, construction, or other activities would temporarily or permanently remove sensitive native or naturalized habitat (as listed in Table 5 in the County Guidelines for Determining Significance [County 2010b], excluding those without a mitigation ratio) on or off the project site.

The project would result in unavoidable impacts to sensitive natural communities, including 14.9 acres of Diegan coastal sage scrub (Tier II) and 0.9 acre of non-native grassland (Tier III). Impacts to sensitive natural communities would be considered significant. Mitigation measures **BIO-2** and **BIO-4** would reduce impacts to less than significant.

B. Absent mitigation, the following would occur to or within jurisdictional wetlands and/or riparian habitats as defined by the USACE, CDFW, and County: vegetation removal; grading; diversion of water flow; placement of fill; placement of structures; road crossing construction; placement of culverts; disturbance of the substratum; and activities that may cause an adverse change in native species composition, diversity, and abundance.

The project would avoid and permanently preserve all riparian habitat on site; therefore, no impacts to riparian habitat would occur.

The project would, however, result in unavoidable impacts occurring to 0.03 acre of non-wetland waters of the U.S. subject to USACE jurisdiction. This impact would occur at a nuisance-fed, unnamed tributary to Hansen's Creek. This same tributary constitutes non-wetland waters of the State subject to RWQCB jurisdiction. A total of 0.04 acre of unvegetated streambed subject to CDFW jurisdiction will be impacted within the same unnamed tributary. Mitigation measure **BIO-5** would reduce impacts to less than significant.

The project would not result in significant impacts under the above guidelines for the following reasons:

C. The project would not draw down the groundwater table to the detriment of groundwater-dependent habitat, typically a drop of 3 feet or more from historical low groundwater levels.

No groundwater withdrawals or activities that could result in lowering of the groundwater table are proposed. No significant impact would occur.

D. The project would not cause indirect impacts, particularly at the edge of proposed development adjacent to proposed or existing open space or other natural habitat areas, to levels that would likely harm sensitive habitats over the long term.

The project would not result in indirect impacts from the spread of non-native plant species. Non-native species are already prevalent throughout the project site. As a design feature to avoid potential significant impacts from project landscaping, only non-invasive plant species would be included in the landscape plan for the site (species not listed on the California Invasive Plant Inventory prepared by the California Invasive Plant Council [Cal-IPC; 2006]). No significant impact would occur.

E. The project does not include a wetland buffer adequate to protect the functions and values of existing wetlands.

The project provides minimum 50-foot buffers around wetlands and limited building zones further protecting resources on and in the immediate vicinity of the site. No impact would occur.

4.3 CUMULATIVE IMPACT ANALYSIS

As discussed in Section 3.3 above, the cumulative projects with available data, including the proposed project, would impact 223.6 acres of coastal sage scrub and 86.8 acres of non-native grassland. In addition, cumulative projects would impact 12.06 acres of riparian/wetland/ jurisdictional waters. Cumulative impacts to these habitat types would be significant. The proposed project would impact 14.9 acres of coastal sage scrub, 0.9 acre of non-native grassland, and 0.04 acre of CDFW jurisdictional streambed (of which 0.03 acre is also USACE jurisdictional). Therefore, the proposed project would contribute to significant cumulative impacts to sensitive riparian and natural habitats. However, the project's contribution is only 6.9 percent of the cumulative coastal sage scrub impact, 1.0 percent of the cumulative non-native grassland impact, and 0.3 percent of the wetland/waters impact, and thus considered less than cumulatively considerable. In addition, the project would mitigate all habitat impacts to less than significant. Although a significant impact to sensitive habitats would occur and the proposed project would contribute to these significant impacts, such impacts would be mitigated and the proposed project's contribution to cumulative impacts to sensitive habitats would be less than significant.

4.4 MITIGATION MEASURES AND DESIGN CONSIDERATIONS

BIO-5 Impacts to 0.03 acre of USACE- and RWQCB-jurisdictional non-wetland waters of the U.S./State shall be mitigated at a 1:1 ratio through one or a combination of the following: 0.03 acre of establishment, re-establishment, rehabilitation, and/or preservation mitigation on site within biological open space easement; 0.03 acre of establishment, re-establishment, rehabilitation, and/or preservation mitigation off site within biological open space easement; purchase of mitigation credits at the San Luis Rey Mitigation Bank or other location deemed acceptable by the County, USACE, and RWQCB, with final impact acreage and mitigation requirements to be determined by the USACE and RWQCB as part of the 404/401 permitting process. Copies of the CWA Section 404 permit and CWA Section 401 Water Quality Certification shall be submitted to PDS prior to Final Map recordation or Grading Permit issuance.

BIO-6 Impacts to 0.04 acre of CDFW-jurisdictional unvegetated streambed shall be mitigated at a 1:1 ratio through 0.04 acre of preservation mitigation on site within biological open space easement or other means deemed acceptable by the County and CDFW, with final impact acreage and mitigation requirements to be determined by the CDFW as part of the CFG Code Section 1602 SAA process. A copy of the SAA shall be submitted to PDS prior to Final Map recordation or Grading Permit issuance.

4.5 CONCLUSION

The project would result in significant impacts to sensitive natural communities; however, a combination of avoidance through project design, proposed biological open space, and mitigation measures to fully compensate the loss of habitat would reduce impacts to below a level of significance. Mitigation is proposed at ratios consistent with those required by the County, USACE, RWQCB, and CDFW. With the implementation of mitigation measures **BIO-2**, **BIO-4**, **BIO-5,** and **BIO-6**, impacts on sensitive natural communities would be reduced to less than significant.

5.0 JURISDICTIONAL WETLANDS AND WATERWAYS

5.1 GUIDELINES FOR DETERMINING SIGNIFICANCE

Would the project have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the CWA (including but not limited to marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

5.2 ANALYSIS OF PROJECT EFFECTS

The project would have no adverse impacts on federally-protected wetlands. The project would preserve 3.7 acres of federally-protected wetlands associated with Hansen's Creek and Little Hansen's Creek. Preservation represents a beneficial impact of the project on federally-protected wetlands and no mitigation is required.

5.3 CUMULATIVE IMPACT ANALYSIS

The project would have no adverse impacts on federally-protected wetlands. The project would preserve 4.15 acres of federally-protected wetlands associated with Hansen's Creek and Little Hansen's Creek. These areas were authorized to be impacted by The Pointe project and are included in the calculated cumulative impact of 12.06 acres; thus, the acreage of cumulative impact would be reduced by project approval. The project would help reduce the level of significance of the cumulative impact on federally-protected wetlands and its contribution would be beneficial. No mitigation is required.

5.4 MITIGATION MEASURES AND DESIGN CONSIDERATIONS

No mitigation is required.

5.5 CONCLUSION

The project would have no adverse impacts on federally-protected wetlands.

6.0 WILDLIFE MOVEMENT AND NURSERY SITES

6.1 GUIDELINES FOR DETERMINING SIGNIFICANCE

Would the project 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?

Any of the following conditions would be considered significant if:

A. The project would impede wildlife access to foraging habitat, breeding habitat, water sources, or other areas necessary for their reproduction.

B. The project would substantially interfere with connectivity between blocks of habitat, or would potentially block or substantially interfere with a local or regional wildlife corridor or linkage.

C. The project would create artificial wildlife corridors that do not follow natural movement patterns.

D. The project would increase noise and/or nighttime lighting in a wildlife corridor or linkage to levels proven to affect the behavior of the animals identified in a site-specific analysis of wildlife movement.

E. The project does not maintain an adequate width for an existing wildlife corridor or linkage and/or would further constrain an already narrow corridor through activities such as (but not limited to) reduction of corridor width, removal of available vegetative cover, placement of incompatible uses adjacent to it, and placement of barriers in the movement path.

F. The project does not maintain adequate visual continuity (i.e., long lines-of-site) within wildlife corridors or linkage.

6.2 ANALYSIS OF PROJECT EFFECTS

The project would not result in significant impacts under the above guidelines for the following reasons:

A. The project would not impede wildlife access to foraging habitat, breeding habitat, water sources, or other areas necessary for their reproduction.

The expected wildlife movement trends in the region, local area, and project site are depicted on Figures 11 and 18, as well as within photos 15 through 18 in Appendix F.

Wildlife foraging habitat, breeding habitat, and water sources necessary for reproduction were identified within portions of the project site. These include the high quality coastal sage scrub in the northwestern portion of the site, the high quality coastal sage scrub in the southeastern portions of the site, and the Hansen's Creek and Little Hansen's Creek riparian corridors. The project would preserve all of these areas within biological open space and maintain functional connectivity of habitat between all of the areas where barriers do not already exist. One exception is the required extension of Pointe Parkway, which becomes Avenida Bosques through the project site. The approximate location of Avenida Bosques is shown on photo 17 in Appendix F. This road has been designed to abut proposed developments to minimize impacts and edge effects. Where it must traverse a small section of open space, the road is narrowed and adequate widths are provided on either side to facilitate wildlife movement. Landscaping in that area will exclude trees, to maintain lines of sight and eliminate potential perch habitat for birds of prey that might predate on species such as coastal California gnatcatcher. Movement at the road crossing is expected to be limited to that of birds and coyotes, and smaller species such as jackrabbits, which are species that can readily cross over the roadway. The edge of development with the proposed project is set back from the edge of the previously graded pad where the graded slope creates a break in the natural flow of the land (Figure 17, photo 18 in Appendix F), and would not widen the existing physical pinch point that was created by previous grading. In addition, the proposed project would include restoration and enhancement of coastal sage scrub along the linkage pinch point, thereby improving the quality and function of existing habitat for species such as coastal California gnatcatcher. Therefore, the project would not impede wildlife access to habitat necessary for reproduction.

B. The project would not substantially interfere with connectivity between blocks of habitat and would not potentially block or substantially interfere with a local or regional wildlife corridor or linkage.

As addressed above, the project would not substantially interfere with the already constrained linkage between Dictionary Hill to the west and San Diego National Wildlife Refuge to the east. The project would contribute 27.9 acres of biological open space preserve and would restore habitat along the linkage path, thereby enhancing habitat quality and connectivity. The project would introduce new development onto the site; however, the development is divided into discrete pads that have been sited and designed to abut existing development and would retain access through the higher-quality habitat in the middle of the site. Thus the project would not substantially interfere with access to and from key blocks of habitat. The proposed connection point on the west side of the site lines up with the most logical movement path off site to the west, where the linkage is constrained on both sides by existing development (Figure 17). The project further concentrates development in the lower quality habitat on the site that does not provide optimal cover and resources for wildlife moving through the area. In addition, substantial areas identified as being Take Authorized are not going to be developed and will become biological open space as a result of the project. Last, the proposed project would include restoration and enhancement of coastal sage scrub along the linkage pinch point, thereby improving the quality and function of existing habitat for species such as coastal California gnatcatcher. The project conforms to the goals and requirements of the MSCP and BMO, including effects on habitat linkages and wildlife corridors, as demonstrated in the draft MSCP findings attached as Appendix K. Impacts would be less than significant.

C. The project would not create artificial wildlife corridors that do not follow natural movement patterns.

The project does not create an artificial corridor for wildlife, and movement functions would continue on the site under post-project conditions. Adequate upland scrub and riparian habitat associated with favorable topography and cover for target wildlife would remain throughout the site once the project is built. The site is already situated along the path of a constrained linkage and the project would not introduce significant barriers further separating or fragmenting key habitat stands. Development is targeted in areas that do not occur along expected travel routes and that do not support high quality habitat. Adequate space and connectivity of habitat would remain across the site and in the local area, as depicted on Figure 17. The proposed connection point on the west side of the site is aligned with the most direct movement path from Dictionary Hill. Coyotes and other animals traveling from west to east would have to cross Fabled Waters Drive through a 265-foot opening with homes on both sides, and then pass between the existing tennis court and homes to the north, with a width of 320 feet (Figure 17, photo 15 in Appendix F). At the western boundary of the site, the habitat is further narrowed by the existing grading in Lot 2 that created a steep slope and disturbed pad extending further north than the tennis court. As depicted on Figure 17 and photos 15 through 18 in Appendix F, wildlife movement is expected to follow gentler contours and scrub-vegetated areas along the linkage path. Traveling west-to-east, wildlife would be expected to move east onto the high spot and point along the western site boundary

(above the cut slope for the existing graded pad), then turn north toward the shallower-sloping, vegetated draw and ravine before continuing to head north, east, or southeast within the biological open space for the project. Lot 2 is set back from the edge of existing disturbance, leaving the natural movement pattern intact. Lot 1 on the north side is similarly located within a disturbed area where previous grading activities left multiple piles of dirt and rock that would be expected to impede wildlife movement. Moving west to east across the site, natural movement patterns are expected to follow the descending gullied land that continues east and spills down into the biological open space surrounding the Hansen's Creek riparian corridor. From there, a clear line of site opens up to the east and south, and movement is directed along the Hansen's Creek corridor unobstructed, eventually to the southern tip and southeastern boundary of the site at Jamacha Boulevard. The reverse would be expected of natural movement patterns for wildlife entering the site from the south and southeast. The project will preserve adequate space and resources to conserve these movement patterns. No artificial corridors would be created. Impacts would be less than significant.

D. The project would not increase noise and/or nighttime lighting in a wildlife corridor or linkage to levels proven to affect the behavior of the animals identified in a site-specific analysis of wildlife movement.

The project occurs along the path of a constrained linkage. Project operation noise is not anticipated to adversely impact sensitive species at this location during project operations, as project developments are setback and located upslope from open space areas. Noise from the project is not expected to carry downslope into the open space areas. All project-related lighting would be required to adhere to Division 9 of the San Diego County Light Pollution Code. Project lighting adjacent to undeveloped habitat would be of the lowest illumination allowed for human safety, selectively placed, shielded, and directed away from such habitat. Additionally, developments have been setback and buffered from on-site biological open space and adjacent undeveloped lands. No significant impact to wildlife corridors or linkages resulting from lighting or noise would occur.

E. The project maintains an adequate width for an existing wildlife corridor or linkage and would not further constrain an already narrow corridor through activities such as (but not limited to) reduction of corridor width, removal of available vegetative cover, placement of incompatible uses adjacent to it, or placement of barriers in the movement path.

The expected wildlife movement trends in the region, local area, and project site are depicted on Figures 11 and 18 as well as within photos 15 through 18 in Appendix F.

The project maintains adequate widths and would not further constrain existing corridors or linkages in the local area. As discussed above, the project site occurs along the path of an east-west linkage that is already constrained and fragmented as a result of developments in the local area. Fabled Waters Drive to the west of the site and Jamacha Boulevard to the east represent existing roadway barriers that intersect the entirety of the east-west linkage; therefore, species that are accessing the project site currently are able to cross roads and will

be able to cross the proposed road. Various existing "Pointe" developments surrounding the project site present additional barriers and constraints to wildlife movement. The project would not further constrain the corridor because project development has been specifically sited in areas that abut existing developments, show signs of past disturbance, and that represent the least sensitive habitat on the site. The resulting corridor would follow the most intact area of the site, both in terms of habitat and topography. Wildlife movement, namely that of birds (e.g., coastal California gnatcatcher) and common mammals such as coyote, is expected through the site to and from Dictionary Hill to the west and open space parcels connecting to the San Diego National Wildlife Refuge to the east. Expected wildlife movement and conservation of linkage functions through the project site is depicted on Figure 17. The project conserves the entirety of habitat that abuts off-site open space along the eastern and western project site boundaries. The project further conserves key stands of habitat within the site and maintains adequate widths between developed areas for movement of target species. The project would restore 3.7 acres to Diegan coastal sage scrub, thus improving the function of the existing corridor (Figure 18, Appendix L). The proposed project would also enhance 0.4 acre of disturbed coastal sage scrub at the existing physical pinch point to improve its value for the gnatcatcher. In addition, the Limited Building Zones would be planted with native species, thus providing vegetative cover and functioning as an extension of open space. The project would protect linkage functions by preserving in perpetuity important stepping stone habitat located west of Jamacha Boulevard that is designated as Take Authorized Area and additional habitat immediately east of Jamacha Boulevard to prevent future development on that parcel and maintain connectivity with open space parcels located further to the east. The project greatly improves habitat connectivity through the site compared to the approved design, as demonstrated in the draft MSCP findings attached as Appendix K. Considering the project's biological open space configuration and conservation of linkage functions, impacts would be less than significant.

F. The project maintains adequate visual continuity (i.e., long lines-of-site) within wildlife corridors and linkage.

The project would not impair visual continuity within corridors or linkages in the local area. Figure 17 depicts expected wildlife movement patterns in the local area. Considering topography and vegetative cover along travel routes, wildlife potentially moving through the local area would likely access the site from two key points of entry: (1) from the middle portions of the western boundary of the site; and (2) from the southeastern boundary, near the areas where Hansen's Creek and Little Hansen's Creek exit the site. Wildlife approaching the site from open space within Dictionary Hill to the west would have clear lines of sight to the biological open space (Hardline Preserve) along the western boundary of the project site. From there, wildlife would be expected to follow the descending gullied land that continues east and spills down into the biological open space surrounding the Hansen's Creek riparian corridor. From there, a clear line of sight opens up to the east and south, and movement is directed along the Hansen's Creek corridor unobstructed, eventually to the southern tip and southeastern boundary of the site at Jamacha Boulevard. Wildlife has to cross Jamacha Boulevard, continuing south and east into downstream reaches of Hansen's Creek and eventually toward the Sweetwater River and San Diego National Wildlife Refuge. The project proposes no developments along this path that would disrupt lines-of-sight or linkage

functions. The project conserves topographic features favorable to movement of target species along the linkage path. For example, the project conserves high points and shallow slopes for gnatcatcher, and valley bottoms and drainage corridors for mammals. As such, the project would not impair visual continuity within corridors or linkages in the local area and impacts would be less than significant.

6.3 CUMULATIVE IMPACT ANALYSIS

The project will comply with the requirements of the BMO and MSCP, including preserve design criteria related to corridors and linkages. In addition, the project will improve habitat connectivity compared to the approved Pointe project, which, it was determined in the Habitat Loss Permit (HLP) analysis, "would result in direct impacts to movement of terrestrial wildlife (e.g., mammals and reptiles) between Sweetwater River Reservoir and natural habitats on Dictionary Hill." The HLP analysis also found, "bird species will still be able to access Dictionary Hill via the stepping-stone patches of habitat associated with The Pointe San Diego project. Dictionary Hill is already a semi-isolated island of mostly sage scrub that supports a substantial population (>20 territories) of California gnatcatcher. Due its current island situation, Dictionary Hill was not included in the MHPA. Many of the terrestrial species that may occur on Dictionary Hill may already be effectively isolated from the large habitat areas along the Sweetwater River and slopes of San Miguel Mountain. This habitat linkage is not considered to be regionally significant due to the current relatively isolated condition of Dictionary Hill." The proposed project would improve wildlife movement potential relative to the approved Pointe project by providing an east-west habitat connection rather developing the entire project site. No additional review of cumulative impacts is required under CEQA.

6.4 MITIGATION MEASURES AND DESIGN CONSIDERATIONS

No additional mitigation measures are required.

6.5 CONCLUSION

With the project's proposed biological open space, incorporation of design features, and implementation of the measures listed above, impacts would be less than significant and no additional mitigation measures are required.

7.0 LOCAL POLICIES, ORDINANCES, AND ADOPTED PLANS

7.1 GUIDELINES FOR DETERMINING SIGNIFICANCE

Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance? Would the project conflict with the provisions of an adopted HCP, NCCP plan, or other approved local, regional or state HCP?

Any of the following conditions would be considered significant if:

A. For lands outside of the MSCP, the project would impact Diegan coastal sage scrub vegetation in excess of the County's 5 percent habitat loss threshold, as defined by the Southern California Coastal Sage Scrub NCCP Guidelines.

B. The project would preclude or prevent the preparation of the subregional NCCP. For example, the project proposes development within areas that have been identified by the County or resource agencies as critical to future habitat preserves.

C. The project will impact any amount of wetlands or sensitive habitat lands as outlined in the RPO.

D. The project would not minimize and/or mitigate coastal sage scrub habitat loss in accordance with Section 4.3 of the NCCP Guidelines.

E. The project does not conform to goals and requirements outlined in any applicable HCP, Resource Management Plan (RMP), Special Area Management Plan, Watershed Plan, or similar regional planning effort.

F. For lands within the MSCP, the project would not minimize impacts to BRCA, as defined in the BMO (County 2010c).

G. The project would preclude connectivity between areas of high habitat values, as defined by the Southern California Coastal Sage Scrub NCCP Guidelines.

H. The project does not maintain existing movement corridors and/or habitat linkages, as defined by the BMO.

I. The project does not avoid impacts to MSCP narrow endemic species and would impact core populations of narrow endemics.

J. The project would reduce the likelihood of survival and recovery of listed species in the wild.

K. The project would result in the killing of migratory birds or destruction of active migratory bird nests and/or eggs (MBTA).

L. The project would result in the take of eagles, eagle eggs, or any part of an eagle (Bald and Golden Eagle Protection Act; BGEPA).

7.2 ANALYSIS OF PROJECT EFFECTS

The project would result in significant impacts under the above guidelines for the following reason:

K. Absent mitigation, the project would result in the killing of migratory birds or destruction of active migratory bird nests and/or eggs (MBTA).

Implementation of the project could potentially result in the killing of migratory birds or destruction of active migratory bird nests and/or eggs protected under the MBTA. Project construction could directly impact individuals or cause breeding birds to temporarily or permanently leave their territories, which could lead to reduced reproductive success and increased mortality. These impacts would be significant; however, mitigation measure **BIO-7** would reduce impacts to less than significant.

The project would not result in significant impacts under the above guidelines for the following reasons:

A. The project would not impact Diegan coastal sage scrub vegetation outside of the MSCP in excess of the County's 5 percent habitat loss threshold, as defined by the Southern California Coastal Sage Scrub NCCP Guidelines.

Project impacts to Diegan coastal sage scrub are all located within the adopted South County MSCP Subarea Plan. No impact would occur.

B. The project would not preclude or prevent the preparation of the subregional NCCP. For example, the project proposes development within areas that have been identified by the County or resource agencies as critical to future habitat preserves.

Implementation of the project would not preclude or prevent the preparation of the subregional NCCP. The project is located within the boundaries of the South County MSCP Subarea Plan, which has already been prepared and adopted. No impact would occur.

C. The project would not impact wetlands outlined in the RPO.

The site supports RPO wetlands associated with Hansen's Creek and Little Hansen's Creek. The project avoids these RPO wetlands and no impacts would occur. All RPO wetlands on the site will be placed within biological open space with adequate buffers. Minimum 50-foot buffers have been incorporated over the RPO wetlands, with buffers reaching 375 feet at their maximum. As described for BRCA below, several areas qualify as RPO sensitive habitat lands on the site. These RPO sensitive habitat lands will also be avoided and preserved by the project. Therefore, no impacts to RPO resources would occur.

D. The project would minimize and mitigate coastal sage scrub habitat loss in accordance with Section 4.3 of the NCCP Guidelines.

The project would impact 14.9 acres of coastal sage scrub habitat. The project is located within the adopted MSCP and the loss would be mitigated in accordance with the MSCP and BMO.

E. The project conforms to the goals and requirements outlined in an applicable HCP, RMP, Special Area Management Plan, Watershed Plan, or similar regional planning effort.

No adopted RMP, Special Area Management Plan, or Watershed Plan is applicable to the project. The project occurs within the boundaries of the adopted South County MSCP Subarea Plan. The project conforms to the goals and requirements of the MSCP and BMO, as demonstrated in the draft MSCP findings attached as Appendix K. No impact would occur.

F. The project minimizes impacts to BRCA, as defined in the BMO (County 2010c).

The project minimizes impacts to BRCA in accordance with the MSCP and BMO, as demonstrated in the draft MSCP findings attached as Appendix K to this report. With approval of the boundary adjustment, all impacts will be within Take Authorized areas. No impact would occur.

G. The project would not preclude connectivity between areas of high habitat values, as defined by the Southern California Coastal Sage Scrub NCCP Guidelines.

The project is located within the adopted MSCP and connectivity is evaluated according to the MSCP and BMO. Impacts would be less than significant.

H. The project does not maintain existing movement corridors and/or habitat linkages, as defined by the BMO.

The project has been designed to conserve the existing habitat linkage in the local area in accordance with the MSCP and BMO, as demonstrated in the draft MSCP findings attached as Appendix K. Impacts would be less than significant.

I. The project does not avoid impacts to MSCP narrow endemic species and would impact core populations of narrow endemics.

Least Bell's vireo represents the only narrow endemic confirmed as occupying the project site. The project avoids and preserves within biological open space all occupied and suitable least Bell's vireo habitat. Adequate setbacks and project design features are incorporated into the project to ensure no adverse indirect effects occur to occupied vireo habitat during operation of the project. Therefore, the project avoids impacts to MSCP narrow endemic species and would not impact core populations.

J. The project would not reduce the likelihood of survival and recovery of listed species in the wild.

As addressed within Section 3.0, coastal California gnatcatcher and least Bell's vireo were determined to be breeding within portions of the site. The project would avoid and preserve all on-site coastal sage scrub and riparian habitat confirmed during 2015 surveys to support breeding territories for these two listed species. The project's biological open space would

conserve breeding, foraging, and dispersal habitat for both of these species. Therefore, the project would not reduce the likelihood of survival or recovery for either species, and a less than significant impact would occur.

L. The project would not result in the take of eagles, eagle eggs, or any part of an eagle (Bald and Golden Eagle Protection Act; BGEPA).

The project site does not contain eagle nesting habitat and it is not within any known golden eagle territory. While there is marginal eagle foraging habitat (open non-native grassland) on site, the surrounding habitat fragmentation and the distance from known eagle territories would indicate that the site has low value for golden eagle. The surrounding area is primarily urbanized and new nesting in the vicinity is unlikely. Therefore, no impacts would occur to golden eagle or its habitat.

7.3 CUMULATIVE IMPACT ANALYSIS

The project will comply with the requirements of the MBTA, RPO, BGEPA, BMO, and MSCP. All currently proposed and future projects within the cumulative study area will also be required to comply with these regulations. No additional review of cumulative impacts is required under CEQA.

7.4 MITIGATION MEASURES AND DESIGN CONSIDERATIONS

BIO-7 No grubbing, clearing, or grading shall occur during the general avian breeding season (February 15 – August 31). All grading permits, improvement plans, and the final map shall state the same. If grubbing, clearing, or grading would occur during the general avian breeding season, a pre-construction survey shall be conducted by a qualified biologist to determine if active bird nests are present in the affected areas. If there are no nesting birds (includes nest building or other breeding/nesting behavior) within this area, clearing, grubbing, and grading shall be allowed to proceed. If active nests or nesting birds are observed within the area, the biologist shall flag the active nests and construction activities shall avoid active nests until nesting behavior has ceased, nests have failed, or young have fledged.

7.5 CONCLUSION

Implementation of the project would result in potentially significant impacts to breeding migratory birds. Implementation of mitigation measure **BIO-7**, which proposes avoiding clearing of vegetation during the bird breeding season, would reduce these impacts to below a level of significance. Implementation of **BIO-1** and **BIO-3** would further reduce impacts on nesting birds to less than significant.

8.0 SUMMARY OF PROJECT IMPACTS AND MITIGATION

The proposed project has the potential to cause significant impacts to special status species, sensitive natural communities, and local policies. In each case, however, the identified significant impact can be mitigated to a less than significant level. Table 10 provides a summary of project impacts and mitigation pertaining to sensitive natural communities. Table 11 provides a summary of the proposed mitigation measures.

Table 10
SUMMARY OF VEGETATION COMMUNITIES, IMPACTS, AND MITIGATION FOR THE SWEETWATER VISTAS PROJECT[1]

VEGETATION COMMUNITY	PROJECT SITE EXISTING	TOTAL IMPACTS	MITIGATION		
			Ratio	Required	Preserved On Site
MSCP South County Segment					
Tier I					
Disturbed wetland (11200)	0.02		--	--	0.02
Cismontane alkali marsh (52310)	--	--	--	--	--
Freshwater marsh (52400)	--	--	--	--	--
Mule fat scrub (63310)	0.11	--	--	--	0.11
Southern willow scrub (63320)	1.76	--	--	--	1.76
Tamarisk scrub (63810)	0.32	0.1[2]	--	--	0.18
Non-native riparian (65000)	0.12	--	--	--	0.12
Arundo-dominated riparian (65100)	0.49	--	--	--	0.49
Subtotal	***2.82***	--	--	--	***2.7***†
Tier II					
Diegan coastal sage scrub (32500)	18.5	12.5	1.5:1	18.8	5.8
Diegan coastal sage scrub – disturbed (32500)	2.0	1.6	1.5:1	2.4	0.4
Subtotal	***20.5***	***14.1***	--	***21.2***	***6.2***
Tier III					
Non-native grassland (42200)	3.0	0.9	0.5:1	0.5	2.1
Subtotal	***3.0***	***0.9***	--	***0.5***	***2.1***‡
Tier IV					
Disturbed habitat (11300)	5.5	3.4	--	--	1.5
Eucalyptus woodland (79100)	0.7	0.1	--	--	0.6
Non-native vegetation (11000)	1.5	1.0	--	--	0.6
Subtotal	***7.7***	***4.7***	--	--	***2.7***‡

Table 10 (cont.)
SUMMARY OF VEGETATION COMMUNITIES, IMPACTS, AND MITIGATION FOR THE SWEETWATER VISTAS PROJECT[1]

VEGETATION COMMUNITY	PROJECT SITE EXISTING	TOTAL IMPACTS	MITIGATION		
			Ratio	Required	Preserved On Site
MSCP South County Segment (cont.)					
N/A					
Urban/developed (12000)	1.3	1.3	--	--	
Subtotal					
Total MSCP South County Segment	**35.2**	**20.9**	**--**	**21.7**	**13.6**
MSCP Metro-Lakeside-Jamul-Segment					
Tier I					
Disturbed wetland (11200)	--	--	--	--	--
Cismontane alkali marsh (52310)	1.17	--	--	--	1.17
Freshwater marsh (52400)	0.02	--	--	--	0.02
Mule fat scrub (63310)	0.22	--	--	--	0.22
Southern willow scrub (63320)	2.0	--	--	--	2.0
Tamarisk scrub (63810)	0.09	--	--	--	0.09
Non-native riparian (65000)	0.2	--	--	--	0.2
Arundo-dominated riparian (65100)	--	--	--	--	--
Subtotal	***3.7***	**--**	**--**	**--**	***3.7†††***
Tier II					
Diegan coastal sage scrub (32500)	7.0	0.8	1.5:1	1.2	6.2
Diegan coastal sage scrub – disturbed (32500)	0.2	--	--	--	0.2
Subtotal	***7.2***	***0.8***	**--**	***1.2***	***6.4†††***
Tier III					
Non-native grassland (42200)	0.6	--	--	--	0.6
Subtotal	***0.6***	**--**	**--**	**--**	***0.6***

Table 10 (cont.)
SUMMARY OF VEGETATION COMMUNITIES, IMPACTS, AND MITIGATION FOR THE SWEETWATER VISTAS PROJECT[1]

VEGETATION COMMUNITY	PROJECT SITE EXISTING	TOTAL IMPACTS	MITIGATION		
			Ratio	Required	Preserved On Site
MSCP Metro-Lakeside-Jamul-Segment (cont.)					
Tier IV					
Disturbed habitat (11300)	3.7	1.4	--	--	2.2
Eucalyptus woodland (79100)	--	--	--	--	--
Non-native vegetation (11000)	1.5	0.1	--	--	1.4
Subtotal	***5.2***	***1.5***	**--**	**--**	***3.6‡***
N/A					
Urban/developed (12000)	--	0.2	--	--	--
Subtotal	**--**	***0.2***	**--**	**--**	**--**
Total MSCP Metro-Lakeside-Jamul Segment	**16.7**	**2.4**	**--**	**1.2**	**14.3**
TOTAL	**51.9**	**23.4**	**--**	**22.9**	**27.9**

[1] Upland communities/habitat types are rounded to the nearest 0.1 acre, while wetland communities are rounded to the nearest 0.01; totals do not reflect rounding.

[2] Impacts to tamarisk scrub at this location are within an upland landscape position and not associated with a streambed, riparian habitat, or wetlands. They are therefore considered Tier IV impacts not Tier I impacts.

† Contains 2.67 acres in MSCP South County Segment proposed for up-Tier mitigation in MSCP South County Segment.

†† Contains 3.7 acres in MSCP Metro-Lakeside-Jamul Segment available for up-Tier mitigation in MSCP South County Segment.

††† Contains 5.6 acres in MSCP Metro-Lakeside-Jamul Segment available for Tier II mitigation in MSCP South County Segment.

‡ Candidates for restoration of Tier I and Tier II to achieve on-site mitigation.

Table 11
SUMMARY OF BIOLOGICAL RESOURCES MITIGATION MEASURES FOR THE SWEETWATER VISTAS PROJECT

PROPOSED MITIGATION	LEVEL OF SIGNIFICANCE AFTER MITIGATION	GUIDELINE NUMBER
BIO-1 No grading or clearing of Diegan coastal sage scrub shall occur during the breeding season of the coastal California gnatcatcher (February 15 to August 31). All grading permits, improvement plans, and the final map shall state the same. If clearing or grading would occur during the breeding season for the gnatcatcher, a pre-construction survey shall be conducted to determine whether gnatcatchers occur within the impact area(s). Impacts to occupied habitat shall be avoided. If there are no gnatcatchers nesting (includes nest building or other breeding/nesting behavior) within that area, grading and clearing shall be allowed to proceed. If, however, any gnatcatchers are observed nesting or displaying breeding/nesting behavior within the area, construction in that area shall be postponed until all nesting (or breeding/nesting behavior) has ceased or until after August 31.	Less than significant	3.1 A 7.2 K
BIO-2 Mitigation for 14.9 acres of impacts to Diegan coastal sage scrub, a Tier II habitat on site that provides breeding, foraging, and dispersal habitat for the coastal California gnatcatcher and that may serve as functional foraging habitat for raptors, shall occur at a 1.5:1 ratio through a combination of Tier II and Tier I preservation and 3.7 acres of Diegan coastal sage scrub restoration totaling 22.4 acres, all on site within the biological open space easement to be designated as Hardline preserve.	Less than significant	3.1A 4.2A

Table 11 (cont.)
SUMMARY OF BIOLOGICAL RESOURCES MITIGATION MEASURES FOR THE SWEETWATER VISTAS PROJECT

PROPOSED MITIGATION	LEVEL OF SIGNIFICANCE AFTER MITIGATION	GUIDELINE NUMBER
BIO-3 If operation of construction dozers, excavators, rock crushers, pile drivers, or cast-in-drilled-hole equipment occurs during the breeding seasons for the coastal California gnatcatcher (February 15 to August 31), least Bell's vireo (March 15 to September 15), or nesting raptors (January 15 to July 15), pre-construction survey(s) shall be conducted by a qualified biologist as appropriate to determine whether these species occur within the areas potentially impacted by noise. If it is determined at the completion of pre-construction surveys that active nests belonging to these sensitive species are absent from the potential impact area, construction shall be allowed to proceed. If pre-construction surveys determine the presence of active nests belonging to these sensitive species, then operation of the following equipment shall not occur within the specified distances from an active nest during the respective breeding seasons: a dozer within 400 feet; an excavator within 350 feet; rock crusher equipment within 1,350 feet; a breaker within 500 feet; a pile driver within 2,600 feet; and cast-in-drilled holes equipment within 350 feet. All grading permits, improvement plans, and the final map shall state the same. Construction shall: (1) be postponed until a qualified biologist determines the nest(s) is no longer active or until after the respective breeding season; or (2) not occur until a temporary noise barrier or berm is constructed at the edge of the development footprint and/or around the piece of equipment to ensure that noise levels are reduced to below 60 dBA or ambient. Decibel output will be confirmed by a County-approved noise specialist and intermittent monitoring by a qualified biologist to ensure that conditions have not changed will be required. If pre-construction surveys identify coastal California gnatcatcher, least Bell's vireo, or nesting raptors, any necessary blasting will be restricted to the non-breeding season for the identified birds (September 1 to February 14 for coastal California gnatcatcher; July 16 to January 14 for nesting raptors; and September 16 to March 14 for least Bell's vireo) or be completed using wholly chemical means.	Less than significant	3.1 A 3.1 B 3.1 L 7.2 K

Table 11 (cont.)
SUMMARY OF BIOLOGICAL RESOURCES MITIGATION MEASURES FOR THE SWEETWATER VISTAS PROJECT

PROPOSED MITIGATION	LEVEL OF SIGNIFICANCE AFTER MITIGATION	GUIDELINE NUMBER
BIO-4 Mitigation for impacts to 0.5 acre of non-native grassland, a Tier III habitat on site that may serve as foraging habitat for raptor species, shall occur at a 0.5:1 ratio through the preservation of 0.5 acre of Tier III habitat on site within the biological open space easement to be designated as Hardline preserve.	Less than significant	3.1 B 3.1 C 3.1 F 4.2A
BIO-5 Impacts to 0.03 acre of USACE- and RWQCB-jurisdictional non-wetland waters of the U.S./State shall be mitigated at a 1:1 ratio through one or a combination of the following: 0.03 acre of establishment, re-establishment, rehabilitation, and/or preservation mitigation on site within biological open space easement; 0.03 acre of establishment, re-establishment, rehabilitation, and/or preservation mitigation off site within biological open space easement; purchase of mitigation credits at the San Luis Rey Mitigation Bank or other location deemed acceptable by the County, USACE, and RWQCB.	Less than significant	4.2B
BIO-6 Impacts to 0.04 acre of CDFW-jurisdictional unvegetated streambed shall be mitigated at a 1:1 ratio through 0.04 acre of preservation mitigation on-site within biological open space easement or other means deemed acceptable by the County and CDFW.	Less than significant	4.2B

Table 11 (cont.)
SUMMARY OF BIOLOGICAL RESOURCES MITIGATION MEASURES FOR THE SWEETWATER VISTAS PROJECT

PROPOSED MITIGATION	LEVEL OF SIGNIFICANCE AFTER MITIGATION	GUIDELINE NUMBER
BIO-7 No grubbing, clearing, or grading shall occur during the general avian breeding season (February 15 to August 31). All grading permits, improvement plans, and the final map shall state the same. If grubbing, clearing, or grading would occur during the general avian breeding season, a pre-construction survey shall be conducted by a qualified biologist to determine if active bird nests are present in the affected areas. If there are no nesting birds (includes nest building or other breeding/nesting behavior) within this area, clearing, grubbing, and grading shall be allowed to proceed. If active nests or nesting birds are observed within the area, the biologist shall flag the active nests and construction activities shall avoid active nests until nesting behavior has ceased, nests have failed, or young have fledged.	Less than significant	7.2 K

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Appendix A

PLANT SPECIES OBSERVED

Appendix A
PLANT SPECIES OBSERVED
SWEETWATER VISTAS

FAMILY	SCIENTIFIC NAME	COMMON NAME	HABITAT**
Agavaceae	*Chlorogalum parviflorum*	soap plant	DCSS
Adoxaceae	*Sambucus nigra* ssp. *caerulea*	blue elderberry	DCSS
Aizoaceae	*Carpobrotus* sp.*	hottentot fig	NNR, NNV
	*Mesembryanthemum crystallinum**	crystalline iceplant	DH
Anacardiaceae	*Malosma laurina*	laurel sumac	DH, DCSS
	Rhus integrifolia	lemonade berry	DCSS
	*Schinus molle**	Peruvian pepper tree	DCSS, NNV
	*Schinus terebinthifolius**	Brazilian pepper tree	NNR, NNV
Apiaceae	*Apium graveolens**	wild celery	SWS, NNR
	*Daucus carota**	Queen Anne's lace	DCSS, DH
	Daucus pusillus	wild carrot	DCSS, NNG
	*Foeniculum vulgare**	fennel	DH, NNG
Apocynaceae	*Funastrum cynanchoides*	climbing milkweed	DCSS
	*Nerium oleander**	oleander	DH, NNV
Arecaceae	*Phoenix canariensis**	Canary Island date palm	NNR, SWS
	*Washingtonia robusta **	Mexican fan palm	DH, NNR, NNG, SWS
Asteraceae	*Ambrosia psilostachya*	western ragweed	DCSS, NNG, SWS
	Artemisia californica	California sagebrush	DCSS
	Baccharis pilularis	coyote brush	DCSS, NNG
	Baccharis salicifolia	mule fat	MFS, DCSS, SWS, TS
	Baccharis sarothroides	broom baccharis	DCSS, DH, EUCW, NNR, SWS, TS
	Bahiopsis laciniata†	San Diego County viguiera	DCSS
	*Carduus pycnocephalus**	Italian thistle	DH, NNG, TS
	*Centaurea melitensis**	tocalote	DH, DCSS, NNG
	*Cirsium vulgare**	bull thistle	DH, NNG
	Corethrogyne filaginifolia	sand aster	DCSS
	*Cynara cardunculus**	artichoke thistle	DH
	Deinandra fasciculata	clustered tarweed	DCSS, NNG
	Encelia californica	California encelia	DCSS
	Ericameria sp.	goldenbush	DCSS
	Eriophyllum confertiflorum	golden yarrow	DCSS
	*Glebionis coronaria**	garland daisy	DH
	*Hedypnois cretica**	Crete weed	NNG
	*Helminthotheca echioides**	bristly ox-tongue	DH, NNG
	Holocarpha virgata†	graceful tarplant	DH

Appendix A (cont.)
PLANT SPECIES OBSERVED
SWEETWATER VISTAS

FAMILY	SCIENTIFIC NAME	COMMON NAME	HABITAT**
Asteraceae (cont.)	*Hypochaeris glabra**	smooth cat's-ear	DH, NNG
	Isocoma menziesii	San Diego goldenbush	DCSS
	Iva hayesiana†	San Diego marsh-elder	CAM
	Lasthenia californica	goldfields	DCSS
	*Logfia gallica**	narrowleaf filago	DCSS
	Pseudognaphalium californicum	California everlasting	NNG, DCSS
	*Silybum marianum**	milk thistle	DH, NNG, NNR
	*Sonchus asper**	spiny sow-thistle	DH, NNG
	*Sonchus oleraceus**	common sow-thistle	DH
	Stephanomeria virgata	virgate wreath-plant	DCSS
	Stylocline gnaphaloides	everlasting nest straw	DCSS
Boraginaceae	*Amsinckia menziesii*	rancher's fiddleneck	NNG
	Cryptantha intermedia	nievitas	DCSS
	Cryptantha sp.	popcorn flower	DCSS
	Heliotropium curassavicum	salt heliotrope	SWS
	Pectocarya sp.	pectocarya	DCSS
	Plagiobothrys collinus	Cooper's popcornflower	DCSS
Brassicaceae	*Brassica nigra**	black mustard	DH, DCSS, NNG
	*Hirschfeldia incana**	short-pod mustard	DH, EUCW, NNG, TS
	Lepidium nitidum	shining pepperweed	DCSS
	Nasturtium officinale	watercress	DW, NNR
	*Raphanus sativus**	wild radish	DH, NNG
	*Sisymbrium orientale**	hedge mustard	DH
Chenopodiaceae	*Salsola tragus**	Russian thistle	DH
Crassulaceae	*Crassula connata*	pygmy-weed	DCSS
Cucurbitaceae	*Marah macrocarpus*	wild cucumber	DCSS
Cyperaceae	*Cyperus involucratus**	umbrella sedge	DW
	Schoenoplectus californicus	California bulrush	SWS
	Schoenoplectus pungens	three square bulrush	NNR, SWS
Dipsacaeae	*Dipsacus fullonum**	teasel	NNG, NNR
Euphorbiaceae	*Euphorbia peplus**	petty spurge	DH
	*Ricinus communis**	castor-bean	DH, SWS, EUCW
Fabaceae	*Acacia sp.**	acacia	NNV
	Acmispon glaber	deer weed	DCSS
	Astragalus trichopodus	milkvetch	DCSS
	Lupinus sp.	lupine	DCSS
	*Medicago polymorpha**	bur-clover	DH

Appendix A (cont.)
PLANT SPECIES OBSERVED
SWEETWATER VISTAS

FAMILY	SCIENTIFIC NAME	COMMON NAME	HABITAT**
Fabaceae (cont.)	*Melilotus indicus**	Indian sweetclover	DH, DCSS, NNG
Fagaceae	*Quercus agrifolia*	coast live oak	DCSS
Gentianaceae	*Zeltnera venusta*	canchalagua	DCSS
Geraniaceae	*Erodium cicutarium**	red-stemmed filaree	NNG
Hydrophyllaceae	*Phacelia* sp.	phacelia	DCSS
	Phacelia parryi	Parry's phacelia	DCSS
Iridaceae	*Sisyrinchium bellum*	blue-eyed grass	NNG
Juncaceae	*Juncus acutus* var. *leopoldii*†	southwestern spiny rush	DW, SWS, CAM, TS
	Juncus bufonius	toad rush	CAM, DW, NNR
Lamiaceae	*Marrubium vulgare**	horehound	DCSS, DH, NNG
	Salvia apiana	white sage	DCSS
	Salvia mellifera	black sage	DCSS,
	Salvia munzii†	Munz's sage	DCSS
	Trichostema lanceolatum	vinegar weed	DCSS
Liliaceae	*Allium jepsonii*	Jepson's onion	DCSS
Malvaceae	*Malacothamnus fasciculatus*	chaparral mallow	DCSS
Moraceae	*Ficus carica**	fig	NNR, SWS
Myrsinaceae	*Anagallis arvensis**	scarlet pimpernel	DCSS
Myrtaceae	*Eucalyptus* sp.*	eucalyptus	NNR, DCSS, EUCW, MFS
	*Eucalyptus camaldulensis**	red gum eucalyptus	EUCW
Nyctaginaceae	*Bougainvillea sp.**	bougainvillea	NNV
Oleaceae	*Fraxinus uhdei**	shamel ash	NNR, SWS
	*Olea europaea**	olive	DCSS, NNV
Onagraceae	*Clarkia purpurea*	purple clarkia	NNG
Oxalidaceae	*Oxalis pes-caprae**	Bermuda buttercup	NNG
Phrymaceae	*Mimulus aurantiacus*	bush monkeyflower	DCSS
Plantaginaceae	*Plantago erecta*	dwarf plantain	DCSS
Plumbaginaceae	*Limonium perezii**	Perez's sea lavender	DH
Poaceae	*Arundo donax**	giant reed	SWS, AR
	*Bromus diandrus**	ripgut brome	DCSS, NNG
	Bromus madritensis ssp. r*ubens**	red brome	DH, NNR, NNG, DCSS
	Carex spissa	San Diego sedge	CAM
	*Cortaderia sp.**	pampas grass	DCSS, DW, SWS
	Distichlis spicata	salt grass	SWS, DCSS
	*Festuca myuros**	rat-tail fescue	DCSS
	*Pennisetum setaceum**	fountain grass	DH, NNG, NNV

Appendix A (cont.)
PLANT SPECIES OBSERVED
SWEETWATER VISTAS

FAMILY	SCIENTIFIC NAME	COMMON NAME	HABITAT**
Poaceae (cont.)	*Phalaris paradoxa**	hood canarygrass	DCSS
	*Schismus barbatus**	Mediterranean schismus	DCSS
	*Stipa miliacea**	smilo grass	NNR
	Stipa pulchra	purple needlegrass	DCSS, NNG
Polemoniaceae	*Navarretia hamata*	hooked navarettia	DCSS
Polygonaceae	*Eriogonum fasciculatum*	flat-top buckwheat	DCSS
	Pterostegia drymarioides	California thread-stem	DCSS
Portulaceae	*Calandrinia ciliata*	fringed redmaids	DCSS
Ranunculaceae	*Clematis ligusticifolia*	virgin's bower	NNR
Rhamnaceae	*Rhamnus crocea*	spiny redberry	DCSS
Rosaceae	*Heteromeles arbutifolia*	toyon	DCSS
	Rosa californica	California rose	NNR, SWS
Rubiaceae	*Gallium aparine**	common bedstraw	DCSS
Salicaceae	*Salix gooddingii*	black willow	NNR, SWS
	Salix laevigata	red willow	SWS
	Salix lasiolepis	arroyo willow	NNR, SWS, AR
Saururaceae	*Anemopsis californica*	yerba mansa	CAM, NNR, SWS
Scrophulariaceae	*Myoporum acuminatum**	strychnine bush	DH, EUCW
	*Myoporum parvifolium**	creeping myoporum	DEV
	Antirrhinum nuttallianum	Nuttall's snapdragon	DCSS
Selaginellaceae	*Selaginella cinerascens*†*	ashy spike moss	DCSS
Simaroubaceae	*Ailanthus altissima**	tree of heaven	NNR
Solanaceae	*Datura wrightii*	Jimson weed	DCSS
	*Nicotiana glauca**	tree tobacco	DH, EUCW
Tamaricaceae	*Tamarix ramosissima**	tamarisk	NNR, SWS, AR, CAM, TS, MFS
Themidaceae	*Dichelostemma capitatum*	blue dicks	NNG
Typhaceae	*Typha* sp.	cat-tail	SWS, NNR
Urticaceae	*Parietaria hespera*	pellitory	DCSS
	*Urtica urens**	dwarf nettle	DEV, DH

*Non-native Species
**CAM=cismontane alkali marsh, DW=disturbed wetland, MFS=mule fat scrub; SWS= southern willow scrub, AR=arundo-dominated riparian, NNR=non-native riparian, TS=tamarisk scrub, DCSS=Diegan coastal sage scrub; NNG=non-native grassland; EUCW=eucalyptus woodland; NNV=non-native vegetation; DH=disturbed habitat, DEV=developed

†Special Status Species

Appendix B

ANIMAL SPECIES OBSERVED OR DETECTED

Appendix B
ANIMAL SPECIES OBSERVED OR DETECTED
SWEETWATER VISTAS

FAMILY	SCIENTIFIC NAME	COMMON NAME
Invertebrates		
Apidae	*Apis* sp.	honey bee
Astacidae	*Procambarus clarkii*	crayfish
Pompilidae	*Pepsis* sp.	tarantula hawk
Coccinellidae	*Hippodamia convergens*	convergent ladybug beetle
Acrididae	*Trimeroptropis pallidipennis*	pallid-winged grasshopper
Hesperiidae	*Erynnis funeralis*	funereal duskywing
	Hylephila phyleus	fiery skipper
Lycaenidae	*Euphilotes bernardino*	San Bernardino blue
	Icaricia acmon acmon	acmon blue butterfly
	Leptotes marina	marine blue butterfly
Nymphalidae	*Danaus gilippus*	queen butterfly
	Danaus plexippus†	monarch butterfly
	Nymphalis antiopa	mourning cloak butterfly
	Vanessa atalanta	red admiral butterfly
	Vanessa cardui	painted lady butterfly
Papilioninae	*Papilio zelicaon*	anise swallowtail butterfly
Pieridae	*Anthocharis sara sara*	Pacific Sara orangetip butterfly
	Pieris rapae	cabbage white butterfly
	Pontia protodice	checkered white butterfly
Riodinidae	*Apodemia mormo virgulti*	Behr's metalmark butterfly
Reptiles		
Phrynosomatidae	*Sceloporus occidentalis*	western fence lizard
	Uta stansburiana	side blotched lizard
Viperidae	*Crotalus oreganus*	western rattlesnake
Birds		
Accipitridae	*Accipiter cooperii*†	Cooper’s hawk
	Buteo jamaicensis	red-tailed hawk
	Buteo lineatus†	red-shouldered hawk
	Circus cyaneus†	northern harrier

Appendix B (cont.)
ANIMAL SPECIES OBSERVED OR DETECTED
SWEETWATER VISTAS

FAMILY	SCIENTIFIC NAME	COMMON NAME
Birds (cont.)		
Aegithalidae	*Psaltriparus minimus*	bushtit
Anatidae	*Anas platyrhynchos*	mallard
Ardeidae	*Ardea alba*	great egret
Caprimulgidae	*Chordeiles acutipennis*	lesser nighthawk
Cardinalidae	*Passerina caerulea*	blue grosbeak
	Pheucticus melanocephalus	black-headed grosbeak
Cathartidae	*Cathartes aura*†	turkey vulture
Charadriiformes	*Charadrius vociferous*	killdeer
Columbidae	*Zenaida macroura*	mourning dove
Corvidae	*Aphelocoma californica*	western scrub-jay
	Corvus brachyrhynchos	American crow
	Corvus corax	common raven
Cuculidae	*Geococcyx californianus*	greater road runner
Emberizidae	*Melospiza melodia*	song sparrow
	Melozone crissalis	California towhee
	Pipilo maculatus	spotted towhee
	Zonotrichia leucophrys	white-crowned sparrow
Estrildidae	*Lonchura punctulata*	nutmeg mannikin
Falconidae	*Falco sparverius*	American kestrel
Fringillidae	*Haemorhous mexicanus*	house finch
	Spinus psaltria	lesser goldfinch
Hirundinidae	*Petrochelidon pyrrhonota*	cliff swallow
	Stelgidopteryx serripennis	northern rough-winged swallow
Icteridae	*Icterus cucullatus*	hooded oriole
Laridae	*Larus sp.*	gull
Mimidae	*Mimus polyglottos*	northern mockingbird
	Toxostoma redivivum	California thrasher
Odontophoridae	*Callipepla californica*	California quail
Parulidae	*Cardellina pusilla*	Wilson's warbler
	Geothlypis trichas	common yellowthroat
	Oreothlypis celata	orange-crowned warbler
	Setophaga coronata	yellow-rumped warbler
	Setophaga petechia†	yellow warbler

Appendix B (cont.)
ANIMAL SPECIES OBSERVED OR DETECTED
SWEETWATER VISTAS

FAMILY	SCIENTIFIC NAME	COMMON NAME
Birds (cont.)		
Passeridae	*Passer domesticus*	house sparrow
Picidae	*Picoides nuttallii*	Nuttall's woodpecker
Polioptilidae	*Polioptila californica californica*†	coastal California gnatcatcher
Regulidae	*Regulus calendula*	ruby-crowned kinglet
Sylviidae	*Chamaea fasciata*	wrentit
Trochilidae	*Archilochus alexandri*	black-chinned hummingbird
	Calypte anna	Anna's hummingbird
	Calypte costae	Costa's hummingbird
Troglodytidae	*Thryomanes bewickii*	Bewick's wren
	Troglodytes aedon	house wren
Tyrannidae	*Empidonax difficilis*	Pacific-slope flycatcher
	Myiarchus cinerascens	ash-throated flycatcher
	Sayornis nigricans	black phoebe
	Sayornis saya	Say's phoebe
	Tyrannus verticalis	western kingbird
	Tyrannus vociferans	Cassin's kingbird
Vireonidae	*Vireo bellii pusillus*†	least Bell's vireo
Mammals		
Canidae	*Canis latrans*	coyote
Geomyidae	*Thomomys bottae*	Botta's pocket gopher
Leporidae	*Sylvilagus audubonii*	desert cottontail
Muridae	*Neotoma* sp.	woodrat
Sciuridae	*Spermophilus beecheyi*	California ground squirrel

†Special Status Species

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Appendix C

SENSITIVE PLANT SPECIES WITH POTENTIAL TO OCCUR

Appendix C SENSITIVE PLANT SPECIES WITH POTENTIAL TO OCCUR – SWEETWATER VISTAS				
Common Name	**Species Name**	**Status**	**Habitat Associations**	**Potential to Occur**
Blue streamwort	*Stemodia durantifolia*	--/-- CNPS 2B.1 County List B	Small herb. Occurs in wet sandy areas along small creeks and is an obligate wetland plant. Elevation range 150-915 meters. Flowering period Jan – Dec.	**Not expected.** Species believe to be extant from project location. Suitable habitat on site is marginal.
Brewer's calandrinia	*Calandrinia breweri*	--/-- CNPS 4.2 County List D	Annual herb. Occurs in chaparral and coastal scrub; burned areas. Elevation 10-1220 meters. Flowering period Mar – Jun.	**Low.** Marginal habitat on site. Species not observed during surveys.
Campo clarkia	*Clarkia delicata*	--/-- CNPS 1B.2 County List A	Annual herb. Occurs in areas or the periphery of oak woodlands and cismontane chaparral. Elevation 235-1000 meters. Flowering period Apr – Jun.	**Not Expected.** No suitable habitat on site. The site occurs outside of this species range.
Coast barrel cactus	*Ferocactus viridescens*	--/-- CNPS 2B.1 County List B	Optimal habitat for this cactus appears to be Diegan coastal sage scrub hillsides, often at the crest of slopes and growing among cobbles. Flowering period May – Jun.	**None.** Species would have been observed is present.

Appendix C (cont.)
SENSITIVE PLANT SPECIES WITH POTENTIAL TO OCCUR – SWEETWATER VISTAS

Common Name	Species Name	Status	Habitat Associations	Potential to Occur
Cooper's rein orchid	*Piperia cooperi*	--/-- CNPS 4.2 County List D	Small herb. Occurs in vernally moist areas and in shallow soils adjacent to water courses. Elevation range 0-915 meters. Flowering period Mar – Jun.	**Low.** Potential habitat on site is highly disturbed due to the presence of homeless encampments.
Davidson's saltscale	*Atriplex serenana var. davidsonii*	--/-- CNPS 1B.2 County List A	Annual herb. Occurs in coastal bluffs and coastal scrub on alkaline soil. Elevation range 3-250 meters. Flowering period Apr – Oct.	**None.** Project site is not within the range of this species.
Gairdner's yampah	*Perideridia gairdneri gairdneri*	--/-- CNPS 4.2 County List D	Perennial herb. Endemic to California. Usually occurs in wetlands, but occasionally found in non wetlands. Elevation range 0 – 610 meters. Flowering period Jun – Oct.	**None.** Project site is not within the range of this species.
Graceful tarplant	*Holocarpha virgata* ssp. *elongata*	--/-- CNPS 4.2 County List D	Medium herb. Occurs in grasslands on coastal mesas and in the foothills. Elevation range 0-915 meters. Flowering period May – Nov.	**Species Present.** Approximately 40 individuals observed on site during 2015 surveys.
Large leaf fillary	*California macrophylla* (*Erodium macrophyllum* var. *macrophyllum*)	--/-- CNPS 1B.1 County List B	Annual herb. Found in cismontane woodland, valley, and foothill grassland on clay soils. Elevation range 15-1200 m. Flowering period Mar to May.	**Not Expected.** The closest observation for this species is more than 12 km away from the project site.

Appendix C (cont.)
SENSITIVE PLANT SPECIES WITH POTENTIAL TO OCCUR – SWEETWATER VISTAS

Common Name	Species Name	Status	Habitat Associations	Potential to Occur
Lewis sun cup	*Camissonia lewisii*	--/-- CNPS 3 County List C	Annual herb. Occurs in very sandy substrates near the beach, typically on beach bluffs. Elevation 0-300 meters. Flowering period Mar – Jun.	**Not Expected.** Suitable habitat does not occur on site.
Ashy spike-moss	*Selaginella cinerascens*	--/-- CNPS 4.1 County List D	Prostrate herb. Occurs in rocky, open areas in sage scrub and chaparral. Elevation range 0-305 meters. No flowering period, as it is not a flowering plant. Above-ground all year.	**Species Present.** Species observed during 2015 surveys.
Mud nama	*Nama stenocarpum*	--/-- CNPS 2B.2 County List B	Annual or perennial herb. Found in freshwater wetlands, riparian, lake margins, and stream banks and edges. Occasionally found in non wetlands. Elevation range 5 to 500 meters. Flowering period Jan to Jul.	**None.** Project is outside of the range of this species.
Munz sage	*Salvia munzii*	--/-- CNPS 2B.2 County List B	Shrub. Occurs in chaparral and Diegan coastal sage scrub. Elevation 120-1065 meters. Flowering period Feb – Apr.	**Species Present.** Ten individuals observed on site during 2015 surveys.
Orcutt's brodiaea	*Brodiaea orcuttii*	--/-- CNPS 1B.1 County List A	Small herb. Occurs only on clay soils in vernally moist environments, usually near vernal pools but occasionally near streams. Elevation range 0-1525 meters. Flowering period May – Jul.	**Presumed Absent.** Marginal habitat on site. Species not observed during 2015 surveys.

Appendix C (cont.)
SENSITIVE PLANT SPECIES WITH POTENTIAL TO OCCUR – SWEETWATER VISTAS

Common Name	Species Name	Status	Habitat Associations	Potential to Occur
Otay tarplant	*Deinandra (Hemizonia) conjugens*	FT/CE CNPS 1B.1 County List A MSCP NE	Annual herb. Occurs in fractured clay soils in grasslands or lightly vegetated coastal sage scrub. Elevation 25-300 meters. Flowering period May – Jun.	**Presumed Absent.** Marginal habitat on site. Species not observed during 2015 surveys.
Palmer's sage	*Artemisia palmeri*	--/-- CNPS 4.2 County List D	Medium shrub. Occurs along streams in coastal sage scrub and chaparral. Elevation range 0-3000 ft. Flowering period May – Sep, but identifiable year-round by leaves.	**Presumed Absent.** Suitable habitat occurs on site however species was not observed during surveys.
Prostrate spineflower	*Chorizanthe procumbens*	--/-- CNPS unlisted County unlisted	Annual herb. Grows in chaparral, valley grassland, pinyon-juniper woodland, and coastal sage scrub. Elevation range 10-1300 meters. Flowering period Apr. –Jul.	**Not Expected.** Preferred habitat not present on site.
Robinson's peppergrass	*Lepidium virginicum* var. *robinsonii*	--/-- CNPS 4.3 County List A	Medium herb. Occurs in openings in chaparral and coastal sage scrub. Typically observed in relatively dry, exposed locales rather than beneath a shrub canopy or along creeks. Elevation range 0-1525 meters. Flowering period Jan – Jul.	**Presumed Absent.** Suitable habitat present on site however species was not observed during surveys.
Rush-like bristleweed	*Xanthisma junceum (Machaeranthera juncea)*	--/-- CNPS 4.3 County List D	Medium herb. Occurs in xeric chaparral and coastal sage scrub, on exposed, rocky substrates. Elevation range 150-1220 meters. Flowering period Jun – Jan.	**Not Expected.** Exposed rocky substrates not present on site.

Appendix C (cont.)
SENSITIVE PLANT SPECIES WITH POTENTIAL TO OCCUR – SWEETWATER VISTAS

Common Name	Species Name	Status	Habitat Associations	Potential to Occur
San Diego adolphia	*Adolphia californica*	--/-- CNPS 2B.1 County List B	Shrub. Occurs on clay soils in dry canyons and washes in coastal sage scrub and chaparral. Elevation range less than 400 meters. Flowering period Dec – May.	**Presumed Absent.** Shrub would have been observed if present.
San Diego ambrosia	*Ambrosia pumila*	FE/-- CNPS 1B.1 County List A	Small herb. Generally found along creeks or seasonal drainages along the periphery of willow riparian areas. Elevation range 200-610 meters. Flowering period Apr – Oct.	**Presumed Absent.** Marginal habitat on site. Species not observed during 2015 surveys
San Diego goldenstar	*Bloomeria* (*Muilla*) *clevelandii*	--/-- CNPS 1B.1 County List A	Small herb. Occurs on clay soils in grasslands and coastal sage scrub. Elevation range 0-610 meters. Flowering period Apr – May.	**Presumed Absent.** Marginal habitat is present on site has however species was not observed during surveys.
San Diego marsh-elder	*Iva hayesiana*	--/-- CNPS 2B.2 County List B	Perennial herb. Occurs along stream courses. Shrub identifiable all year. Elevation range less than 300 meters. Flowering period Apr – Oct.	**Species Present.** Species observed in abundance in eastern portion of site during 2015 survey.
San Diego needle grass	*Stipa diegoensis* (*Achnatherum diegoense*)	--/-- CNPS 4.2 County List D	Tall bunchgrass. Occurs in chaparral – sage scrub ecotone, usually in fine, silty loam soil. Elevation range 0-915 meters. Flowering period Feb – Jun.	**Not Expected.** Fine, silty loam soils are not present on project site. Species not observed during 2015 surveys.

Appendix C (cont.)
SENSITIVE PLANT SPECIES WITH POTENTIAL TO OCCUR – SWEETWATER VISTAS

Common Name	Species Name	Status	Habitat Associations	Potential to Occur
San Diego sunflower	*Bahiopsis* (*Viguiera*) *laciniata*	--/-- CNPS 4.2 County List D	Medium shrub. Occurs in coastal sage scrub, often at high density. Elevation range 0-915 meters. Flowering period Feb – Aug. but identifiable year-round by leaves.	**Species Present.** Species was observed in abundance throughout the site during 2015 surveys.
San Diego thorn-mint	*Acanthomintha ilicifolia*	FT/SE CNPS 1B.1 County List A	Small herb. Occurs on clay soils near vernal pools and in grassy openings in coastal sage scrub and chaparral. Elevation range 0-915 meters. Flowering period Apr – Jun.	**None.** No vernal pool habitat is present on site.
Rayless ragwort	*Senecio aphanactis*	--/-- CNPS 2.2 County List B	Annual herb. Found in chaparral, cismontane woodland, coastal scrub, and drying alkaline flats. Elevation range 15 - 800 meters. Flowering period Jan – Apr.	**Presumed Absent.** Marginal habitat is present on site however this species was not observed during 2015 surveys.
Slender-pod jewelflower	*Caulanthus heterophyllus* (*Caulanthus stenocarpus*)	--/-- CNPS unlisted County unlisted	Annual herb. Grows in dry open scrub, usually after disturbance or fire. Elevation less than 1400 meters. Flowering period Mar-May.	**Presumed Absent.** Suitable habitat is present on site however species was not observed during surveys.
Small flowered microseris	*Microseris douglasii* spp. *platycarpha*	--/-- CNPS 4.2 County List D	Annual herb. Occurs in clay soils in perennial grasslands, on vernal pools periphery, or in broad openings in sage scrub. Elevation 15-1070 meters. Flowering period Mar – May.	**Not Expected.** No suitable habitat on site.

Appendix C (cont.)
SENSITIVE PLANT SPECIES WITH POTENTIAL TO OCCUR – SWEETWATER VISTAS

Common Name	Species Name	Status	Habitat Associations	Potential to Occur
Small flowered morning glory	*Convolvulus simulans*	--/-- CNPS 4.2 County List D	Annual herb. Occurs in coastal clay areas in openings of chaparral, sage scrub, and grasslands. Elevation range 30-700 meters. Flowering period Mar – Jul.	**Presumed Absent.** Suitable habitat occurs on site however species was not observed during surveys.
Summer holly	*Comarostaphylis diversifolia* ssp. *diversifolia*	--/-- CNPS 1B.2 County List A	Occurs in chaparral. Large shrub visible all year. Elevation range 100 to 550 meters. Flowering period Apr – Jun.	**None.** Would have been observed if present.
Southwestern spiny rush	*Juncus acutus* ssp. *leopoldii*	--/-- CNPS 4.2 County List D	Large clump-forming graminoid. Occurs in moist, saline or alkaline soils in coastal salt marshes and riparian alkaline marshes. Elevation range 0-915 meters. Flowering period May – Jun. but identifiable year-round by leaves and growth habit.	**Species Present.** Species observed at scattered locations through the site during 2015 surveys.
Variegated dudleya	*Dudleya variegata*	--/-- CNPS 1B.2 County List A	Small herb. Occurs on clay soils near vernal pools, and on metavolcanic rocky soils in open coastal sage scrub, chaparral, and grasslands. Elevation range 0-1070 meters. Flowering period Apr – Jun.	**None.** No vernal pools or metavolcanic rocky soils on site.

Appendix C (cont.)
SENSITIVE PLANT SPECIES WITH POTENTIAL TO OCCUR – SWEETWATER VISTAS

Common Name	Species Name	Status	Habitat Associations	Potential to Occur
Western dichondra	*Dichondra occidentalis*	--/-- CNPS 4.2 County List D	Mat-forming herb. Occurs on sandy banks in coastal sage scrub, chaparral, and oak woodland, often after fire. Elevation range 0-610 meters. Flowering period Mar – Jul.	**Presumed Absent.** Potential habitat occurs on site however it was not observed during surveys.
Willowy monardella	*Monardella linoides viminea*	FE/CE CNPS 1B.1 County List A MSCP NE	Perennial herb. Occurs in riparian scrub, usually at sandy locales in seasonally dry washes. Elevation 50-225 meters. Flowering period Jun – Aug.	**None.** Suitable habitat not present on site.

[1] Listing is as follows: F = Federal; S = State of California; E = Endangered; T = Threatened; R = Rare

[2] CNPS = California Native Plant Society Rare Plant Rank: 1A – presumed extirpated in California and either 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 – more information needed; 4 – watch list for species of limited distribution. Extension codes: .1 – seriously endangered; .2 – moderately endangered; .3 – not very endangered.

[3] County of San Diego Sensitive Plant Lists: A – rare, threatened, or endangered in California and elsewhere; B – rare, threatened, or endangered in California but more common elsewhere; C – may be quite rare but need more information; D – limited distribution and may be uncommon, but not presently endangered.

Potential to Occur is assessed as follows. **None**: Species is either sessile (*e.g.*, plants) or so limited to a particular habitat that it cannot disperse on its own (*e.g.*, fairy shrimp), and habitat suitable for its survival does not occur on the project site; **Not Expected**: Species moves freely and might disperse through or across the project site, but suitable habitat for residence or breeding does not occur on the project site; **Low**: Suitable habitat is present on the project site but is of low quality and no sign of the species was observed during surveys, however the species cannot be excluded with certainty; **High**: Suitable habitat occurs on the project site and the species has been recorded recently on or near the project site, but was not observed during surveys for the current project; **Species Present**: The species was observed during biological surveys for the current project and is assumed to occupy the project site. **Presumed Absent:** Valid protocol surveys for the species were negative and the species is assumed to not occupy the site.

Appendix D

SENSITIVE ANIMAL SPECIES WITH POTENTIAL TO OCCUR

Appendix D
SENSITIVE ANIMAL SPECIES WITH POTENTIAL TO OCCUR – SWEETWATER VISTAS

Common Name	Species Name	Status	Habitat Associations	Potential to Occur
Insects				
Dun skipper	*Euphys vestries harbisoni*	--/-- County Group 1	Riparian habitats and chaparral with narrow canyons or drainages, where perennial sources of water provide adequate habitat for the larval foodplant: San Diego sedge (*Carex spissa*).	**High.** Host plant was observed on portions of the site east of Jamacha. Occurrences reported nearby.
Hermes copper	*Lycaena hermes*	FC/-- County Group 1	Southern mixed chaparral and coastal sage scrub at western edge of Laguna mountains. Requires host plant spiny redberry (*Rhamnus crocea*) in close proximity to California buckwheat (*Eriogonum fasciculatum*) or other nectar sources.	**Not Expected.** A few isolated spiny redberry were observed on site; however, they were not observed in association with California buckwheat.
Monarch butterfly	*Danaus plexippus*	--/-- County Group 2	Winter roost sites extend along the coast from northern Mendocino to Baja California, Mexico. Roosts located in wind-protected tree groves (eucalyptus, Monterey pine, cypress), with nectar and water sources nearby. Larval host plants consist of milkweeds (*Asclepias* spp.).	**Species Present (Foraging).** Species observed on site during 2015 surveys. The species is not likely to roost on site.

Appendix D (cont.)
SENSITIVE ANIMAL SPECIES WITH POTENTIAL TO OCCUR – SWEETWATER VISTAS

Common Name	Species Name	Status	Habitat Associations	Potential to Occur
Insects (cont.)				
Quino checkerspot butterfly	*Euphydryas editha quino*	FE/-- County Group 1	Sunny openings within chaparral and coastal sage shrublands. Host plants include *Plantago erecta, Cordylanthus rigidus*, *Collinsia* spp., *Plantago patagonica*, *Antirrhinum coulterianum*, and *Castilleja exserta.*	**Presumed Absent.** Protocol-level surveys conducted for species were negative. The potential for the species to occur in subsequent years is very low. Only two small host plant patches were found on the site.
Reptiles and Amphibians				
Coast patch-nosed snake	*Salvadora hexalepis virgultea*	--/SSC County Group 2	Inhabits semi-arid brushy areas and chaparral in canyons, rocky hillsides, and plains.	**Low.** Suitable habitat on site. Species was not observed during surveys.
Coastal rosy boa	*Charina trivirgata roseofusca*	--/-- County Group 2	Occurs among rocky outcrops in coastal sage scrub, chaparral, and desert scrub.	**Low.** Suitable habitat on site. Species was not observed during surveys.
Coastal western whiptail	*Cnemidophorus tigris multiscutatus*	--/-- County Group 2	Found in deserts and semiarid areas with sparse vegetation and open areas and in woodland and riparian areas. Substrate may be firm soil, sandy, or rocky at surface.	**Low.** Marginal habitat occurs on the site. Species was observed during surveys.
Coronado skink	*Plestiodon skiltonianus interparietalis*	--/SSC County Group 2	Occurs in grasslands, coastal sage scrub, and open chaparral where there is abundant leaf litter or low herbaceous growth.	**Low.** Suitable habitat on site. Species was not observed during surveys.

Appendix D (cont.)
SENSITIVE ANIMAL SPECIES WITH S POTENTIAL TO OCCUR – SWEETWATER VISTAS

Common Name	Species Name	Status	Habitat Associations	Potential to Occur
Reptiles and Amphibians (cont.)				
Northern red diamond rattlesnake	*Crotalus ruber ruber*	--/SSC County Group 2	Occurs from coastal San Diego County to the eastern slopes of the mountains and in desert habitats. Occurs from sea level to 900 meters in chaparral, woodland, and arid desert habitats in rocky areas and dense vegetation.	**Low.** Suitable habitat present on site. Species was not observed during surveys.
Orange-throated whiptail	*Aspidoscelis hyperythra*	--/SSC County Group 2	Coastal sage scrub, chaparral, edges of riparian woodlands, and washes. Also found in weedy, disturbed areas adjacent to these habitats. Important habitat requirements include open, sunny areas, shaded areas, and abundant insect prey base, particularly termites (*Reticulitermes* sp.).	**High.** Suitable habitat occurs on site. Species was not observed during surveys.
San Diego banded gecko	*Coleonyx variegatus abbottii*	--/-- County Group 1	Chaparral and coastal sage scrub in areas with rock outcrops.	**Not Expected.** No large rock outcrops on site.
San Diego horned lizard	*Phrynosoma coronatum blainvillei*	--/SSC County Group 2	Inhabits coastal sage scrub and chaparral in arid and semiarid climate conditions.	**Low.** Marginal habitat occurs. No sign of this species was observed on the site during surveys. Existing disturbance and proximity to developments strongly preclude the potential for this species to occur.

Appendix D (cont.)
SENSITIVE ANIMAL SPECIES WITH POTENTIAL TO OCCUR – SWEETWATER VISTAS

Common Name	Species Name	Status	Habitat Associations	Potential to Occur
Reptiles and Amphibians (cont.)				
San Diego ringneck snake	*Diadophis punctatus similis*	--/-- County Group 2	Generally occurs in moist habitats such as oak woodlands and canyon bottoms, but is also sometimes encountered in grassland, chaparral, and coastal sage scrub; generally restricted to leaf litter and rarely crosses open areas.	**Not Expected.** Marginal habitat present on site. Species was not observed during surveys.
Silvery legless lizard	*Anniella pulchra pulchra*	--/SSC County Group 2	Areas with loose soil, particularly in sand dunes and or otherwise sandy soil. Generally found in leaf litter, under rocks, logs, or driftwood in oak woodland, chaparral, and desert scrub.	**Not Expected.** Soils on site are highly disturbed.
South coast garter snake	*Thamnophis sirtalis novum*	--/SSC	Utilizes a wide variety of habitats - forests, mixed woodlands, grassland, chaparral, farmlands, often near ponds, marshes, or streams.	**Low.** Suitable habitat occurs. This species is more likely to occur further to the south of the site near Sweetwater Reservoir.
Southwestern pond turtle	*Clemmys marmorata pallida*	--/SSC County Group 1	Thoroughly aquatic turtle of ponds, marshes, rivers, streams and irrigation ditches, usually with aquatic vegetation. Requires basking sites and suitable upland habitat (sandy banks or grassy open fields) up to 0.5 km from water for laying eggs.	**Low.** Stream runs though site however basking sites and suitable upland habitat for egg laying is not present.

Appendix D (cont.)
SENSITIVE ANIMAL SPECIES WITH POTENTIAL TO OCCUR – SWEETWATER VISTAS

Common Name	Species Name	Status	Habitat Associations	Potential to Occur
Reptiles and Amphibians (cont.)				
Two-striped garter snake	*Thamnophis hammondii*	---/SSC County Group 1	Typical habitat is along permanent and intermittent streams bounded by dense riparian vegetation; also found associated with vernal pools and stock ponds.	**Low.** Appropriate habitat on site. Species was not observed during surveys.
Western spadefoot	*Spea hammondii*	--/SSC County Group 2	Occurs in open coastal sage scrub, chaparral, and grassland, along sandy or gravelly washes, floodplains, alluvial fans, or playas; requires temporary pools for breeding and friable soils for burrowing; generally excluded from areas with bullfrogs (*Rana catesbiana*) or crayfish (*Procambarus* sp.).	**None.** No suitable habitat on site.
Birds				
Barn owl	*Tyto alba*	--/--County Group 2	Require large areas of open land over which to hunt. Marsh, grasslands, or mixed agricultural fields. For nesting and roosting they need cavities in trees or man-made structures such as barns or silos.	**Low.** Marginal habitat present on site. No suitable nesting or roosting habitat observed. This species could forage over the site.
Bell's sage sparrow	*Amphispiza belli belli*	BCC/WL County Group 1	Occurs in sunny, dry stands of coastal sage scrub or chaparral.	**Low.** Despite suitable habitat on site species was not observed during surveys.

Appendix D (cont.)
SENSITIVE ANIMAL SPECIES WITH POTENTIAL TO OCCUR – SWEETWATER VISTAS

Common Name	Species Name	Status	Habitat Associations	Potential to Occur
Birds (cont.)				
White-tailed kite	*Elanus caeruleus*	--/FP County Group 1	Rolling foothills and valley margins with scattered oaks and river bottomlands or marshes next to deciduous woodland. Open grasslands, meadows, or marshes for foraging close to isolated, dense-topped trees for nesting and perching.	**High.** Suitable nesting habitat occurs. This species was not observed or otherwise detected during surveys.
Burrowing owl	*Athene cunicularia*	BCC/SSC County Group 1	Typical habitat is grasslands, open scrublands, agricultural fields, and other areas where there are ground squirrel burrows or other areas in which to burrow. All records of burrowing owl in northwestern San Diego County are prior to 1997 (Unitt 2004).	**Not expected.** No suitable habitat present on site.
California gull	*Larus californicus*	--/WL County Group 2	Breeds on islands in lakes or rivers. Forages along lakes, bogs, farm fields, lawns, pastures, sagebrush, garbage dumps, feedlots, parking lots, ocean beaches, and open ocean.	**Not expected.** No suitable breeding habitat on site. Species could forage on site.

Appendix D (cont.)
SENSITIVE ANIMAL SPECIES WITH POTENTIAL TO OCCUR – SWEETWATER VISTAS

Common Name	Species Name	Status	Habitat Associations	Potential to Occur
Birds (cont.)				
Coastal California gnatcatcher	*Polioptila californica californica*	FT/SSC County Group 1	Occurs in coastal sage scrub with California sagebrush (*Artemisia californica*) as a dominated or co-dominant below 2,500 feet.	**Species Present (Breeding).** Protocol-level surveys confirmed a breeding pair in the northwestern portion of the site. An additional pair was confirmed to the immediate east of the site.
Cooper's hawk	*Accipiter cooperi*	--/WL County Group 1	Tends to inhabit lowland riparian areas and oak woodlands in proximity to suitable foraging areas such as scrublands or fields.	**Species Present (Breeding).** This species was observed on several occasions during surveys and is presumed to use the site for breeding.
Grasshopper sparrow	*Ammodramus savannarum*	--/SSC County Group 1	Typical habitat is dense grasslands that have little or no shrub cover.	**None**. No suitable habitat on site.
Great blue heron	*Ardea herodias*	--/-- County Group 2	Wetland habitats, but can be observed foraging away from water.	**Low.** Suitable habitat on site however species was not observed during surveys.
Green heron	*Butorides virescens*	--/-- County Group 2	Found around wooded ponds, marshes, rivers, reservoirs, and estuaries.	**Low.** Suitable habitat present on site however species was not observed during surveys.
Horned lark	*Eremophila alpestris actis*	--/SSC County Group 2	Expansive open areas with barren or sparsely vegetated ground such as beaches, plowed fields, etc.	**Not Expected.** Suitable habitat does not occur on the site.

Appendix D (cont.)
SENSITIVE ANIMAL SPECIES WITH POTENTIAL TO OCCUR – SWEETWATER VISTAS

Common Name	Species Name	Status	Habitat Associations	Potential to Occur
Birds (cont.)				
Least Bell's vireo	*Vireo bellii pusillus*	FE/ CE County Group 1	Summer resident of Southern California. Inhabits riparian woodland and is most frequent in areas that combine an understory of dense, young willows or mule fat with a canopy of tall willows.	**Species Present (Breeding).** Protocol-level surveys confirmed this species at several locations within suitable habitat that occurs on and in the immediate vicinity of the site.
Loggerhead shrike	*Lanius ludovicianus*	BCC/SSC County Group 1	Typical habitat includes open habitats including grasslands, shrublands, and ruderal areas with adequate perching locations.	**Not Expected.** Marginal habitat occurs on site.
Long-eared owl	*Asio otus*	--/SSC County Group 1	In San Diego County is a rare resident in shady oak woodlands and broad riparian forests. Ideal habitat includes a closed canopy near open habitats for foraging and a supply of abandoned raptor or corvid nests or debris platforms for nesting (Unitt 2004).	**Not expected.** No appropriate habitat on site.
Northern harrier	*Circus cyaneus*	--/SSC County Group 1	Within San Diego County, distribution is primarily scattered throughout lowlands but can also be observed in foothills, mountains, and desert. Nests on ground in shrubby vegetation, usually at marsh edge; nest built of a large mound of sticks in wet areas. Typical habitat consists of open grassland and marsh.	**Species Present (Foraging).** This species was observed on foraging on site during 2015 surveys.

Appendix D (cont.)
SENSITIVE ANIMAL SPECIES WITH POTENTIAL TO OCCUR – SWEETWATER VISTAS

Common Name	Species Name	Status	Habitat Associations	Potential to Occur
Birds (cont.)				
Prairie falcon	*Falco mexicanus*	BCC/WL County Group 1	Inhabits dry, open terrain, either level or hilly. Nests on cliffs or bluffs and forages over open desert scrub or grassland.	**Low.** No suitable nesting habitat occurs. This species has a low potential to forage over the site.
Red-shouldered hawk	*Buteo lineatus*	--/-- County Group 1	Riparian woodland, oak woodland, orchards, eucalyptus groves, or other areas with tall trees.	**Species Present (Foraging).** This species was observed during 2015 surveys.
Rufous-crowned sparrow	*Aimophila ruficeps cenescens*	--/SSC County Group 1	Found in coastal sage scrub and sparse mixed chaparral.	**Low.** Suitable habitat occurs. This species was not observed or otherwise detected during surveys.
San Diego cactus wren	*Campylorhynchus brunnicapillus couesi*	--/SSC	Coastal sage scrub with tall *Opuntia* cactus for nesting and roosting.	**None.** Suitable nesting habitat does not occur on the site.
Sharp-shinned hawk	*Accipiter striatus*	--/WL County Group 1	Usually observed in areas with tall trees or other vegetative cover but can be observed in a variety of habitats. In San Diego County occurs in small numbers and only in winter.	**Low.** Species could forage over site during winter.

Appendix D (cont.)
SENSITIVE ANIMAL SPECIES WITH POTENTIAL TO OCCUR – SWEETWATER VISTAS

Common Name	Species Name	Status	Habitat Associations	Potential to Occur
Birds (cont.)				
Southwestern willow flycatcher	*Empidonax trailii extimus*	FE/SE County Group 1	Breeds within thickets of willows or other riparian understory usually along streams, ponds, lakes, or canyons. One of the most important characteristics of the habitat appears to be the presence of dense vegetation, usually throughout all vegetation layers present. Almost all breeding habitats are within close proximity of water or very saturated soil.	**Presumed Absent.** Marginal habitat occurs for this species. This species was not observed or otherwise detected during least Bell's vireo surveys.
Tricolored blackbird	*Agelaius tricolor*	--/SSC County Group 1	Requires open water, protected nesting substrate, and foraging area with available insect prey.	**Low.** Suitable breeding habitat is absent from the site. This species could potentially forage over the site.
Turkey vulture	*Cathartes aura*	--/-- County Group 2	Species occurs throughout much of San Diego County with the exception of extreme coastal San Diego where development is heaviest. Foraging habitat includes most open habitats with breeding occurring in crevices among boulders.	**Species Present (Flyover).** Species was observed during 2015 surveys.
Vermilion flycatcher	*Pyrocephalus rubinus*	--/SSC County Group 1	Occasionally present in coastal regions as a migrant. Breeds in inland deserts.	**Not Expected.** No suitable habitat occurs. This species could potentially migrate through the general area.

Appendix D (cont.)
SENSITIVE ANIMAL SPECIES WITH POTENTIAL TO OCCUR – SWEETWATER VISTAS

Common Name	Species Name	Status	Habitat Associations	Potential to Occur
Birds (cont.)				
Western bluebird	*Sialia mexicana*	--/-- County Group 2	Open coniferous and deciduous woodlands, wooded riparian areas, grasslands, farmlands, and edge of burned areas. Prefers open forest habitats. Nests in cavities in trees and snags, or between bark and trunk. Uses nest boxes.	**Low.** Marginal habitat present on site. Species not observed during surveys.
Western grebe	*Aechmophorus occidentalis*	--/-- County Group 1	Open water and vegetated lake fringe.	**None.** Suitable habitat is not present.
Yellow-breasted chat	*Ictera virens*	--/SSC County Group 1	Prefers mature riparian woodlands.	**High.** Suitable habitat occurs. This species was not observed or detected during surveys.
Yellow warbler	*Setophaga brewsteri*	--/SSC County Group 2	Found along riparian woodlands.	**Species Present (Breeding).** This species was observed at several locations within the site during surveys.
Mammals				
Big free-tailed bat	*Nyctinomops macrotis*	--/SSC County Group 2	A rare species in California (Zeiner et al. 1990). Prefers rugged, rocky canyons. Often forages over water. Roosts in crevices in high cliffs or rock outcrops.	**Not expected.** No high cliffs or large rock outcrops on site.
Dulzura California pocket mouse	*Chaetodipus californicus femoralis*	--/SSC County Group 2	Variety of habitats including coastal scrub, chaparral, and grasslands in San Diego County. Associated with grass-chaparral edges.	**Low.** Marginal habitat present on site.

Appendix D (cont.)
SENSITIVE ANIMAL SPECIES WITH POTENTIAL TO OCCUR – SWEETWATER VISTAS

Common Name	Species Name	Status	Habitat Associations	Potential to Occur
Mammals (cont.)				
Greater western mastiff bat	*Eumops perotis californicus*	--/SSC County Group 2	Found in the lower and upper Sonoran desert scrub near cliffs, preferring the rugged rocky canyons with abundant crevices. During winter months it goes into torpor every day, but arouses and leaves the roost to forage at night when temperatures at dusk are above 5° C. Prefer crowding into tight crevices.	**Not expected.** No high cliffs or large rock outcrops on site.
Long-legged myotis	*Myotis volans*	--/-- County Group 2	Feeds over water and over open habitats using denser woodland and forests for reproduction. Drinks regularly. Roosts in rock crevices, buildings, under tree bark, in snags, mines, and caves.	**Low.** May forage over site in summer, but would not be present during winter as there are no caves or mines on site for roosting.
Mexican long-tongued bat	*Choeronycteris mexicana*	--/SSC County Group 2	Occasionally found in San Diego County which is on the periphery of their range. Feeds on nectar and pollen of night-blooming succulents. Roosts in relatively well-lit caves and in and around buildings.	**Not expected.** No caves or buildings currently on site.

Appendix D (cont.)
SENSITIVE ANIMAL SPECIES WITH POTENTIAL TO OCCUR – SWEETWATER VISTAS

Common Name	Species Name	Status	Habitat Associations	Potential to Occur
Mammals (cont.)				
Mountain lion	*Felis concolor*	--/-- County Group 2	Requires extensive areas of riparian vegetation and brushy stages of various habitats with interspersed irregular terrain, rocky outcrops, and tree/brush edges. Main prey is mule deer.	**Low.** This species has a very low potential to range over the site.
Northwestern San Diego pocket mouse	*Chaetodipus fallax fallax*	--/SSC County Group 2	Occurs in open areas of coastal sage scrub and weedy growth, often on sandy substrates.	**Low.** Marginal habitat is present on site.
Pallid bat	*Antrozous pallidus*	--/SSC County Group 2	Locally common species of low elevations in California. Rocky, mountainous areas and near water; also found over more open, sparsely vegetated grasslands, and prefers foraging in the open. Uses three different roosts: 1) the day roost is in a warm, horizontal opening such as rock cracks; 2) the night roost is in the open, near foliage; and 3) the hibernation roost, which is in caves or cracks in rocks.	**Low.** Species may use this site for foraging.

Appendix D (cont.)
SENSITIVE ANIMAL SPECIES WITH POTENTIAL TO OCCUR – SWEETWATER VISTAS

Common Name	Species Name	Status	Habitat Associations	Potential to Occur
Mammals (cont.)				
Pocketed free-tailed bat	*Nyctinomops femorosaccus*	--/SSC County Group 2	Semiarid desert lands. Day-roosts in caves, crevices in cliffs, and under the roof tiles of buildings. Uses a variety of arid habitats in southern California: pine-juniper woodlands, desert scrub, palm oases, desert wash, desert riparian, etc. Prefers rocky areas with high cliffs.	**Not expected.** No high rocky cliffs on site for roosting.
Ringtail	*Bassariscus astutus*	--/-- County Group 2	Various riparian habitats and in brush stands of moist forest and shrub habitats at low to middle elevations. Less common in wooded areas with hollow trees, sometimes around buildings.	**None.** The site is likely too disturbed and urbanized to support this species.
San Diego black-tailed jackrabbit	*Lepus californicus bennettii*	--/SSC County Group 2	Found primarily in open habitats including coastal sage scrub, chaparral, grasslands, croplands, and open, disturbed areas if there is at least some shrub cover present.	**High.** Suitable habitat present on site.
San Diego desert woodrat	*Neotoma lepida intermedia*	--/SSC County Group 2	Open chaparral and coastal sage scrub, often building large, stick nests in rock outcrops or around clumps of cactus or yucca.	**High.** Woodrat middens were observed on site however species in residence was not determined.

Appendix D (cont.)
SENSITIVE ANIMAL SPECIES WITH POTENTIAL TO OCCUR – SWEETWATER VISTAS

Common Name	Species Name	Status	Habitat Associations	Potential to Occur
Mammals (cont.)				
Small-footed myotis	*Myotis ciliolabrum*	--/-- County Group 2	Occurs in arid, upland habitats near water. Prefers open stands in forests and woodlands as well as brushy habitats. Feeds over and drinks from streams, ponds, springs, and stock tanks.	**Low.** May forage over site in summer, but would not be present during winter as there are no caves or mines on site for roosting.
Southern grasshopper mouse	*Onychomys torridus ramona*	--/SSC County Group 2	Desert habitat is preferred, but it also occurs in coastal scrub and mixed chaparral. It is uncommon in valley foothill and montane riparian habitats.	**Not Expected.** This species has been extirpated from most of its historical range by development.
Southern mule deer	*Odocoileus hemionus*	--/-- County Group 2	Mule deer occupy to some extent almost all types of habitat within their range but, in general, they seem to prefer the more arid, open situations	**Low.** This species has a low potential to range over the site as it is highly fragmented from surrounding suitable habitat.
Spotted bat	*Euderma maculatum*	--/SSC County Group 2	Prefers sites with adequate roosting habitat (i.e., cliffs); feeds over water and along washes. Rare in California (Zeiner, et al. 1990).	**Not Expected.** No high rocky cliffs present on site.
Townsend's western big-eared bat	*Corynorhinus townsendii*	--/SSC County Group 2	Most abundant in mesic habitats. Considered uncommon in California (Zeiner, et al. 1990). Drinks water and requires caves, mines, tunnels, buildings, or other man-made structures for roosting.	**Low.** May forage over site in summer, but would not be present during winter as there are no caves or mines on site for roosting.

Appendix D (cont.)
SENSITIVE ANIMAL SPECIES WITH POTENTIAL TO OCCUR – SWEETWATER VISTAS

Common Name	Species Name	Status	Habitat Associations	Potential to Occur
Mammals (cont.)				
Western red bat	*Lasiurus blossevillii*	--/-- County Group 2	Riparian areas dominated by cottonwoods, oaks, sycamores, and walnuts.	**Low.** May forage over site however, suitable roosting habitat on site is extremely limited.
Yuma myotis	*Myotis yumanensis*	--/-- County Group 2	Open forests and woodland are optimal habitat. Closely tied to bodies of water for foraging and drinking. Roosts in buildings, mines, crevices, caves, and under bridges.	**Low.** May forage over project area but no suitable roost sites are present.

[1] Listing codes are as follows: FE = Federally Endangered; FT = Federally Threatened; FC= Federal Candidate species; BCC = Birds of Conservation Concern; SE = State of California Endangered; FP = State of California Fully Protected; WL = State of California Wait-Listed; SSC = State of California Species of Special Concern.

[2] County of San Diego Sensitive Animal List: Group 1 = Animals that have a very high level of sensitivity, either because they are listed as threatened or endangered or because they have very specific natural history requirements that must be met; Group 2 = Animals that are becoming less common, but are not yet so rare that extirpation or extinction is imminent without immediate action; these species tend to be prolific within their suitable habitat types.

Potential to Occur is assessed as follows. **None**: Species is either sessile (*e.g.*, plants) or so limited to a particular habitat that it cannot disperse on its own (*e.g.*, fairy shrimp), and habitat suitable for its survival does not occur on the project site; **Not Expected**: Species moves freely and might disperse through or across the project site, but suitable habitat for residence or breeding does not occur on the project site; **Low**: Suitable habitat is present on the project site but is of low quality and no sign of the species was observed during surveys, however the species cannot be excluded with certainty; **High**: Suitable habitat occurs on the project site and the species has been recorded recently on or near the project site, but was not observed during surveys for the current project; **Species Present**: The species was observed during biological surveys for the current project and is assumed to occupy the project site. **Presumed Absent:** Valid protocol surveys for the species were negative and the species is assumed to not occupy the site.

Appendix E

EXPLANATION OF STATUS CODES FOR PLANT AND ANIMAL SPECIES

Appendix E
EXPLANATION OF STATUS CODES FOR PLANT AND ANIMAL SPECIES

FEDERAL, STATE, AND LOCAL CODES

U.S. Fish and Wildlife Service (USFWS)

FE	Federally listed endangered
FT	Federally listed threatened

California Department of Fish and Wildlife (CDFW)

SE	State listed endangered
ST	State listed threatened
SSC	State species of special concern
WL	Watch List

Fully Protected	Fully Protected species refer to all vertebrate and invertebrate taxa of concern to the Natural Diversity Data Base regardless of legal or protection status. These species may not be taken or possessed without a permit from the Fish and Game Commission and/or CDFW.

County of San Diego

Plant sensitivity:

List A	Plants rare, threatened, or endangered in California or elsewhere
List B	Plants rare, threatened, or endangered in California but more common elsewhere
List C	Plants that may be quite rare, but more information is needed to determine rarity status
List D	Plants of limited distribution and are uncommon, but not presently rare or endangered

Animal sensitivity:

Group 1	Animals that have a very high level of sensitivity, either because they are listed as threatened or endangered or because they have very specific natural history requirements that must be met.
Group 2	Animals that are becoming less common, but are not yet so rare that extirpation or extinction is imminent without immediate action. These species tend to be prolific within their suitable habitat types.

Multiple Species Conservation Program (MSCP) Covered

Multiple Species Conservation Program covered species for which the County has take authorization within the MSCP area.

MSCP Narrow Endemic (NE)

Narrow endemic species are native species that have "restricted geographic distributions, soil affinities, and/or habitats." The MSCP participants' subarea plans have specific conservation measures to ensure impacts to narrow endemics are avoided to the maximum extent practicable.

OTHER CODES AND ABBREVIATIONS

California Native Plant Society (CNPS) Codes

Lists

1A = Presumed extinct.

1B = Rare, threatened, or endangered in California and elsewhere. Eligible for state listing.

2 = Rare, threatened, or endangered in California but more common elsewhere. Eligible for state listing.

3 = Distribution, endangerment, ecology, and/or taxonomic information needed. Some eligible for state listing.

4 = A watch list for species of limited distribution. Needs monitoring for changes in population status. Few (if any) eligible for state listing.

List/Threat Code Extensions

.1 – Seriously endangered in California (over 80 percent of occurrences threatened/high degree and immediacy of threat)

.2 – Fairly endangered in California (20 to 80 percent occurrences threatened)

.3 – Not very endangered in California (less than 20 percent of occurrences threatened, or no current threats known)

A "CA Endemic" entry corresponds to those taxa that only occur in California.

All List 1A (presumed extinct in California) and some List 3 (need more information; a review list) plants lacking threat information receive no extension. Threat Code guidelines represent only a starting point in threat level assessment. Other factors, such as habitat vulnerability and specificity, distribution, and condition of occurrences, are considered in setting the Threat Code.

Appendix F

SITE PHOTOGRAPHS



Photo 1. Overview of northern-central portions of the site and where development is proposed for Lot 1, facing east.



Photo 2. Overview of southwestern portions of the site and where development is proposed for Lot 2, facing northwest.



Photo 3. Overview of northeastern portions of the site and where development is proposed for Lot 3, facing west.



Photo 4. Overview of project site east of Jamacha Boulevard, facing north. This portion of the site is referred to as the “mitigation parcel” and supports a reach of Little Hansen’s Creek and occupied coastal sage scrub. The entirety of this area will be placed in biological open space.



Photo 5. Overview of biological open space on portions of the site west of Jamacha surrounding Hansen's Creek, facing southwest.



Photo 6. View of homeless encampment and associated disturbances within Hansen's Creek in central portion of the site, facing southeast. These areas will be placed within managed biological open space.



Photo 7. View of culvert for disturbed unnamed ephemeral tributary to Hansen's Creek in northern portions of the site, facing north.



Photo 8. Overview of upper project reach of Hansen's Creek corridor to be placed within biological open space, facing north.



Photo 9. Overview of central project reach of Hansen's Creek to be placed within biological open space, facing northwest. Additional habitat to be placed within biological open space extends out to the background of the photo, with Lot 2 to the left and Lot 1 to the right.



Photo 10. Overview of central project reach of Hansen's Creek to be placed within biological open space, facing west.



Photo 11. Overview of lower project reach of Hansen's Creek to be placed within biological open space, facing southwest.



Photo 12. Overview of lower project reach of Hansen's Creek to be placed within biological open space, facing north. Least Bell's vireo and other sensitive birds occupy this habitat. Habitat on the large hill in the background right will be restored to coastal sage scrub.



Photo 13. Overview of high quality coastal sage scrub within Hardline Preserve and biological open space in northeastern portion of the site, facing west. Gnatcatcher and Munz's sage occupy this habitat.



Photo 14. Overview of high quality coastal sage scrub within Hardline Preserve and biological open space in northeastern portion of the site, facing north.



Photo 15. Overview of off-site Hardline Preserve, open space, and existing developments to the west of the site. Expected wildlife movement through this area generally trends east to west, between existing open space upslope near the existing water tank and the proposed open space in the western portion of the site. An existing pinch point at Fabled Waters Drive is depicted in the background. Another existing pinch point between existing residences (background right) and existing tennis courts (off the photo to the left) is depicted.

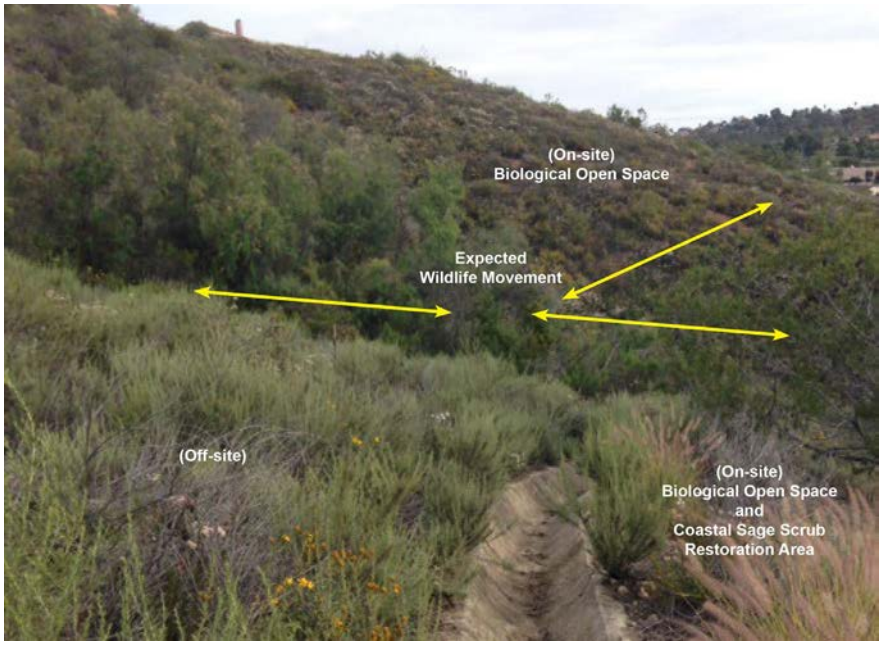

Photo 16. View of expected wildlife movement route crossing the western site boundary, facing north. Wildlife, especially birds such as coastal California gnatcatcher, would be expected to follow the vegetated slope, ravine, and draw in the land that is depicted in the midground. This route serves as a functional movement path to and from the project site that would be conserved by the project within biological open space.



Photo 17. Overview of expected wildlife movement route within the project's biological open space in the western portion of the project site. The approximate location of Lot 1 is depicted in the background. The approximate location of Lot 2 is off the photo to the right. The approximate alignment for Avenida Bosques is also depicted. The project would accommodate open space widths of no less than 250 feet between structures proposed on Lots 1 and 2. The expected wildlife movement route through this area is being conserved within biological open space and the proposed project will restore and enhance coastal sage scrub habitat within and around the movement route. Movement functions will be conserved and overall quality of gnatcatcher habitat within this area will be improved through restoration and enhancement.

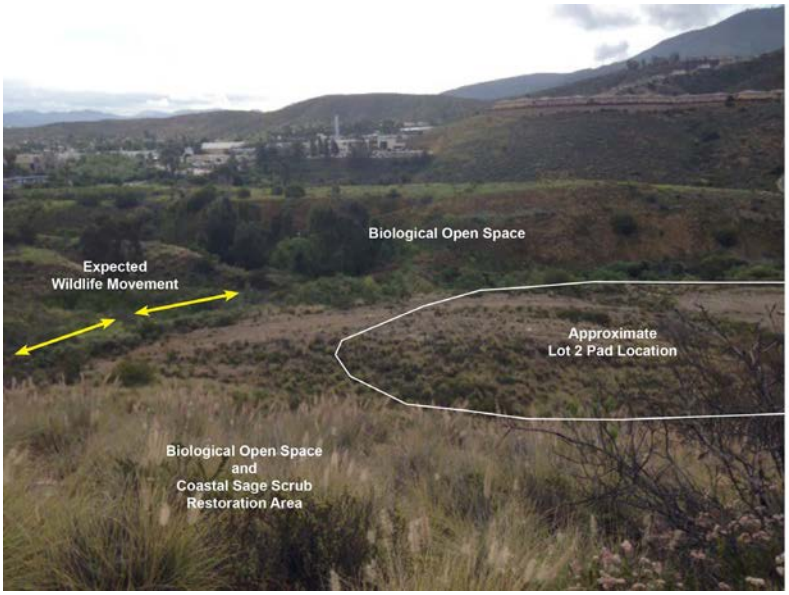

Photo 18. Overview of expected wildlife movement route within the project's biological open space in the western portion of the site, facing southeast. The approximate location of Lot 2 is depicted in the midground right of the photo. The non-native vegetation in the foreground will be restored to coastal sage scrub and the disturbed coastal sage scrub in the midground center and left will be enhanced. Movement functions will be conserved and overall quality of gnatcatcher habitat within this area will be improved through restoration and enhancement.

Appendix G

COASTAL CALIFORNIA GNATCATCHER SURVEY REPORT

HELIX Environmental Planning, Inc.
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Suite 200
La Mesa, CA 91942
619.462.1515 **tel**
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www.**helixepi**.com

June 5, 2015 DOW-03

Ms. Stacey Love
U.S. Fish and Wildlife Service
2177 Salk Ave., Suite 250
Carlsbad, California 92008

Subject: 2015 Coastal California Gnatcatcher (*Polioptila californica californica*) Survey Report for the Sweetwater Vistas Project

Dear Ms. Love:

This letter presents the results of a protocol-level survey for the federally listed threatened coastal California gnatcatcher (*Polioptila californica californica*; CAGN) by HELIX Environmental Planning, Inc. (HELIX) for the Sweetwater Vistas Project located in the unincorporated community of Spring Valley, San Diego County, California. This report describes the methods used to perform the survey and the results. It is being submitted to the U.S. Fish and Wildlife Service (USFWS) as a condition of HELIX's Threatened and Endangered Species Permit TE778195.

PROJECT LOCATION

The project site is generally located north of Sweetwater Reservoir, south and west of State Route 94, and east of State Route 125 in the unincorporated community of Spring Valley in San Diego County, California (Figure 1). Specifically, the site is located near the northwest corner of Jamacha Boulevard and Sweetwater Springs Boulevard. It is located within the San Diego land grant in unsectioned lands, of the U.S. Geological Survey (USGS) 7.5-minute Jamul Mountains quadrangle map (Figure 2). Furthermore, the project site is located on unincorporated lands within the South County and Lakeside-Metro-Jamul segments of the County's Multiple Species Conservation Program (MSCP) Subarea Plan. The site is part of a previously-approved Specific Plan known as The Pointe.

PROJECT DESCRIPTION

The project as currently planned would include the development of a new master planned community consisting of 266 multi-family residential units (5.1 dwelling units per acre) and approximately 25.9 acres of biological open space. Under the previously approved Specific Plan, 51.51 acres were disturbed leaving only 0.38 acre in biological open space. The residential development to occur on the 44.08-acre Western Parcel would be divided into three planning areas (A, B, and C). The 7.81-acre Eastern Parcel containing high quality habitat would be placed in Biological Open Space. Planning Areas A and B, which in aggregate total 158 units, are envisioned to be for sale product, while Planning Area C, totaling 108 units, is designed as an apartment community. The project is anticipated to require a General Plan Amendment, Specific Plan Amendment, Rezone, MSCP Boundary Line Adjustment, Tentative Map, and Major Use Permit.

METHODS

The survey consisted of three site visits that were performed by HELIX biologists Jason Kurnow and Erica Harris (TE 778195) in accordance with the current (1997) USFWS protocol. The CAGN survey area encompassed approximately 27.7 acres of potential CAGN habitat consisting of coastal sage scrub (Figure 3). Table 1 details the survey locations, times, and conditions.

The surveys were conducted by walking along the edges of, as well as within, suitable CAGN habitat. The survey route was arranged to ensure complete survey coverall of all habitat with potential for occupancy by CAGN. All surveys were conducted with binoculars to aid in bird detection. Recorded CAGN vocalizations were played sparingly and only if other means of detection had failed. The approximate survey route followed is depicted on Figure 3.

Table 1
COASTAL CALIFORNIA GNATCATCHER SURVEY INFORMATION

Survey Date	Biologist(s)	Start/Stop Times	Acres (ac) Surveyed/ Survey Rate (ac per hour)	Start/Stop Weather Conditions
4/6/15	J. Kurnow	0745/1030	27.7 ac/10.1 ac	62°F, wind, 1-2 mph, 70% cloud cover 68°F, wind, 1-2 mph, 45% cloud cover
4/14/15	J. Kurnow T. Rachels*	0700/1000	27.7 ac/9.2 ac	61°F, wind, 1-2 mph, overcast 66°F, wind, 1-2 mph, 60% cloud cover
4/27/15	J. Kurnow E. Harris T. Rachels*	0745/1045	27.7 ac/9.2 ac	59°F, wind, 0-1 mph, 0% cloud cover 81°F, wind, 1-3 mph, 0% cloud cover

* Supervised individual

Vegetation Communities/Habitat Types

Fourteen vegetation communities/habitat types or land use areas have been mapped within the project site (Holland 1986; Oberbauer 2008): freshwater marsh, cismontane alkali marsh, disturbed wetland, southern willow scrub, mule fat scrub, Arundo-dominated riparian, non-native riparian, tamarisk scrub, Diegan coastal sage scrub (including disturbed), non-native grassland, eucalyptus woodland, non-native vegetation, disturbed habitat, and urban/developed land (Figure 3). These communities or land use areas are described below. As noted above, Diegan coastal sage scrub was the only vegetation community surveyed for CAGN because the other communities do not provide suitable breeding habitat for the species.

Freshwater Marsh

Freshwater marsh is dominated by perennial, emergent monocots, 5 to 13 feet tall, forming incomplete to completely closed canopies. This vegetation type occurs along the coast and in coastal valleys near river mouths and around the margins of lakes and springs, freshwater or brackish marshes. These areas are semi- or permanently flooded yet lack a significant current (Holland 1986). Dominant species include cattails (*Typha* sp.) and bulrushes (*Scirpus* sp.), along with umbrella sedges (*Cyperus* sp.), rushes (*Juncus* sp.), and spike-sedge, (*Eleocharis* sp.).

Cismontane Alkali Marsh

Cismontane alkali marsh is characterized by wet or inundated areas dominated by emergents, but often with an understory of grasses or sedges. Standing water or saturated soil is present during the entire or majority of the year. High evaporation and low input of fresh water results in high salinity, especially during the summer (Holland 1986). Characteristic species include: yerba mansa (*Anemopsis californica*), salt grass (*Distichlis spicata* var. *stricta*), cattails, and rush.

Disturbed Wetland

This vegetation community is dominated by exotic wetland species that invade areas that have been previously disturbed or undergone periodic disturbances. These non-natives become established more readily following natural or human-induced habitat disturbance than the native wetland flora. Characteristic species of disturbed wetlands include giant reed (*Arundo donax*), ox tongue (*Picris echioides*), cocklebur (*Xanthium strumarium* var. *canadense*), and tamarisk (*Tamarix* sp.).

Southern Willow Scrub

Southern willow scrub consists of dense, broadleaved, winter-deciduous stands of trees dominated by shrubby willows (*Salix* sp.) in association with mule fat (*Baccharis salicifolia*), and with scattered emergent cottonwood (*Populus fremontii*) and western sycamores (*Platanus racemosa*). This vegetation community occurs on loose, sandy or fine gravelly alluvium deposited near stream channels during flood flows. Frequent flooding maintains this early seral community, preventing succession to a riparian woodland or forest (Holland 1986). In the

absence of periodic flooding, this early seral type would be succeeded by southern cottonwood or western sycamore riparian forest.

Mule Fat Scrub

Mule fat scrub is a depauperate, shrubby riparian scrub community dominated by mule fat and interspersed with small willows. This vegetation community occurs along intermittent stream channels with a fairly coarse substrate and moderate depth to the water table. This early seral community is maintained by frequent flooding, the absence of which would lead to a cottonwood or sycamore dominated riparian woodland or forest (Holland 1986). In some environments, limited hydrology may favor the persistence of mule fat.

Arundo-Dominated Riparian

Densely vegetated riparian thickets dominated almost exclusively by giant reed.

Non-Native Riparian

Densely vegetated riparian thickets dominated by non-native, invasive species. Characteristic species include: giant reed, tamarisk, eucalyptus (*Eucalyptus* sp.), palms (*Phoenix* spp. and *Washingtonia* spp.), Bermuda grass (*Cynodon dactylon*), castor bean (*Ricinus communis*), and pampas grass (*Cortaderia* spp.), along with natives such as arrowweed (*Pluchea sericea*), Fremont's cottonwood, and willows.

Tamarisk Scrub

Tamarisk scrub is typically comprised of shrubs and/or small trees of exotic tamarisk species but may also contain willows, salt bushes (*Atriplex* spp.), catclaw acacia (*Acacia greggii*), and salt grass. This habitat occurs along intermittent streams in areas where high evaporation rates increase the salinity level of the soil. Tamarisk is a phreatophyte, a plant that can obtain water from an underground water table. Because of its deep root system and high transpiration rates, tamarisk can substantially lower the water table to below the root zone of native species, thereby competitively excluding them. As a prolific seeder, it may rapidly displace native species within a drainage (Holland 1986).

Diegan Coastal Sage Scrub (including disturbed)

Diegan coastal sage scrub is dominated by subshrubs with leaves that abscise during drought and are replaced by a lesser amount of smaller leaves. This adaptation of drought evasion allows these species to withstand drought periods in summer and fall in areas of low precipitation. Coastal sage scrub occurs on a variety of soil types, from sandy lithosols on siliceous sandstone to clay-rich chernozems on volcanic ash. Typical species found within Diegan coastal sage scrub include California sagebrush (*Artemisia californica*), California buckwheat (*Eriogonum fasciculatum*), laurel sumac (*Malosma laurina*), and black sage (*Salvia mellifera*).

Eucalyptus Woodland

Eucalyptus woodland is dominated by eucalyptus, an introduced genus that produces a large amount of leaf and bark litter. The chemical and physical characteristics of this litter, combined with the shading effects of the tall trees, limit the ability of other species to grow in the understory, and floristic diversity decreases. If sufficient moisture is available, eucalyptus becomes naturalized and is able to reproduce and expand its range. Eucalyptus woodland is not considered a sensitive community unless it supports a federally or state listed species.

Non-native Grassland

Non-native grassland is a dense to sparse cover of annual grasses, often associated with numerous species of showy-flowered native annual forbs. This association occurs on gradual slopes with deep, fine-textured, usually clay soils. Characteristic species include oats (*Avena* sp.), red brome (*Bromus rubens*), ripgut (*B. diandrus*), ryegrass (*Lolium* sp.), and mustard (*Brassica* sp.). Most of the annual introduced species that comprise the majority of species and biomass within the non-native grassland originated from the Mediterranean region, an area with a long history of agriculture and a climate similar to California. These two factors, in addition to intensive grazing and agricultural practices in conjunction with severe droughts, contributed to the successful invasion and establishment of these species and the replacement of native grasslands with an annual dominated non-native grassland (Jackson 1985).

Non-native Vegetation

Non-native vegetation is characterized by predominantly non-native species introduced or established through human action. These areas are not typically artificially irrigated but receive water from precipitation or runoff.

Disturbed Habitat

Disturbed habitat includes land cleared of vegetation (e.g., dirt roads), land containing a preponderance of non-native plant species such as ornamentals or ruderal exotic species that take advantage of disturbance (previously cleared or abandoned landscaping), or land showing signs of past or present animal usage that removes any capability of providing viable habitat.

Developed

Developed land is where permanent structures and/or pavement have been placed, which prevents the growth of vegetation, or where landscaping is clearly tended and maintained.

RESULTS

CAGNs were observed at two locations: one area was located within the project site boundary, with the other occurring just outside the project site boundary (Figure 3). CAGNs located within the project site boundary were observed during all 3 survey visits. These observations were of a family group consisting of a pair and 2 juveniles. All observations of the family group occurred amongst Diegan coastal sage scrub located within the northwestern portion of the project site (Figure 3). The off-site CAGN location was of a pair utilizing Diegan coastal sage scrub east and upslope of the eastern project site boundary (Figure 3). This pair was detected during the last survey visit.

CERTIFICATION

I certify that the information in this survey report and enclosed exhibit fully and accurately represent my work.

Sincerely,



Jason Kurnow
Senior Scientist



Erica Harris
Biologist

Enclosures:
Figure 1 Regional Location Map
Figure 2 Project Vicinity Map (USGS Topography)
Figure 3 Coastal California Gnatcatcher (*Polioptila californica californica*) Survey Route and Locations

REFERENCES

Holland, R.F. 1986. Preliminary Descriptions of the Terrestrial Natural Communities of California. State of California, The Resources Agency, 156 pp.

Oberbauer, T., Kelly, M., and Buegge, J. 2008. Vegetation Communities of San Diego County. Based on "Preliminary Descriptions of the Terrestrial Natural Communities of California", R.F. Holland, 1986. 73 pp.

United States Fish and Wildlife Service (USFWS). 1997. Coastal California Gnatcatcher (*Polioptila californica californica*) Presence/Absence Survey Protocol. 5pp.



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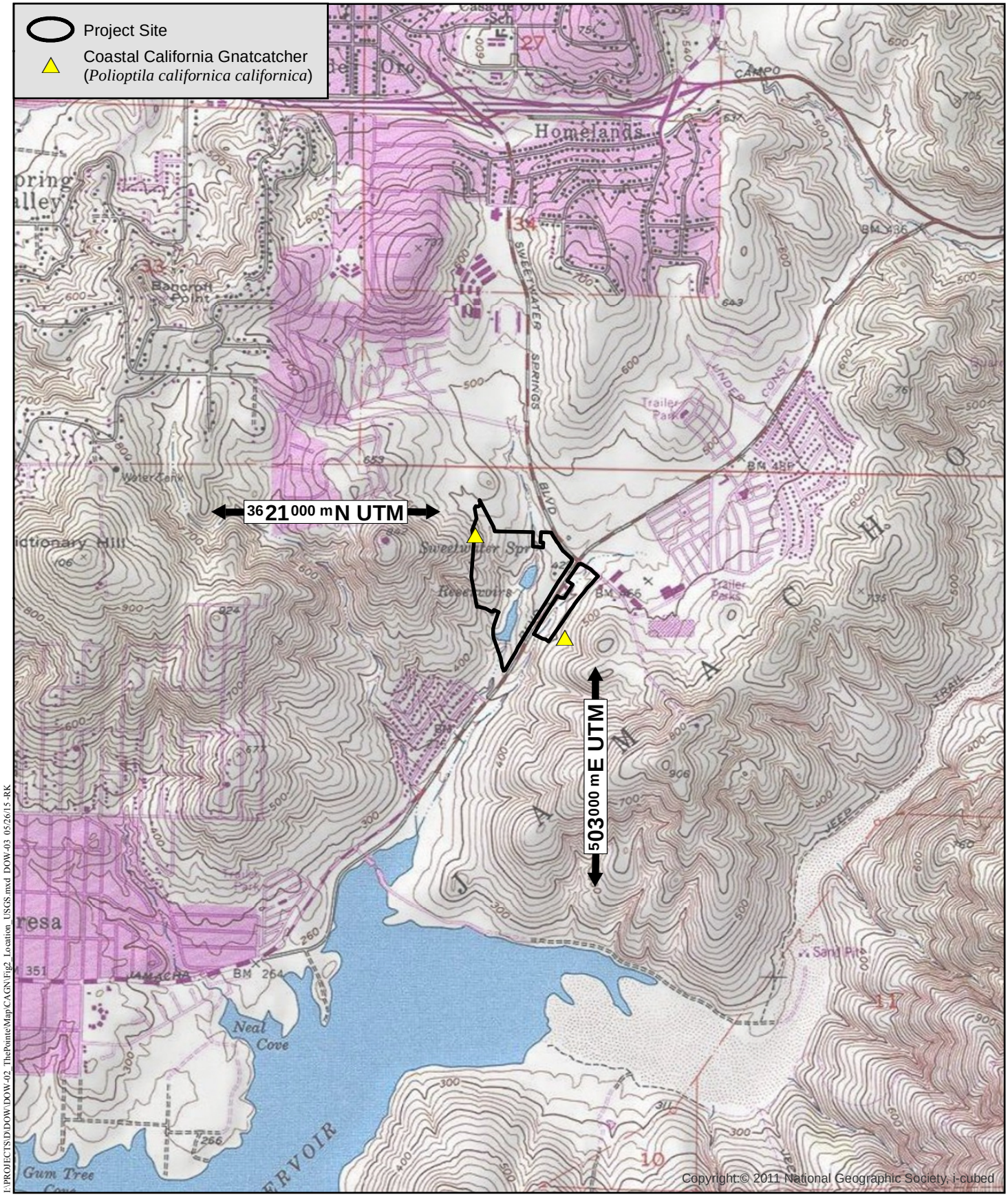
Regional Location Map

SWEETWATER VISTAS

HELIX Environmental Planning

N 0 8 Miles

Figure 1



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Project Vicinity Map (USGS Topography)

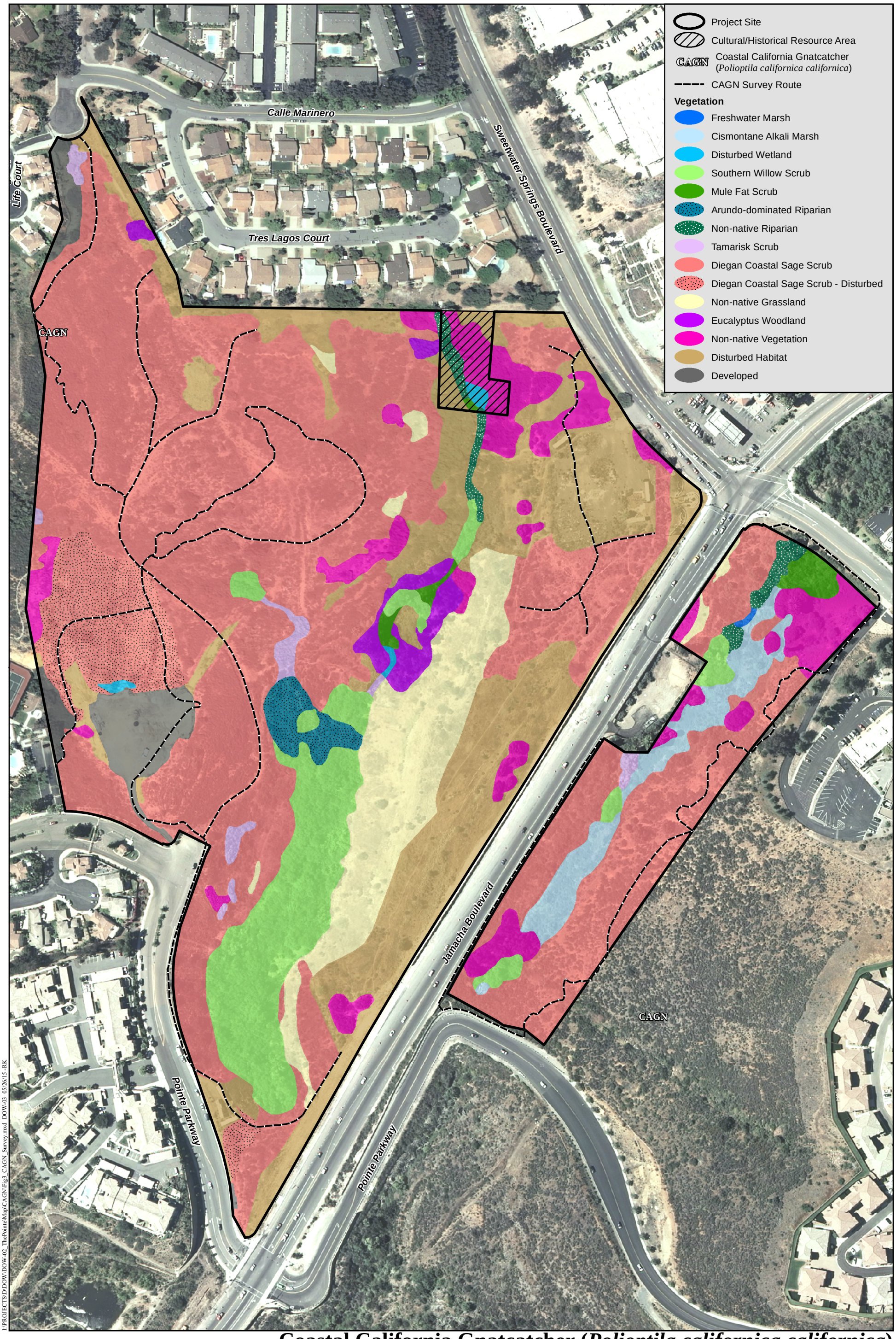
SWEETWATER VISTAS

HELIX Environmental Planning

N

0 2,000 Feet

Figure 2



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Coastal California Gnatcatcher (*Polioptila californica californica*) Survey Route and Locations

SWEETWATER VISTAS

HELIX Environmental Planning

N 0 200 Feet

Figure 3

Appendix H

QUINO CHECKERSPOT BUTTERFLY SURVEY REPORT

HELIX Environmental Planning, Inc.
7578 El Cajon Boulevard
Suite 200
La Mesa, CA 91942
619.462.1515 **tel**
619.462.0552 **fax**
www.**helixepi**.com

June 18, 2015 DOW-01

Ms. Stacey Love
U.S. Fish and Wildlife Service
2177 Salk Ave., Suite 250
Carlsbad, California 92008

Subject: 2015 Quino Checkerspot Butterfly (*Euphydryas editha quino*) Survey Report for the Sweetwater Vistas Project

Dear Ms. Love:

This letter presents the results of the 2015 Quino checkerspot butterfly (*Euphydryas editha quino*; QCB) surveys performed by HELIX Environmental Planning, Inc. (HELIX) for the Sweetwater Vistas Project (project). HELIX biologists Amy Mattson, Jasmine Bakker, Erica Harris, and Stacy Nigro (TE778195-12.2) completed protocol within 12 survey events (12 total site visits) over approximately 27 acres of potential QCB habitat within an approximately 53-acre property.

PROJECT LOCATION

The area surveyed for the project, herein referred to as the survey area or project site, is generally located north of Sweetwater Reservoir, south and west of State Route 94, and east of State Route 125 in the unincorporated community of Spring Valley in San Diego County, California (Figure 1). Specifically, the site is located near the northwest corner of Jamacha Boulevard and Sweetwater Springs Boulevard. It is located within the San Diego land grant in unsectioned lands, of the U.S. Geological Survey (USGS) 7.5-minute Jamul Mountains quadrangle map (Figure 2). Furthermore, the project site is located on unincorporated lands within the South County and Lakeside-Metro-Jamul segments of the County's Multiple Species Conservation Program (MSCP) Subarea Plan. The site is part of a previously-approved Specific Plan known as The Pointe.

PROJECT DESCRIPTION

The proposed project consists of a residential development with related uses such as access roads, drainage facilities, and open space.

METHODS

Habitat Assessment

A QCB habitat assessment of the survey area was conducted by HELIX biologist Amy Mattson on February 20, 2015. Elevations range from approximately 957 to 1,167 feet above mean sea level. Vegetation communities within the survey area consist primarily of Diegan coastal sage scrub and disturbed habitat, with smaller amounts of non-native grassland and non-native vegetation. Eucalyptus woodland, southern willow scrub, mule fat scrub, tamarisk scrub, arundo-dominated riparian, non-native riparian, freshwater marsh, cismontane alkali marsh, and disturbed wetland were present in the project site, but were excluded from the survey area. A portion of the survey area is being used as a ranch. A number of dirt roads and trails traverse the survey area (Figure 3).

Based on the habitat assessment, approximately 27 acres of the survey area were considered potential QCB habitat based on the current U.S. Fish and Wildlife Service (USFWS) Survey Guidelines (USFWS 2014). Approximately 25.6 acres were excluded from the survey area based on the presence of dense closed-canopy coastal sage scrub and closed-canopy trees. Figure 3 depicts the Quino survey area.

Focused QCB Surveys

As summarized in Table 1, a total of 12 surveys were conducted by Ms. Mattson, Ms. Nigro, Ms. Bakker, and Ms. Harris to complete protocol.

Table 1
QCB SURVEY INFORMATION

SITE VISIT	BIOLOGIST	ACRES/HOUR	TIME (start/end)	WEATHER CONDITIONS*	
				Start	End
1 2/20/15	Amy Mattson	7.7	1145/1510	100% clouds, 70˚F, wind 0-1 mph	100% clouds, 70˚F, wind 1-5 mph
2 2/25/15	Amy Mattson	9.6	1015/1300	1% clouds, 71˚F, wind 0-2 mph	0% clouds, 78˚F, wind 1-5 mph

Table 1 (cont.)
QCB SURVEY INFORMATION

SITE VISIT	BIOLOGIST	ACRES/HOUR	TIME (start/end)	WEATHER CONDITIONS*	
				Start	End
3 3/6/15	Stacy Nigro	8.8	1115/1415	0% clouds, 80˚F, wind 0-2 mph	0% clouds, 84˚F, wind 2-8 mph
4 3/13/15	Erica Harris	10.0	1354/1633	0% clouds, 91.5˚F, wind 2-5 mph	3% clouds, 91˚F, wind 2-7 mph
5 3/20/15	Amy Mattson	9.8	1035/1315	0% clouds, 75˚F, wind 0-1 mph	0% clouds, 81˚F, wind 0-1 mph
6 3/27/15	Amy Mattson	9.8	0850/1133	0% clouds, 74˚F, wind 0-1 mph	0% clouds, 93˚F, wind 0-1 mph
7 4/2/15	Stacy Nigro	8.4	1000/1310	40% clouds, 68˚F, wind 0-2 mph	20% clouds, 73˚F, wind 2-4 mph
8 4/10/15	Erica Harris	9.8	1130/1410	0% clouds, 75˚F, wind 2-5 mph	0% clouds, 73˚F, wind 2-5 mph
9 4/17/15	Amy Mattson, Laura Moreton†	10.0	0905/1144	0% clouds, 75˚F, wind 0-1 mph	0% clouds, 84˚F, wind 0-3 mph
10 4/27/15	Jasmine Bakker	10.0	1140/1419	0% clouds, 84˚F, wind 3-6 mph	0% clouds, 92˚F, wind 3-7 mph
11 4/29/15	Erica Harris	9.8	1220/1500	0% clouds, 92˚F, wind 2-6 mph	0% clouds, 93˚F, wind 2-8 mph
12 5/4/15	Amy Mattson, Laura Moreton†	9.8	1100/1340	85% clouds, 73˚F, wind 0-1 mph	75% clouds, 74˚F, wind 0-4 mph

*Temperature taken on the ground in the shade
†Supervised Individual

HELIX biologist Laura Moreton participated as a supervised individual on April 17 and May 4, 2015. Surveys were conducted in accordance with protocol established by the USFWS (2014). The first protocol site visit was conducted on February 20, 2015 in non-excluded areas (Figure 3; totaling approximately 27 acres). Surveys were conducted every week through May 4, 2015. A limited number of QCB sightings had been made in San Diego County this season, including in areas known to support QCB. The reported QCB sightings in San Diego County were two sightings in Marron Valley (March 12 and March 20, 2015), one sighting in east Otay Mesa on March 20, 2015, and 2 sightings in La Posta on March 21, 2015 (Quino Biologists United 2015).

Surveys consisted of walking through appropriate habitat and identifying all butterflies observed by sight and with the aid of binoculars. Larval host plants were mapped with the aid of hand-held Global Positioning System (GPS) units, and potential nectar plant species also were documented. Site visits covered between approximately 7.7 and 10.0 acres per hour.

Identification of butterflies was based on personal knowledge, museum specimens, the San Diego Natural History Museum website, and a field guide by Shiraiwa (2009). Other nomenclature for this report is taken from Holland (1986) and Oberbauer (2008) for vegetation communities and Baldwin *et al.* (2012) and Rebman and Simpson (2014) for plants.

RESULTS

No QCB were detected within the survey area during the 2015 protocol surveys. Dates, times, and weather conditions at the beginning and ending of each of twelve site visits are presented in Table 1. Copies of field notes taken are provided as Attachment B.

Surveyors observed a total of 356 butterfly individuals and at least 17 butterfly species during the twelve site visits. A list of total butterflies observed during the 2015 protocol QCB surveys is included as Attachment B.

One QCB larval host plant species was observed during the survey: dwarf plantain (*Plantago erecta*). Three patches of host plants were present within the Diegan coastal sage scrub vegetation community within the survey area. Dwarf plantain patches had from 10's to 100's of plants.

Four potential QCB nectaring resources were noted within the QCB survey area: popcorn flower (*Cryptantha* sp.), rancher's fiddleneck (*Amsinckia intermedia*), onion (*Allium* sp.), and California buckwheat (*Eriogonum fasciculatum*); however, only the California buckwheat was abundant throughout the QCB survey area. The onion and rancher's fiddleneck dried up by March 20, 2015, and popcorn flower dried by the April 27, 2015 site visit.

California buckwheat was the most abundant flowering plant present within Diegan coastal sage scrub, though there were small numbers of a variety of flowering plants present (Attachment A). Within the disturbed habitat, dominant flowering plants were black mustard (*Brassica nigra*), sweet clover (*Melilotus indicus*), and garland daisy (*Glebionis coronaria*).

Much of the survey area is considered to have low potential to support QCB due to a lack of host plants and nectar resources and/or continual disturbance (as on unpaved roadways/trails). Areas where both host plants and nectaring resources were present were of low to moderate potential for QCB.

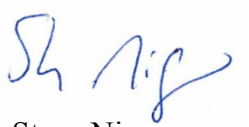
CERTIFICATION

I certify that the information in this survey report and enclosed exhibit fully and accurately represents my work.

Sincerely,



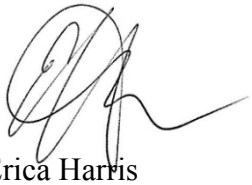
Amy Mattson
Biologist



Stacy Nigro
Biologist



Jasmine Bakker
Biologist



Erica Harris
Biologist

Enclosures:
Figure 1 Regional Location Map
Figure 2 Project Vicinity Map (USGS Topography)
Figure 3 Quino Checkerspot Butterfly (*Euphydras editha quino*) Survey Results
Attachment A 2015 Quino Checkerspot Butterfly Survey Forms
Attachment B Butterfly Checklist

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Baldwin, B. G., D. H. Goldman, D. J. Keil, R. Patterson, T. J. Rosatti, and D. H. Wilken (eds.). 2012. The Jepson manual: vascular plants of California, second edition. Berkeley, CA: University of California Press.

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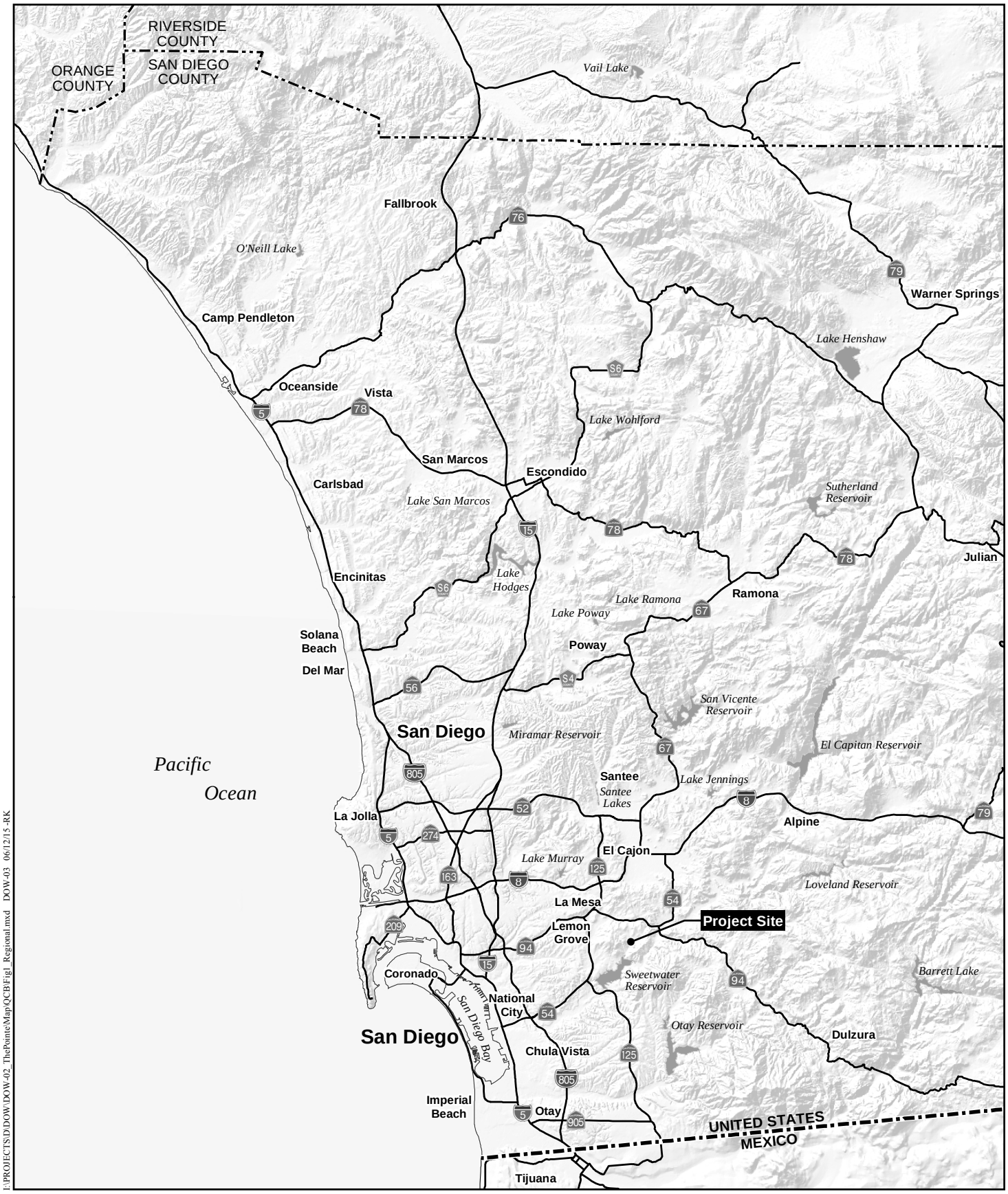

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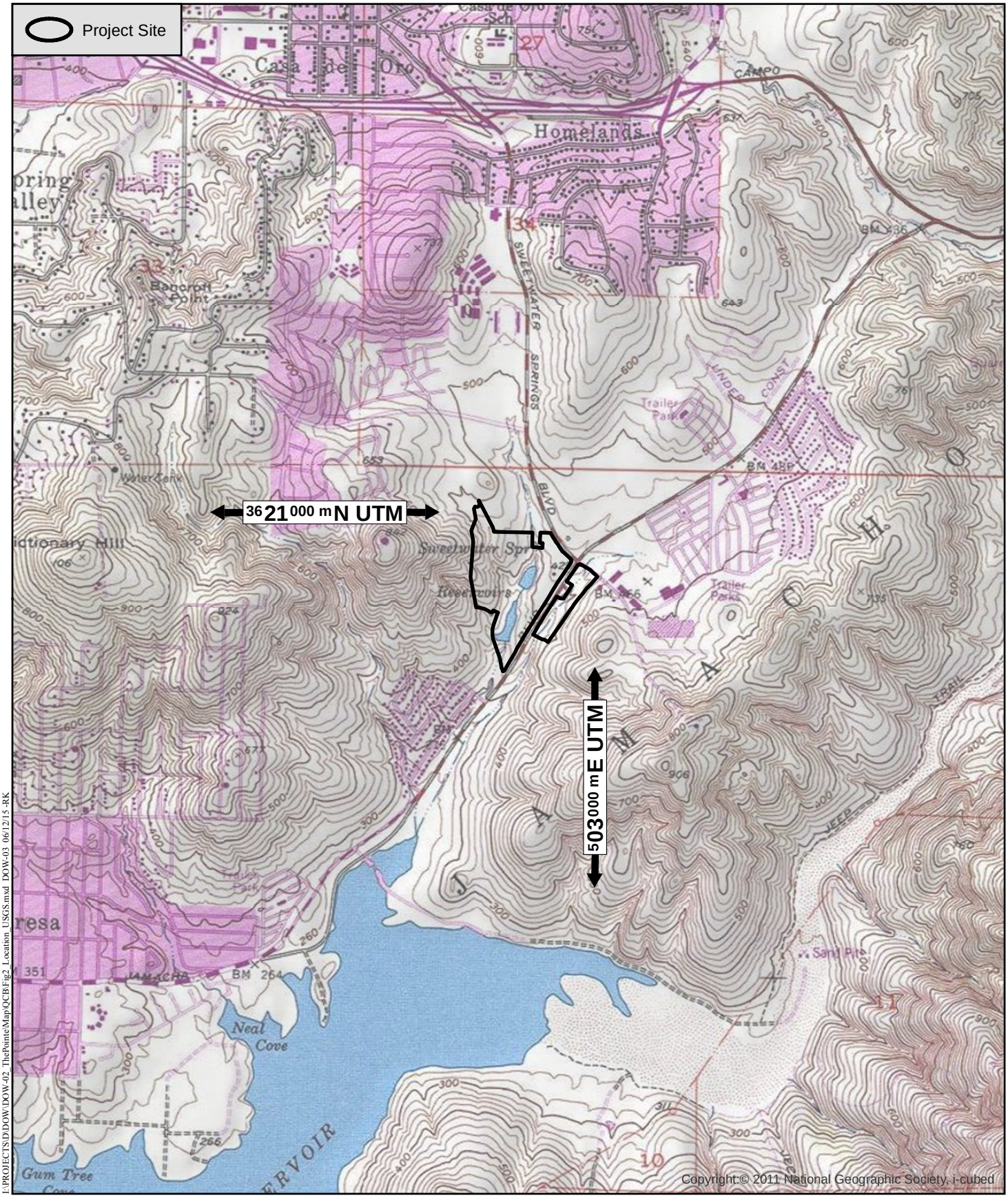
Regional Location Map

SWEETWATER VISTAS

HELIX Environmental Planning

N 0 8 Miles

Figure 1



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Project Vicinity Map (USGS Topography)

SWEETWATER VISTAS

HELIX Environmental Planning

N 0 2,000 Feet

Figure 2



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Quino Checkerspot Butterfly (*Euphydras editha quino*) Survey Results

SWEETWATER VISTAS

HELIX Environmental Planning

0 200 Feet

Figure 3

Attachment A

2015 QUINO CHECKERSPOT BUTTERFLY SURVEY FORMS

2015 Quino Checkerspot Butterfly Survey Form

Surveyor: Amy Mattson **Date:** 02/20/2015

Site Name: Sweetwater Vistas **Site Visit No:** 1

Acres Surveyed 26.4 **Survey Time:** 3:25 hours (3.42) **Acres per Hour:** 7.7

Other Surveyors Present: N/A

Field Conditions				
	Time (24 hr)	**Temperature (˚F)**	**Wind Speed (mph)**	**Cloud Cover**
Start	11:45	70	0-1	100% / overcast, shadows
End	15:10	70	1-5	100% / overcast,
Start				no shadows
End				

Vegetation Communities Surveyed (inc. dominant spp.): DCSS (Art cal, Eri fas, Enc cal, Bac sar, Bah lac)

NNG (bromes, Avena, mustard); DH (roads, open weedy areas, graded pad)

Host Plants	Obs.	Nectar Plants	Obs.
dwarf plantain (*Plantago erecta*)	X	popcorn flower (*Cryptantha/Plagiobothrys* spp.)	X
purple owl's clover (*Castilleja exserta*)		goldfields (*Lasthenia* spp.)	
snapdragon (*Antirrhinum coulterianum*)		goldenstar (*Muilla* spp.)	
birds-beak (*Cordylanthus rigidus*)		fiddleneck (*Amsinckia menziesii* var. *intermedia*)	X
woolly plantain (*Plantago patagonica*)		onion (*Allium* spp.)	X
Chinese houses (*Collinsia* spp.)		buckwheat (*Eriogonum fasciculatum*)	X
		ground pink (*Linanthus dianthiflorus*)	

Butterfly Species	No.	Butterfly Species	No.
Checkerspots		**Hairstreaks**	
California patch (*Chlosyne californica*)		great purple hairstreak (*Atlides halesus corcorani*)	
Gabb's checkerspot (*C. gabbii*)		brown elfin (*Callophrys augustinus*)	
Quino checkerspot (*Euphydryas editha quino*)		bramble (perplexing) hairstreak (*C. dumetorum affinis*)	
chalcedon checkerspot (*E. chalcedona chalcedona*)		gray hairstreak (*Strymon melinus pudica*)	
Leanira checkerspot (*Thessalia leanira wrighti*)		**Ladies/Admirals**	
Mylitta crescent (*Phyciodes mylitta*)		California sister (*Adelpha bredowii californica*)	
Blues		Lorquin's admiral (*Limenitis lorquini*)	
western pygmy-blue (*Brephidium exila*)		west coast lady (*Vanessa annabella*)	
western tailed blue (*Everes amyntula*)		red admiral (*V. atalanta rubria*)	
southern blue (*Glaucopsyche lygdamus australis*)		painted lady (*V. cardui*)	
Edward's blue (*Hemiargus ceraunus gyas*)		American (Virginia) lady (*V. virginiensis*)	
Acmon blue (*Icaricia acmon acmon*)		unidentified lady (*Vanessa* sp.)	2
marine blue (*Leptotes marina*)		**Swallowtails**	
unidentified blue		pale swallowtail (*Papilio eurymedon*)	
Whites		western tiger swallowtail (*P. rutulus*)	
Sara orangetip (*Anthocharis sara sara*)		anise swallowtail (*P. zelicaon*)	
desert (Felder's) orangetip (*A. cethura*)		**Miscellaneous**	
common California ringlet (*Coenonympha californica*)		monarch (*Danaus plexippus*)	2
cabbage white (*Pieris rapae*)		common buckeye (*Junonia coenia grisea*)	
checkered (common) white (*Pontia protodice*)		mourning cloak (*Nymphalis antiopa*)	
spring white (*P. sisymbrii*)		**Skippers**	
unidentified white		funereal duskywing (*Erynnis funeralis*)	2
Metalmarks		mournful duskywing (*Erynnis tristis*)	
Behr's metalmark (*Apodemia mormo virgulti*)		fiery skipper (*Hylephila phyleus*)	
Wright's metalmark (*Calephelis wrighti*)		white (common) checkered-skipper (*Pyrgus albescens*)	
Sulphurs		**Other**	
orange sulphur (*Colias eurytheme*)		queen	
sleepy orange (*Eurema nicippe*)			
cloudless sulfur (*Phoebus sennae marcellina*)			
unidentified sulphur			
Column Subtotal	0	**Column Subtotal**	6
		Total	6

2015 Quino Checkerspot Butterfly Survey Form

Surveyor: Amy Mattson **Date:** 02/25/2015

Site Name: Sweetwater Vistas **Site Visit No:** 2

Acres Surveyed 26.4 **Survey Time:** 2:45 hours (2.75) **Acres per Hour:** 9.6

Other Surveyors Present: N/A

Field Conditions				
	Time (24 hr)	**Temperature (˚F)**	**Wind Speed (mph)**	**Cloud Cover**
Start	10:15	71	0-2	1% / clear
End	13:00	78	1-5	0% / clear
Start				
End				

Vegetation Communities Surveyed (inc. dominant spp.): DCSS (Art cal, Eri fas, Enc cal, Bac sar, Bah lac)

NNG (bromes, Avena, mustard); DH (roads, open weedy areas, graded pad)

Host Plants	Obs.	Nectar Plants	Obs.
dwarf plantain (*Plantago erecta*)	X	popcorn flower (*Cryptantha/Plagiobothrys* spp.)	X
purple owl's clover (*Castilleja exserta*)		goldfields (*Lasthenia* spp.)	
snapdragon (*Antirrhinum coulterianum*)		goldenstar (*Muilla* spp.)	
birds-beak (*Cordylanthus rigidus*)		fiddleneck (*Amsinckia menziesii* var. *intermedia*)	X
woolly plantain (*Plantago patagonica*)		onion (*Allium* spp.)	X
Chinese houses (*Collinsia* spp.)		buckwheat (*Eriogonum fasciculatum*)	X
		ground pink (*Linanthus dianthiflorus*)	

Butterfly Species	No.	Butterfly Species	No.
Checkerspots		**Hairstreaks**	
California patch (*Chlosyne californica*)		great purple hairstreak (*Atlides halesus corcorani*)	
Gabb's checkerspot (*C. gabbii*)		brown elfin (*Callophrys augustinus*)	
Quino checkerspot (*Euphydryas editha quino*)		bramble (perplexing) hairstreak (C. *dumetorum affinis*)	
chalcedon checkerspot (*E. chalcedona chalcedona*)		gray hairstreak (*Strymon melinus pudica*)	
Leanira checkerspot (*Thessalia leanira wrighti*)		**Ladies/Admirals**	
Mylitta crescent (*Phyciodes mylitta*)		California sister (*Adelpha bredowii californica*)	
Blues		Lorquin's admiral (*Limenitis lorquini*)	
western pygmy-blue (*Brephidium exila*)		west coast lady (*Vanessa annabella*)	
western tailed blue (*Everes amyntula*)		red admiral (*V. atalanta rubria*)	
southern blue (*Glaucopsyche lygdamus australis*)		painted lady (*V. cardui*)	1
Edward's blue (*Hemiargus ceraunus gyas*)		American (Virginia) lady (*V. virginiensis*)	
Acmon blue (*Icaricia acmon acmon*)		unidentified lady (*Vanessa* sp.)	3
marine blue (*Leptotes marina*)		**Swallowtails**	
unidentified blue		pale swallowtail (*Papilio eurymedon*)	
Whites		western tiger swallowtail (*P. rutulus*)	
Sara orangetip (*Anthocharis sara sara*)		anise swallowtail (*P. zelicaon*)	
desert (Felder's) orangetip (*A. cethura*)		**Miscellaneous**	
common California ringlet (*Coenonympha californica*)		monarch (*Danaus plexippus*)	
cabbage white (*Pieris rapae*)		common buckeye (*Junonia coenia grisea*)	
checkered (common) white (*Pontia protodice*)		mourning cloak (*Nymphalis antiopa*)	
spring white (*P. sisymbrii*)		**Skippers**	
unidentified white		funereal duskywing (*Erynnis funeralis*)	1
Metalmarks		mournful duskywing (*Erynnis tristis*)	
Behr's metalmark (*Apodemia mormo virgulti*)	8	fiery skipper (*Hylephila phyleus*)	
Wright's metalmark (*Calephelis wrighti*)		white (common) checkered-skipper (*Pyrgus albescens*)	
Sulphurs		**Other**	
orange sulphur (*Colias eurytheme*)		queen	1
sleepy orange (*Eurema nicippe*)			
cloudless sulfur (*Phoebus sennae marcellina*)			
unidentified sulphur	4		
Column Subtotal	**12**	**Column Subtotal**	**6**
		Total	**18**

2015 Quino Checkerspot Butterfly Survey Form

Surveyor: Stacy Nigro **Date:** 03/06/2015

Site Name: Sweetwater Vistas **Site Visit No:** 3

Acres Surveyed 26.4 **Survey Time:** 3 hours **Acres per Hour:** 8.8

Other Surveyors Present: N/A

Field Conditions				
	Time (24 hr)	**Temperature (°F)**	**Wind Speed (mph)**	**Cloud Cover**
Start	11:15	80	0-2	0% / clear
End	14:15	84	2-8	0% / clear
Start				
End				

Vegetation Communities Surveyed (inc. dominant spp.): DCSS (Art cal, Eri fas, Enc cal, Bac sar, Bah lac)

NNG (bromes, Avena, mustard); DH (roads, open weedy areas, graded pad)

Host Plants	Obs.	Nectar Plants	Obs.
dwarf plantain (*Plantago erecta*)	X	popcorn flower (*Cryptantha/Plagiobothrys* spp.)	X
purple owl's clover (*Castilleja exserta*)		goldfields (*Lasthenia* spp.)	
snapdragon (*Antirrhinum coulterianum*)		goldenstar (*Muilla* spp.)	
birds-beak (*Cordylanthus rigidus*)		fiddleneck (*Amsinckia menziesii* var. *intermedia*)	X
woolly plantain (*Plantago patagonica*)		onion (*Allium* spp.)	X
Chinese houses (*Collinsia* spp.)		buckwheat (*Eriogonum fasciculatum*)	X
.		ground pink (*Linanthus dianthiflorus*)	

Butterfly Species	No.	Butterfly Species	No.
Checkerspots		**Hairstreaks**	
California patch (*Chlosyne californica*)		great purple hairstreak (*Atlides halesus corcorani*)	
Gabb's checkerspot (*C. gabbii*)		brown elfin (*Callophrys augustinus*)	
Quino checkerspot (*Euphydryas editha quino*)		bramble (perplexing) hairstreak (C. *dumetorum affinis*)	
chalcedon checkerspot (*E. chalcedona chalcedona*)		gray hairstreak (*Strymon melinus pudica*)	
Leanira checkerspot (*Thessalia leanira wrighti*)		**Ladies/Admirals**	
Mylitta crescent (*Phyciodes mylitta*)		California sister (*Adelpha bredowii californica*)	
Blues		Lorquin's admiral (*Limenitis lorquini*)	
western pygmy-blue (*Brephidium exila*)		west coast lady (*Vanessa annabella*)	
western tailed blue (*Everes amyntula*)		red admiral (*V. atalanta rubria*)	
southern blue (*Glaucopsyche lygdamus australis*)		painted lady (*V. cardui*)	
Edward's blue (*Hemiargus ceraunus gyas*)		American (Virginia) lady (*V. virginiensis*)	
Acmon blue (*Icaricia acmon acmon*)		unidentified lady (*Vanessa* sp.)	1
marine blue (*Leptotes marina*)		**Swallowtails**	
unidentified blue		pale swallowtail (*Papilio eurymedon*)	
Whites		western tiger swallowtail (*P. rutulus*)	
Sara orangetip (*Anthocharis sara sara*)		anise swallowtail (*P. zelicaon*)	
desert (Felder's) orangetip (*A. cethura*)		**Miscellaneous**	
common California ringlet (*Coenonympha californica*)		monarch (*Danaus plexippus*)	
cabbage white (*Pieris rapae*)		common buckeye (*Junonia coenia grisea*)	
checkered (common) white (*Pontia protodice*)		mourning cloak (*Nymphalis antiopa*)	
spring white (*P. sisymbrii*)		**Skippers**	
unidentified white	4	funereal duskywing (*Erynnis funeralis*)	3
Metalmarks		mournful duskywing (*Erynnis tristis*)	
Behr's metalmark (*Apodemia mormo virgulti*)	7	fiery skipper (*Hylephila phyleus*)	
Wright's metalmark (*Calephelis wrighti*)		white (common) checkered-skipper (*Pyrgus albescens*)	
Sulphurs		**Other**	
orange sulphur (*Colias eurytheme*)			
sleepy orange (*Eurema nicippe*)			
cloudless sulfur (*Phoebus sennae marcellina*)			
unidentified sulphur	9		
Column Subtotal	**20**	**Column Subtotal**	**4**
		Total	**24**

2015 Quino Checkerspot Butterfly Survey Form

Surveyor: Amy Mattson **Date:** 03/13/2015

Site Name: Sweetwater Vistas **Site Visit No:** 4

Acres Surveyed 26.4 **Survey Time:** 2:39 hours (2.65) **Acres per Hour:** 10.0

Other Surveyors Present: N/A

Field Conditions				
	Time (24 hr)	**Temperature (˚F)**	**Wind Speed (mph)**	**Cloud Cover**
Start	13:54	91.5	2-5, gusty	0% / clear
End	16:33	91	2-7, gusty	3% / high haze
Start				
End				

Vegetation Communities Surveyed (inc. dominant spp.): DCSS (Art cal, Eri fas, Enc cal, Bac sar, Bah lac)

NNG (bromes, Avena, mustard); DH (roads, open weedy areas, graded pad)

Host Plants	Obs.	Nectar Plants	Obs.
dwarf plantain (*Plantago erecta*)	X	popcorn flower (*Cryptantha/Plagiobothrys* spp.)	X
purple owl's clover (*Castilleja exserta*)		goldfields (*Lasthenia* spp.)	
snapdragon (*Antirrhinum coulterianum*)		goldenstar (*Muilla* spp.)	
birds-beak (*Cordylanthus rigidus*)		fiddleneck (*Amsinckia menziesii* var. *intermedia*)	
woolly plantain (*Plantago patagonica*)		onion (*Allium* spp.)	X
Chinese houses (*Collinsia* spp.)		buckwheat (*Eriogonum fasciculatum*)	X
		ground pink (*Linanthus dianthiflorus*)	

Butterfly Species	No.	Butterfly Species	No.
Checkerspots		**Hairstreaks**	
California patch (*Chlosyne californica*)		great purple hairstreak (*Atlides halesus corcorani*)	
Gabb's checkerspot (*C. gabbii*)		brown elfin (*Callophrys augustinus*)	
Quino checkerspot (*Euphydryas editha quino*)		bramble (perplexing) hairstreak (C. *dumetorum affinis*)	
chalcedon checkerspot (*E. chalcedona chalcedona*)		gray hairstreak (*Strymon melinus pudica*)	
Leanira checkerspot (*Thessalia leanira wrighti*)		**Ladies/Admirals**	
Mylitta crescent (*Phyciodes mylitta*)		California sister (*Adelpha bredowii californica*)	
Blues		Lorquin's admiral (*Limenitis lorquini*)	
western pygmy-blue (*Brephidium exila*)		west coast lady (*Vanessa annabella*)	
western tailed blue (*Everes amyntula*)		red admiral (*V. atalanta rubria*)	
southern blue (*Glaucopsyche lygdamus australis*)		painted lady (*V. cardui*)	
Edward's blue (*Hemiargus ceraunus gyas*)		American (Virginia) lady (*V. virginiensis*)	
Acmon blue (*Icaricia acmon acmon*)		unidentified lady (*Vanessa* sp.)	
marine blue (*Leptotes marina*)	1	**Swallowtails**	
unidentified blue		pale swallowtail (*Papilio eurymedon*)	
Whites		western tiger swallowtail (*P. rutulus*)	
Sara orangetip (*Anthocharis sara sara*)	1	anise swallowtail (*P. zelicaon*)	
desert (Felder's) orangetip (*A. cethura*)		**Miscellaneous**	
common California ringlet (*Coenonympha californica*)		monarch (*Danaus plexippus*)	
cabbage white (*Pieris rapae*)		common buckeye (*Junonia coenia grisea*)	
checkered (common) white (*Pontia protodice*)		mourning cloak (*Nymphalis antiopa*)	
spring white (*P. sisymbrii*)		**Skippers**	
unidentified white	1	funereal duskywing (*Erynnis funeralis*)	7
Metalmarks		mournful duskywing (*Erynnis tristis*)	
Behr's metalmark (*Apodemia mormo virgulti*)	16	fiery skipper (*Hylephila phyleus*)	
Wright's metalmark (*Calephelis wrighti*)		white (common) checkered-skipper (*Pyrgus albescens*)	
Sulphurs		**Other**	
orange sulphur (*Colias eurytheme*)			
sleepy orange (*Eurema nicippe*)			
cloudless sulfur (*Phoebus sennae marcellina*)			
unidentified sulphur	4		
Column Subtotal	**23**	**Column Subtotal**	**7**
		Total	**30**

2015 Quino Checkerspot Butterfly Survey Form

Surveyor: Amy Mattson **Date:** 03/20/2015

Site Name: Sweetwater Vistas **Site Visit No:** 5

Acres Surveyed 26.4 **Survey Time:** 2:40 hours (2.7) **Acres per Hour:** 9.8

Other Surveyors Present: N/A

Field Conditions				
	Time (24 hr)	**Temperature (°F)**	**Wind Speed (mph)**	**Cloud Cover**
Start	10:35	75	0-1	0% / slight haze
End	13:15	81	0-1	0% / very slight haze
Start				
End				

Vegetation Communities Surveyed (inc. dominant spp.): DCSS (Art cal, Eri fas, Enc cal, Bac sar, Bah lac)

NNG (bromes, Avena, mustard); DH (roads, open weedy areas, graded pad)

Host Plants	**Obs.**	**Nectar Plants**	**Obs.**
dwarf plantain (*Plantago erecta*)	X	popcorn flower (*Cryptantha/Plagiobothrys* spp.)	X
purple owl's clover (*Castilleja exserta*)		goldfields (*Lasthenia* spp.)	
snapdragon (*Antirrhinum coulterianum*)		goldenstar (*Muilla* spp.)	
birds-beak (*Cordylanthus rigidus*)		fiddleneck (*Amsinckia menziesii* var. *intermedia*)	
woolly plantain (*Plantago patagonica*)		onion (*Allium* spp.)	
Chinese houses (*Collinsia* spp.)		buckwheat (*Eriogonum fasciculatum*)	X
		ground pink (*Linanthus dianthiflorus*)	

Butterfly Species	**No.**	**Butterfly Species**	**No.**
Checkerspots		**Hairstreaks**	
California patch (*Chlosyne californica*)		great purple hairstreak (*Atlides halesus corcorani*)	
Gabb's checkerspot (*C. gabbii*)		brown elfin (*Callophrys augustinus*)	
Quino checkerspot (*Euphydryas editha quino*)		bramble (perplexing) hairstreak (*C. dumetorum affinis*)	
chalcedon checkerspot (*E. chalcedona chalcedona*)		gray hairstreak (*Strymon melinus pudica*)	
Leanira checkerspot (*Thessalia leanira wrighti*)		**Ladies/Admirals**	
Mylitta crescent (*Phyciodes mylitta*)		California sister (*Adelpha bredowii californica*)	
Blues		Lorquin's admiral (*Limenitis lorquini*)	
western pygmy-blue (*Brephidium exila*)		west coast lady (*Vanessa annabella*)	
western tailed blue (*Everes amyntula*)		red admiral (*V. atalanta rubria*)	
southern blue (*Glaucopsyche lygdamus australis*)		painted lady (*V. cardui*)	2
Edward's blue (*Hemiargus ceraunus gyas*)		American (Virginia) lady (*V. virginiensis*)	
Acmon blue (*Icaricia acmon acmon*)		unidentified lady (*Vanessa* sp.)	3
marine blue (*Leptotes marina*)		**Swallowtails**	
unidentified blue	1	pale swallowtail (*Papilio eurymedon*)	
Whites		western tiger swallowtail (*P. rutulus*)	
Sara orangetip (*Anthocharis sara sara*)	1	anise swallowtail (*P. zelicaon*)	
desert (Felder's) orangetip (*A. cethura*)		**Miscellaneous**	
common California ringlet (*Coenonympha californica*)		monarch (*Danaus plexippus*)	
cabbage white (*Pieris rapae*)	2	common buckeye (*Junonia coenia grisea*)	
checkered (common) white (*Pontia protodice*)	4	mourning cloak (*Nymphalis antiopa*)	1
spring white (*P. sisymbrii*)		**Skippers**	
unidentified white		funereal duskywing (*Erynnis funeralis*)	3
Metalmarks		mournful duskywing (*Erynnis tristis*)	
Behr's metalmark (*Apodemia mormo virgulti*)	21	fiery skipper (*Hylephila phyleus*)	
Wright's metalmark (*Calephelis wrighti*)		white (common) checkered-skipper (*Pyrgus albescens*)	
Sulphurs		**Other**	
orange sulphur (*Colias eurytheme*)			
sleepy orange (*Eurema nicippe*)			
cloudless sulfur (*Phoebus sennae marcellina*)			
unidentified sulphur	10		
Column Subtotal	**39**	**Column Subtotal**	**9**
		Total	**48**

2015 Quino Checkerspot Butterfly Survey Form

Surveyor: Amy Mattson **Date:** 03/27/2015

Site Name: Sweetwater Vistas **Site Visit No:** 6

Acres Surveyed 26.4 **Survey Time:** 2:43 hours (2.7) **Acres per Hour:** 9.8

Other Surveyors Present: N/A

Field Conditions				
	Time (24 hr)	**Temperature (˚F)**	**Wind Speed (mph)**	**Cloud Cover**
Start	8:50	74	0-1	0% / sunny & clear
End	11:33	93	0-1	0% / sunny & clear
Start				
End				

Vegetation Communities Surveyed (inc. dominant spp.): DCSS (Art cal, Eri fas, Enc cal, Bac sar, Bah lac)

NNG (bromes, Avena, mustard); DH (roads, open weedy areas, graded pad)

Host Plants	**Obs.**	**Nectar Plants**	**Obs.**
dwarf plantain (*Plantago erecta*)	X	popcorn flower (*Cryptantha/Plagiobothrys* spp.)	X
purple owl's clover (*Castilleja exserta*)		goldfields (*Lasthenia* spp.)	
snapdragon (*Antirrhinum coulterianum*)		goldenstar (*Muilla* spp.)	
birds-beak (*Cordylanthus rigidus*)		fiddleneck (*Amsinckia menziesii* var. *intermedia*)	
woolly plantain (*Plantago patagonica*)		onion (*Allium* spp.)	
Chinese houses (*Collinsia* spp.)		buckwheat (*Eriogonum fasciculatum*)	X
		ground pink (*Linanthus dianthiflorus*)	

Butterfly Species	**No.**	**Butterfly Species**	**No.**
Checkerspots		**Hairstreaks**	
California patch (*Chlosyne californica*)		great purple hairstreak (*Atlides halesus corcorani*)	
Gabb's checkerspot (*C. gabbii*)		brown elfin (*Callophrys augustinus*)	
Quino checkerspot (*Euphydryas editha quino*)		bramble (perplexing) hairstreak (C. *dumetorum affinis*)	
chalcedon checkerspot (*E. chalcedona chalcedona*)		gray hairstreak (*Strymon melinus pudica*)	
Leanira checkerspot (*Thessalia leanira wrighti*)		**Ladies/Admirals**	
Mylitta crescent (*Phyciodes mylitta*)		California sister (*Adelpha bredowii californica*)	
Blues		Lorquin's admiral (*Limenitis lorquini*)	
western pygmy-blue (*Brephidium exila*)		west coast lady (*Vanessa annabella*)	
western tailed blue (*Everes amyntula*)		red admiral (*V. atalanta rubria*)	
southern blue (*Glaucopsyche lygdamus australis*)		painted lady (*V. cardui*)	
Edward's blue (*Hemiargus ceraunus gyas*)		American (Virginia) lady (*V. virginiensis*)	
Acmon blue (*Icaricia acmon acmon*)		unidentified lady (*Vanessa* sp.)	2
marine blue (*Leptotes marina*)		**Swallowtails**	
unidentified blue		pale swallowtail (*Papilio eurymedon*)	
Whites		western tiger swallowtail (*P. rutulus*)	
Sara orangetip (*Anthocharis sara sara*)		anise swallowtail (*P. zelicaon*)	
desert (Felder's) orangetip (*A. cethura*)		**Miscellaneous**	
common California ringlet (*Coenonympha californica*)		monarch (*Danaus plexippus*)	
cabbage white (*Pieris rapae*)		common buckeye (*Junonia coenia grisea*)	
checkered (common) white (*Pontia protodice*)	6	mourning cloak (*Nymphalis antiopa*)	
spring white (*P. sisymbrii*)		**Skippers**	
unidentified white	12	funereal duskywing (*Erynnis funeralis*)	4
Metalmarks		mournful duskywing (*Erynnis tristis*)	
Behr's metalmark (*Apodemia mormo virgulti*)	24	fiery skipper (*Hylephila phyleus*)	
Wright's metalmark (*Calephelis wrighti*)		white (common) checkered-skipper (*Pyrgus albescens*)	
Sulphurs		**Other**	
orange sulphur (*Colias eurytheme*)			
sleepy orange (*Eurema nicippe*)			
cloudless sulfur (*Phoebus sennae marcellina*)			
unidentified sulphur	12		
Column Subtotal	**54**	**Column Subtotal**	**6**
		Total	**60**

2015 Quino Checkerspot Butterfly Survey Form

Surveyor: Stacy Nigro **Date:** 04/02/2015

Site Name: Sweetwater Vistas **Site Visit No:** 7

Acres Surveyed 26.4 **Survey Time:** 3.16 hours **Acres per Hour:** 8.4

Other Surveyors Present: N/A

Field Conditions				
	Time (24 hr)	**Temperature (°F)**	**Wind Speed (mph)**	**Cloud Cover**
Start	1000	68	0-2	40%
End	1310	73	2-4	20%
Start				
End				

Vegetation Communities Surveyed (inc. dominant spp.): DCSS (Art cal, Eri fas, Enc cal, Bac sar, Bah lac)

NNG (bromes, Avena, mustard); DH (roads, open weedy areas, graded pad)

Host Plants	Obs.	Nectar Plants	Obs.
dwarf plantain (*Plantago erecta*)	X	popcorn flower (*Cryptantha/Plagiobothrys* spp.)	X
purple owl's clover (*Castilleja exserta*)		goldfields (*Lasthenia* spp.)	
snapdragon (*Antirrhinum coulterianum*)		goldenstar (*Muilla* spp.)	
birds-beak (*Cordylanthus rigidus*)		fiddleneck (*Amsinckia menziesii* var. *intermedia*)	
woolly plantain (*Plantago patagonica*)		onion (*Allium* spp.)	
Chinese houses (*Collinsia* spp.)		buckwheat (*Eriogonum fasciculatum*)	X
		ground pink (*Linanthus dianthiflorus*)	

Butterfly Species	No.	Butterfly Species	No.
Checkerspots		**Hairstreaks**	
California patch (*Chlosyne californica*)		great purple hairstreak (*Atlides halesus corcorani*)	
Gabb's checkerspot (*C. gabbii*)		brown elfin (*Callophrys augustinus*)	
Quino checkerspot (*Euphydryas editha quino*)		bramble (perplexing) hairstreak (*C. dumetorum affinis*)	
chalcedon checkerspot (*E. chalcedona chalcedona*)		gray hairstreak (*Strymon melinus pudica*)	
Leanira checkerspot (*Thessalia leanira wrighti*)		**Ladies/Admirals**	
Mylitta crescent (*Phyciodes mylitta*)		California sister (*Adelpha bredowii californica*)	
Blues		Lorquin's admiral (*Limenitis lorquini*)	
western pygmy-blue (*Brephidium exila*)		west coast lady (*Vanessa annabella*)	
western tailed blue (*Everes amyntula*)		red admiral (*V. atalanta rubria*)	1
southern blue (*Glaucopsyche lygdamus australis*)		painted lady (*V. cardui*)	
Edward's blue (*Hemiargus ceraunus gyas*)		American (Virginia) lady (*V. virginiensis*)	
Acmon blue (*Icaricia acmon acmon*)	1	unidentified lady (*Vanessa* sp.)	
marine blue (*Leptotes marina*)	1	**Swallowtails**	
unidentified blue	2	pale swallowtail (*Papilio eurymedon*)	
Whites		western tiger swallowtail (*P. rutulus*)	
Sara orangetip (*Anthocharis sara sara*)	2	anise swallowtail (*P. zelicaon*)	
desert (Felder's) orangetip (*A. cethura*)		**Miscellaneous**	
common California ringlet (*Coenonympha californica*)		monarch (*Danaus plexippus*)	
cabbage white (*Pieris rapae*)		common buckeye (*Junonia coenia grisea*)	
checkered (common) white (*Pontia protodice*)	1	mourning cloak (*Nymphalis antiopa*)	
spring white (*P. sisymbrii*)		**Skippers**	
unidentified white	7	funereal duskywing (*Erynnis funeralis*)	
Metalmarks		mournful duskywing (*Erynnis tristis*)	
Behr's metalmark (*Apodemia mormo virgulti*)	7	fiery skipper (*Hylephila phyleus*)	
Wright's metalmark (*Calephelis wrighti*)		white (common) checkered-skipper (*Pyrgus albescens*)	
Sulphurs		**Other**	
orange sulphur (*Colias eurytheme*)			
sleepy orange (*Eurema nicippe*)			
cloudless sulfur (*Phoebus sennae marcellina*)			
unidentified sulphur	1		
Column Subtotal	**22**	**Column Subtotal**	**1**
		Total	**23**

2015 Quino Checkerspot Butterfly Survey Form

Surveyor: Erica Harris **Date:** 04/10/2015

Site Name: Sweetwater Vistas **Site Visit No:** 8

Acres Surveyed 26.4 **Survey Time:** 2.7 hours **Acres per Hour:** 9.8

Other Surveyors Present: N/A

Field Conditions				
	Time (24 hr)	**Temperature (°F)**	**Wind Speed (mph)**	**Cloud Cover**
Start	1130	75	2-5	0%
End	1410	73	2-5	0%
Start				
End				

Vegetation Communities Surveyed (inc. dominant spp.): DCSS (Art cal, Eri fas, Enc cal, Bac sar, Bah lac)

NNG (bromes, Avena, mustard); DH (roads, open weedy areas, graded pad)

Host Plants	Obs.	Nectar Plants	Obs.
dwarf plantain (*Plantago erecta*)		popcorn flower (*Cryptantha/Plagiobothrys* spp.)	
purple owl's clover (*Castilleja exserta*)		goldfields (*Lasthenia* spp.)	
snapdragon (*Antirrhinum coulterianum*)		goldenstar (*Muilla* spp.)	
birds-beak (*Cordylanthus rigidus*)		fiddleneck (*Amsinckia menziesii* var. *intermedia*)	
woolly plantain (*Plantago patagonica*)		onion (*Allium* spp.)	
Chinese houses (*Collinsia* spp.)		buckwheat (*Eriogonum fasciculatum*)	X
		ground pink (*Linanthus dianthiflorus*)	

Butterfly Species	No.	Butterfly Species	No.
Checkerspots		**Hairstreaks**	
California patch (*Chlosyne californica*)		great purple hairstreak (*Atlides halesus corcorani*)	
Gabb's checkerspot (*C. gabbii*)		brown elfin (*Callophrys augustinus*)	
Quino checkerspot (*Euphydryas editha quino*)		bramble (perplexing) hairstreak (C. *dumetorum affinis*)	
chalcedon checkerspot (*E. chalcedona chalcedona*)		gray hairstreak (*Strymon melinus pudica*)	
Leanira checkerspot (*Thessalia leanira wrighti*)		**Ladies/Admirals**	
Mylitta crescent (*Phyciodes mylitta*)		California sister (*Adelpha bredowii californica*)	
Blues		Lorquin's admiral (*Limenitis lorquini*)	
western pygmy-blue (*Brephidium exila*)		west coast lady (*Vanessa annabella*)	
western tailed blue (*Everes amyntula*)		red admiral (*V. atalanta rubria*)	
southern blue (*Glaucopsyche lygdamus australis*)		painted lady (*V. cardui*)	
Edward's blue (*Hemiargus ceraunus gyas*)		American (Virginia) lady (*V. virginiensis*)	
Acmon blue (*Icaricia acmon acmon*)		unidentified lady (*Vanessa* sp.)	
marine blue (*Leptotes marina*)		**Swallowtails**	
unidentified blue	1	pale swallowtail (*Papilio eurymedon*)	
Whites		western tiger swallowtail (*P. rutulus*)	
Sara orangetip (*Anthocharis sara sara*)		anise swallowtail (*P. zelicaon*)	
desert (Felder's) orangetip (*A. cethura*)		**Miscellaneous**	
common California ringlet (*Coenonympha californica*)		monarch (*Danaus plexippus*)	
cabbage white (*Pieris rapae*)		common buckeye (*Junonia coenia grisea*)	
checkered (common) white (*Pontia protodice*)	5	mourning cloak (*Nymphalis antiopa*)	
spring white (*P. sisymbrii*)		**Skippers**	
unidentified white	9	funereal duskywing (*Erynnis funeralis*)	1
Metalmarks		mournful duskywing (*Erynnis tristis*)	
Behr's metalmark (*Apodemia mormo virgulti*)	2	fiery skipper (*Hylephila phyleus*)	
Wright's metalmark (*Calephelis wrighti*)		white (common) checkered-skipper (*Pyrgus albescens*)	
Sulphurs		**Other**	
orange sulphur (*Colias eurytheme*)			
sleepy orange (*Eurema nicippe*)			
cloudless sulfur (*Phoebus sennae marcellina*)			
unidentified sulphur	2		
Column Subtotal	**19**	**Column Subtotal**	**1**
		Total	**20**

2015 Quino Checkerspot Butterfly Survey Form

Surveyor: Amy Mattson **Date:** 04/17/2015

Site Name: Sweetwater Vistas **Site Visit No:** 9

Acres Surveyed 26.4 **Survey Time:** 2:39 hours (2.6) **Acres per Hour:** 10.0

Other Surveyors Present: Supervised individual Laura Moreton

Field Conditions				
	Time (24 hr)	**Temperature (˚F)**	**Wind Speed (mph)**	**Cloud Cover**
Start	9:05	75	0-1	0% / slight haze
End	11:44	84	0-3	0% / slight haze
Start				
End				

Vegetation Communities Surveyed (inc. dominant spp.): DCSS (Art cal, Eri fas, Enc cal, Bac sar, Bah lac)

NNG (bromes, Avena, mustard); DH (roads, open weedy areas, graded pad)

Host Plants	Obs.	Nectar Plants	Obs.
dwarf plantain (*Plantago erecta*)		popcorn flower (*Cryptantha/Plagiobothrys* spp.)	X
purple owl's clover (*Castilleja exserta*)		goldfields (*Lasthenia* spp.)	
snapdragon (*Antirrhinum coulterianum*)		goldenstar (*Muilla* spp.)	
birds-beak (*Cordylanthus rigidus*)		fiddleneck (*Amsinckia menziesii* var. *intermedia*)	
woolly plantain (*Plantago patagonica*)		onion (*Allium* spp.)	
Chinese houses (*Collinsia* spp.)		buckwheat (*Eriogonum fasciculatum*)	X
		ground pink (*Linanthus dianthiflorus*)	

Butterfly Species	No.	Butterfly Species	No.
Checkerspots		**Hairstreaks**	
California patch (*Chlosyne californica*)		great purple hairstreak (*Atlides halesus corcorani*)	
Gabb's checkerspot (*C. gabbii*)		brown elfin (*Callophrys augustinus*)	
Quino checkerspot (*Euphydryas editha quino*)		bramble (perplexing) hairstreak (C. *dumetorum affinis*)	
chalcedon checkerspot (*E. chalcedona chalcedona*)		gray hairstreak (*Strymon melinus pudica*)	
Leanira checkerspot (*Thessalia leanira wrighti*)		**Ladies/Admirals**	
Mylitta crescent (*Phyciodes mylitta*)		California sister (*Adelpha bredowii californica*)	
Blues		Lorquin's admiral (*Limenitis lorquini*)	
western pygmy-blue (*Brephidium exila*)		west coast lady (*Vanessa annabella*)	
western tailed blue (*Everes amyntula*)		red admiral (*V. atalanta rubria*)	
southern blue (*Glaucopsyche lygdamus australis*)		painted lady (*V. cardui*)	
Edward's blue (*Hemiargus ceraunus gyas*)		American (Virginia) lady (*V. virginiensis*)	
Acmon blue (*Icaricia acmon acmon*)		unidentified lady (*Vanessa* sp.)	
marine blue (*Leptotes marina*)	2	**Swallowtails**	
unidentified blue	1	pale swallowtail (*Papilio eurymedon*)	
Whites		western tiger swallowtail (*P. rutulus*)	
Sara orangetip (*Anthocharis sara sara*)		anise swallowtail (*P. zelicaon*)	
desert (Felder's) orangetip (*A. cethura*)		**Miscellaneous**	
common California ringlet (*Coenonympha californica*)		monarch (*Danaus plexippus*)	1
cabbage white (*Pieris rapae*)		common buckeye (*Junonia coenia grisea*)	
checkered (common) white (*Pontia protodice*)	17	mourning cloak (*Nymphalis antiopa*)	
spring white (*P. sisymbrii*)		**Skippers**	
unidentified white	8	funereal duskywing (*Erynnis funeralis*)	3
Metalmarks		mournful duskywing (*Erynnis tristis*)	
Behr's metalmark (*Apodemia mormo virgulti*)	8	fiery skipper (*Hylephila phyleus*)	
Wright's metalmark (*Calephelis wrighti*)		white (common) checkered-skipper (*Pyrgus albescens*)	
Sulphurs		**Other**	
orange sulphur (*Colias eurytheme*)		striated queen	1
sleepy orange (*Eurema nicippe*)		fritillary	1
cloudless sulfur (*Phoebus sennae marcellina*)			
unidentified sulphur	4		
Column Subtotal	**40**	**Column Subtotal**	**6**
		Total	**46**

2015 Quino Checkerspot Butterfly Survey Form

Surveyor: Jasmine Bakker **Date:** 04/27/2015

Site Name: Sweetwater Vistas (DOW-03) **Site Visit No:** 10

Acres Surveyed 26.4 **Survey Time:** 2.65 hours **Acres per Hour:** 10

Other Surveyors Present: N/A

Field Conditions				
	Time (24 hr)	**Temperature (°F)**	**Wind Speed (mph)**	**Cloud Cover**
Start	1140	84	3-6	0%
End	1419	92	3-7	0%
Start				
End				

Vegetation Communities Surveyed (inc. dominant spp.): DCSS (*Artemisia californica, Eriogonum fasciculatum*)

NNG (bromes, *Avena*, mustard); DH (*Glebionis, Melilotus*, trails, gravel)

Host Plants	Obs.	Nectar Plants	Obs.
dwarf plantain (*Plantago erecta*)		popcorn flower (*Cryptantha/Plagiobothrys* spp.)	
purple owl's clover (*Castilleja exserta*)		goldfields (*Lasthenia* spp.)	
snapdragon (*Antirrhinum coulterianum*)		goldenstar (*Muilla* spp.)	
birds-beak (*Cordylanthus rigidus*)		fiddleneck (*Amsinckia menziesii* var. *intermedia*)	
woolly plantain (*Plantago patagonica*)		onion (*Allium* spp.)	
Chinese houses (*Collinsia* spp.)		buckwheat (*Eriogonum fasciculatum*)	X
		ground pink (*Linanthus dianthiflorus*)	

Butterfly Species	No.	Butterfly Species	No.
Checkerspots		**Hairstreaks**	
California patch (*Chlosyne californica*)		great purple hairstreak (*Atlides halesus corcorani*)	
Gabb's checkerspot (*C. gabbii*)		brown elfin (*Callophrys augustinus*)	
Quino checkerspot (*Euphydryas editha quino*)		bramble (perplexing) hairstreak (C. *dumetorum affinis*)	
chalcedon checkerspot (*E. chalcedona chalcedona*)		gray hairstreak (*Strymon melinus pudica*)	
Leanira checkerspot (*Thessalia leanira wrighti*)		**Ladies/Admirals**	
Mylitta crescent (*Phyciodes mylitta*)		California sister (*Adelpha bredowii californica*)	
Blues		Lorquin's admiral (*Limenitis lorquini*)	
western pygmy-blue (*Brephidium exila*)		west coast lady (*Vanessa annabella*)	
western tailed blue (*Everes amyntula*)		red admiral (*V. atalanta rubria*)	
southern blue (*Glaucopsyche lygdamus australis*)		painted lady (*V. cardui*)	
Edward's blue (*Hemiargus ceraunus gyas*)		American (Virginia) lady (*V. virginiensis*)	
Acmon blue (*Icaricia acmon acmon*)	3	unidentified lady (*Vanessa* sp.)	
marine blue (*Leptotes marina*)		**Swallowtails**	
unidentified blue		pale swallowtail (*Papilio eurymedon*)	
Whites		western tiger swallowtail (*P. rutulus*)	
Sara orangetip (*Anthocharis sara sara*)		anise swallowtail (*P. zelicaon*)	1
desert (Felder's) orangetip (*A. cethura*)		**Miscellaneous**	
common California ringlet (*Coenonympha californica*)		monarch (*Danaus plexippus*)	
cabbage white (*Pieris rapae*)		common buckeye (*Junonia coenia grisea*)	
checkered (common) white (*Pontia protodice*)	26	mourning cloak (*Nymphalis antiopa*)	
spring white (*P. sisymbrii*)		**Skippers**	
unidentified white	9	funereal duskywing (*Erynnis funeralis*)	2
Metalmarks		mournful duskywing (*Erynnis tristis*)	
Behr's metalmark (*Apodemia mormo virgulti*)		fiery skipper (*Hylephila phyleus*)	1
Wright's metalmark (*Calephelis wrighti*)		white (common) checkered-skipper (*Pyrgus albescens*)	
Sulphurs		**Other**	
orange sulphur (*Colias eurytheme*)			
sleepy orange (*Eurema nicippe*)			
cloudless sulfur (*Phoebus sennae marcellina*)			
unidentified sulphur			
Column Subtotal	**38**	**Column Subtotal**	**4**
		Total	**42**

2015 Quino Checkerspot Butterfly Survey Form

Surveyor: Erica Harris **Date:** 04/29/2015

Site Name: Sweetwater Vistas **Site Visit No:** 11

Acres Surveyed 26.4 **Survey Time:** 2.7 hours **Acres per Hour:** 9.8

Other Surveyors Present: N/A

Field Conditions				
	Time (24 hr)	**Temperature (˚F)**	**Wind Speed (mph)**	**Cloud Cover**
Start	1220	92	2-6	0%
End	1500	93	2-8	0%
Start				
End				

Vegetation Communities Surveyed (inc. dominant spp.): DCSS (Art cal, Eri fas, Enc cal, Bac sar, Bah lac)

NNG (bromes, Avena, mustard); DH (roads, open weedy areas, graded pad)

Host Plants	**Obs.**	**Nectar Plants**	**Obs.**
dwarf plantain (*Plantago erecta*)		popcorn flower (*Cryptantha/Plagiobothrys* spp.)	
purple owl's clover (*Castilleja exserta*)		goldfields (*Lasthenia* spp.)	
snapdragon (*Antirrhinum coulterianum*)		goldenstar (*Muilla* spp.)	
birds-beak (*Cordylanthus rigidus*)		fiddleneck (*Amsinckia menziesii* var. *intermedia*)	
woolly plantain (*Plantago patagonica*)		onion (*Allium* spp.)	
Chinese houses (*Collinsia* spp.)		buckwheat (*Eriogonum fasciculatum*)	X
		ground pink (*Linanthus dianthiflorus*)	

Butterfly Species	**No.**	**Butterfly Species**	**No.**
Checkerspots		**Hairstreaks**	
California patch (*Chlosyne californica*)		great purple hairstreak (*Atlides halesus corcorani*)	
Gabb's checkerspot (*C. gabbii*)		brown elfin (*Callophrys augustinus*)	
Quino checkerspot (*Euphydryas editha quino*)		bramble (perplexing) hairstreak (C. *dumetorum affinis*)	
chalcedon checkerspot (*E. chalcedona chalcedona*)		gray hairstreak (*Strymon melinus pudica*)	
Leanira checkerspot (*Thessalia leanira wrighti*)		**Ladies/Admirals**	
Mylitta crescent (*Phyciodes mylitta*)		California sister (*Adelpha bredowii californica*)	
Blues		Lorquin's admiral (*Limenitis lorquini*)	1
western pygmy-blue (*Brephidium exila*)		west coast lady (*Vanessa annabella*)	
western tailed blue (*Everes amyntula*)		red admiral (*V. atalanta rubria*)	
southern blue (*Glaucopsyche lygdamus australis*)		painted lady (*V. cardui*)	
Edward's blue (*Hemiargus ceraunus gyas*)		American (Virginia) lady (*V. virginiensis*)	
Acmon blue (*Icaricia acmon acmon*)		unidentified lady (*Vanessa* sp.)	
marine blue (*Leptotes marina*)		**Swallowtails**	
unidentified blue		pale swallowtail (*Papilio eurymedon*)	
Whites		western tiger swallowtail (*P. rutulus*)	
Sara orangetip (*Anthocharis sara sara*)		anise swallowtail (*P. zelicaon*)	
desert (Felder's) orangetip (*A. cethura*)		**Miscellaneous**	
common California ringlet (*Coenonympha californica*)		monarch (*Danaus plexippus*)	
cabbage white (*Pieris rapae*)		common buckeye (*Junonia coenia grisea*)	
checkered (common) white (*Pontia protodice*)	5	mourning cloak (*Nymphalis antiopa*)	
spring white (*P. sisymbrii*)		**Skippers**	
unidentified white	3	funereal duskywing (*Erynnis funeralis*)	
Metalmarks		mournful duskywing (*Erynnis tristis*)	
Behr's metalmark (*Apodemia mormo virgulti*)		fiery skipper (*Hylephila phyleus*)	
Wright's metalmark (*Calephelis wrighti*)		white (common) checkered-skipper (*Pyrgus albescens*)	
Sulphurs		**Other**	
orange sulphur (*Colias eurytheme*)			
sleepy orange (*Eurema nicippe*)			
cloudless sulfur (*Phoebus sennae marcellina*)			
unidentified sulphur	2		
Column Subtotal	**10**	**Column Subtotal**	**1**
		Total	**11**

2015 Quino Checkerspot Butterfly Survey Form

Surveyor: Amy Mattson **Date:** 05/04/2015

Site Name: Sweetwater Vistas **Site Visit No:** 12

Acres Surveyed 26.4 **Survey Time:** 2:40 hours (2.7) **Acres per Hour:** 9.8

Other Surveyors Present: Supervised individual Laura Moreton

Field Conditions				
	Time (24 hr)	**Temperature (˚F)**	**Wind Speed (mph)**	**Cloud Cover**
Start	11:00	73	0-1	85% clouds
End	13:40	74	0-4	75% clouds
Start				
End				

Vegetation Communities Surveyed (inc. dominant spp.): DCSS (Art cal, Eri fas, Enc cal, Bac sar, Bah lac)

NNG (bromes, Avena, mustard); DH (roads, open weedy areas, graded pad)

Host Plants	Obs.	Nectar Plants	Obs.
dwarf plantain (*Plantago erecta*)		popcorn flower (*Cryptantha/Plagiobothrys* spp.)	
purple owl's clover (*Castilleja exserta*)		goldfields (*Lasthenia* spp.)	
snapdragon (*Antirrhinum coulterianum*)		goldenstar (*Muilla* spp.)	
birds-beak (*Cordylanthus rigidus*)		fiddleneck (*Amsinckia menziesii* var. *intermedia*)	
woolly plantain (*Plantago patagonica*)		onion (*Allium* spp.)	
Chinese houses (*Collinsia* spp.)		buckwheat (*Eriogonum fasciculatum*)	X
		ground pink (*Linanthus dianthiflorus*)	

Butterfly Species	No.	Butterfly Species	No.
Checkerspots		**Hairstreaks**	
California patch (*Chlosyne californica*)		great purple hairstreak (*Atlides halesus corcorani*)	
Gabb's checkerspot (*C. gabbii*)		brown elfin (*Callophrys augustinus*)	
Quino checkerspot (*Euphydryas editha quino*)		bramble (perplexing) hairstreak (C. *dumetorum affinis*)	
chalcedon checkerspot (*E. chalcedona chalcedona*)		gray hairstreak (*Strymon melinus pudica*)	
Leanira checkerspot (*Thessalia leanira wrighti*)		**Ladies/Admirals**	
Mylitta crescent (*Phyciodes mylitta*)		California sister (*Adelpha bredowii californica*)	
Blues		Lorquin's admiral (*Limenitis lorquini*)	
western pygmy-blue (*Brephidium exila*)		west coast lady (*Vanessa annabella*)	
western tailed blue (*Everes amyntula*)		red admiral (*V. atalanta rubria*)	
southern blue (*Glaucopsyche lygdamus australis*)		painted lady (*V. cardui*)	
Edward's blue (*Hemiargus ceraunus gyas*)		American (Virginia) lady (*V. virginiensis*)	
Acmon blue (*Icaricia acmon acmon*)		unidentified lady (*Vanessa* sp.)	
marine blue (*Leptotes marina*)		**Swallowtails**	
unidentified blue	3	pale swallowtail (*Papilio eurymedon*)	
Whites		western tiger swallowtail (*P. rutulus*)	
Sara orangetip (*Anthocharis sara sara*)		anise swallowtail (*P. zelicaon*)	1
desert (Felder's) orangetip (*A. cethura*)		**Miscellaneous**	
common California ringlet (*Coenonympha californica*)		monarch (*Danaus plexippus*)	
cabbage white (*Pieris rapae*)	2	common buckeye (*Junonia coenia grisea*)	
checkered (common) white (*Pontia protodice*)	21	mourning cloak (*Nymphalis antiopa*)	
spring white (*P. sisymbrii*)		**Skippers**	
unidentified white	7	funereal duskywing (*Erynnis funeralis*)	
Metalmarks		mournful duskywing (*Erynnis tristis*)	
Behr's metalmark (*Apodemia mormo virgulti*)	2	fiery skipper (*Hylephila phyleus*)	
Wright's metalmark (*Calephelis wrighti*)		white (common) checkered-skipper (*Pyrgus albescens*)	
Sulphurs		**Other**	
orange sulphur (*Colias eurytheme*)		striated queen	
sleepy orange (*Eurema nicippe*)		fritillary	
cloudless sulfur (*Phoebus sennae marcellina*)		San Bernardino blue	2
unidentified sulphur	1		
Column Subtotal	**36**	**Column Subtotal**	**3**
		Total	**39**

DUWO3 F2/20/15 AmyM HA & QCB1

1115 & 1130A, 67°F, overcast w/ shadows, 0 mph

Start → 1145 AM, 70°F, " , 0-1 mph

1246 = 72½°F, 126P = 76°F in bush in shade, 310P = 70°F 0-5, 320P = 66°

end → 3:10 PM, 70°F, overcast no shadows, 1-5 mph

3:25 3.42 26.4 acres / 3.42 hr = 7.72 acres/hr

* flowering		funereal dusky wing ‖	ANHU	honeybee
* Enc cal	* Oxa pes cap		RTHA	housefly
— * Cryptantha	* Mal lep	lady ‖	CORA	western ‖ rattlesnake
— * Allium sp. (wit)	* Sal trag.		BUSH	native bees
Jepsonia	* Mimaur	monarch ‖	BEGN	evidence human
* Cal cil	* Bacdogrgh	☺ really fresh orange	CALT	flies
* Phol rae	* Tamarix sp.		BEWR	dragonfly
* Mar mae	Bah lac		LEGO	grasshopper
Cra cas	* Acm gla		AMCR	coyote scat
* Pla ere	* Rap sat			wood at nest
* Lin can	* Ric cap.			← CATH rather
* Clay per	* Mal fas			ground squirrel
Rham cre.				moth.
* Sisymbrium				
* (Acacia sp/tree)	PN stalk of Stylocline	Api ang		
* Bougainvillea	Euph pep	Myoporum-tree		
* Bra nig	* yellow fur ornamental			
* Son ole	* Ric com			
* Glecor	* Salvia mey			
— * Eri fas	* Salmuel.			
* Dat wri	* hort. bulb.			
* (Enc fr)	— * Ams int.			
* Mel ind	* Dei fals (by Rd)			
* Ero cic	* Limonium (NN)			
* Bac sal				

W 2/25/15 BDW 03 QCB Survey 2 26.4 acres

(2:45) 1015 AM 71°F ground 0 - 2mph, 1% clouds & sunny
1:00 PM 78°F, 1 - 5mph 0% clouds & sunny

* = flowering	+ hort - Bougainvillia yellow fur red fur bud 6 (flat)	lady 111	CORA
* Mel init			human
* Brank			ANTU
* Limonium		Sulphur 1111	BUSH
* Acacia tree of prostate	Agave ? planter		LEGO
* Eric cal	* calcil		HOSP
* Eri fas	* Allium depsonic	fun. dodg 1	SOSP
* Eri cic	* Solanum - purple		coyote - tracks
* Dat curi	* Phacelia the purple (seeded)	painted lady 1	grasshopper
* Bahlae			N bees
* Sloria	* Sisymbrium	queen 1	moth
* Bath sat	* Sonchus		SCJA
* Hel [Dic] eck	* Mat mat		[redacted]
* Ams menz	Placere	Behr's MM 1111	ETHA
* Cryptantha			
* Dic cap.			
* Ana arv.			
* Nic glau			
* Bac sal			
* Eucalyptus sp.			
* Fun cyn harvine			
* philistoma			
* Tamarix			
* Azon gla			
* Eri con			
* Pseudognaphalium			
* Mal fas			
* Mim aur			
* (Chrys) cor			

3/6/15 DOW-03

Sweetwtr ~~Spgs~~ Vistas

Stacy Nigro QCB#3

26.4 ac survey area

3 hours

Start	Stop	8.8 ac/hr
11:15	14:15	
80°	84°	
0%/clear	0%/clear	
0-2 mph	2-8 mph	

~~plants~~ butterflies

Behrs nm	= 7	no QCB
Lady sp	= 1	
Fun dusk	= 3	
sulph	= 9	
white sp	= 4	
	24 total	

Enc. cal

habs: DCSS - Artcal, Erio fasc, Bac sar, Bah lac

NNG - bromes, Avena, mustard

DH - rds, open weedy areas, graded pd

3/6/15 DOW-03 p2/2

plants in bloom

Erio fasc	Cammis. sp.	Swtwtr
Acm gla	Allium sp.	Vistas
Pseu cal	Calt cil	
Erio conf	Calan cil	QCB#3
Hir inc	Branig	
Crypt. sp.	Anag arv	
Mim aur	Lim per	
Ams men	Gleb cor	
Meli off		
Sesbania? (Non-nat)		
Raph sat		
Dich cap		
Plag sp.		
Plant ere		

animals

CORA, LEGO, coyote, WCSP, YRWA

HOFI, BUSH, SOSP, LEGO

WREN, cttnt

RTHA

Rite in the Rain.

DOW 03 F 3.13.15 QCB#4

Start 1:54 p, 91.5°F, 2-5 mph, 0% clouds
end 4:33 91°F, 2-7 gusty, 3% high haze
2:39

flowering

Acacia tree
Mel nd
Branigo
horticultural - bougainville, lamonium, red orange - fur bulb/flat, yellow fur tree, [illegible],
Glei [Chrys] cor
phacelia (min/par ?)
Bahlac
Nic glau
Euc far
Raph sat
Tamarix sp.
Sisymbrium sp.
Lupinus sp. - big
Eri fas
Cryptantha sp.
Bel fas
Ana arv
Phacelia sp. (cicldis)
Gal apa

Bac sal
Mal par cheesewood
Euc cal
Pseudognaphalium sp.
Pectocarya sp.
Acm gla
Mim aur
Mal fas
Erio conf
Salvia mun
Api ang
Acmispon sp.
Pla ere
Dic cap
Ric com
Eucrypta
most of the
(allium bloomed out in sun section)

Marine flue 1

CALT

~~[illegible]~~ CORA
BLPH
Apis mellifera
funeral duty
MIF
Indy ang 3 spots side
ANTU
BELOR
grass hopper
Belus MM ~~[illegible]~~
Sra OTip 1
RTHA
Coyote scat
humans
N bees
dragonflies
White 1
Sulphur 1111
desert cottontail
Kingbird
Morro

DOW 03
F 3.20.15 Amy M QCB 5

start	10:35	75°F	0% slight haze	0-1 mph
end	1:15	81°F	0% very slight haze	0-1 mph
	2:40			

Flowering

Acacia tree	Lasoal	Common wt 1111	wrenkt
Eromosl cic.	Bae sal		RTHA
hort - bougainvillea, ?, ator,		sulphur 卌 卌	(CAGN upslope of Sal cin patch, Son of Rd, ie to S)
Bra nig	Nic gla		
Sisymbrium sp.	Enc cal	funereal dusky wing 111	CALT
Gleb cor	Gal apa		damselfly - blue
Mel ind	Dic cap.		CORA
	- Eri fas	Sara O Tip 1	Snails - small & big round
Phae (minor par.)	- Cryptanthe		1 yards - fort
Clay perf	chickweed Cer glo		
Cen mel	Placre	Cabbage wt 11	SPTO
Eric far - Rd sdp	Hyp gla		lady bug flies
Acon gla.	Cas ex - just offsite	Bel's MM 卌 卌 卌 卌	bee mimic flies
Sonchus	- (Allium done blooming)		bees - N
Tamarix	Mimaur		Api mel
Rap sat	Pseudosmaphalium sp.	Painted lady 11	grasshopper
Bah lae	Daupus		LEGO
Eri sap	Dei fas	unID blue 1	COYE
Limonium horticult.	Dic com		CATH
			night hawk
		Mourning dove 1	SCJA
			COHA
			ANHU
			BLPH
		lady 111	humans
			gr. squirrel

3/27/15 DOW 03 QCB#6 Amy M

Start 850, 74°F, 0-1 mph, 0%/sunny & clear
(2:43) End 1133, 93°F, 0-1 mph 0%/sunny & clear

flowering

Mat mat	Phac (par ormin)
Eri cic	Nic glau
Hir inc	Car edu
Hed ore	Las cal
Acacia (tre)	Bac sal
hort: Bougainvillea, ast's	Enc cal
Sisymbrium	Sal mel
Gle cor	Son asp/ole
Mel ind	Gal apa
— Cryptantha	Ana arv
— Eri fas	Ant ant
Dic cap	Mim aur
Placer	Acm gla
Bau cal	Hyp gla
Bah loe	Eri con
Eria sp	Rap sat
Dau pus	(wine) Sarcostemma →
Dat wri	Funastrum cynosphar
Dei fas	

Apimel	LEGO
grasshopper	Wrenfit
humans	COYE
dragonfly	MODO
Damselfly	CATH
coyote scat	ANHU
snail round / brown	CALT
moth	CAGN
gr squirrel	SCJA
desert cottontail	AMCR
	CORA
	Swallow
	LBVI

Finding ||| (4)

WH ~~||||~~ ~~||||~~ || (12)

lady || (2)

sulphur ~~||||~~ ~~||||~~ || (12)

Behr MM ~~||||~~ ~~||||~~ ~~||||~~ ~~||||~~ ~~||||~~ (24)

Common WH ~~||||~~ | (6)

brush mgmt has occurred along houses

4/2/15 DOW-03

Sweetwater Vistas

Stacy Nigro

26.4 acres p1/2

QCB#7 survey area

start	stop
10:00	13:10
68°	73°
0-2 mph	2-4 mph
40% clouds	20% clouds (thin clouds)

3.16 hr survey time

= 8.4 ac/hr

Butterflies

Behns mm = 7
olve sp = 2
white sp = 7
sulphur sp = 1
Acmon blue = 1
red adm = 1
orgtip = 2
cherd white = 1
marine blue = 1

total
23

NO QCB

DOW-03 4/2/15 p2/2

Plants in bloom

Erio fasc	Meli off	Sisy bell
Hir inc	Gleb cor	Erod sp.
Bah lac	Raph sat	Hel ech
Sonc asp	Dei fasc	
Enc cal	Eria saff	
Acm gla	Dich cap	
Mim aur	Asph fist	
Gnap cal	Sal muz	
Erio conf	Astr. trich	
Tam ram	Phac par	
Pic ech	Dauc pus	
Plagi sp.	Sal api	
	Pla ere	
Nav ham	Sen vulg	
Anag arv	Bra nig	

LEGO, honeybee, CORA, COYE, HOFI
coyote trx/scat, CAKI, ANHU
tara hawk, CALT, SPTO, small parrot sp.
BUSH, CATH, WCSP, snail
SOSP, rabbit scat, NUWO, LBVI → proj. site
royal blue damselfly
↓ S. end rip. corr.
+ N. end mi parcel

DOW-03 Erica H
QCB #8 4/10/15
Start: 1130; 75°F 2-5, 0%
Stop: 1410, 73°F, 2-5, 0%

Gilecor Hir Inc Tamarisk
sea lavender Bah lac Nic gla
eri fas sal mel mim aur
aum gla pseudograph. eri con

Blue 1
Duskywing 1
Behrs 11
Sulphur 11
White ~~||||~~ ||||
Checkered white ~~||||~~
BEWR
NOMO SPTO Selasphorus AMETO
NRWS OCWA HOOR WREN
LEGO HOFI YEWA COYE
CALT SOSP RSFL CATH
AMER ANHU BHGR BUSH
LBN RSHA CLSW BLPH

GA gr. squirrel
cottontail

DOW 03 F 4/17/15 QCB 9 Amy w/ Laura H

start 905A 75°F, 0-1mph, 0% clouds / slight haze
end 1144A 84°F, 0-3mph, 10% / slight haze

Branig
Acacia tree NN
Limonium
Ele cor
- Eri fas
Rap sat
Sarcostemma →
Bah lac
Mar vul
Cen mel
Dei fas
Zel ven
Dau pus
Hel ech
Cape honeysuckle
Tamarix
Ericon
Naw ham
Ana arv.
- Cryptantha
Mim aur

queen 1 (1)
common wh ~~||||~~ ~~||||~~ ~~||||~~ || (17)
fritillary 1 (1)
marine blue || (2)
Behr MM ~~||||~~ ||| (8)
Sulphur ||| (4)
white ~~||||~~ ||| (8)
blue 1 (1)
funereal duskywing ||| (3)
monarch 1 (1)

46

COYE
CALT
Grasshopper
ANHU
woodrat nest
SPTO
grasshopper
Swallow
honeybees
flies
No. harrier.
CORA
Jaw selfly

DOW-03 Sweetwater Vistas 27 Apr. 2015
QCB Survey #10 JB

START 1140, 84, 3-6mph, clear + sunny
STOP 1419, 92, 3-7mph, clear + sunny
DH dom by Glebiants, Melilotus, Hirschfeldia / DCSS dom by Artcal, Erifar

Butterflies

White sp. 𝍸 |||
Common white 𝍸 𝍸 𝍸 𝍸 𝍸 |
Anise swallowtail |
Fiery skipper |
Cabbage white |
Fun. dusky wing ||
Acmon blue |||

Low QCB potential

FLOWERING PLS

Hir inc Nicgla Ant nut
Hel cur Riccom Sal mel
Limonium (staffice) Bah lac
Con mel Glecor Sal api
Mel alb Erifar* Mim aur
Tamarix Mal far Meschr
Erecal Deifar Ericon
Cen.ven. Ana arr
Nav Southwestern Riparian

WILDLIFE

TUVU CORA
CALT LEGF
damselfly lizard
cottontail coyote (scat)
SOSP YEWA
COYE AMCR
MODO ANHU
LBVI BUSH
SPTO BEWR
WREN groundsquirrel

DOW-03 Encah
QCB #11 4/29/15
Start: 1220; 92°F, 2-6, 0%
Stop: 1500; 93°F, 2-8, 0%

LEGO HOFI SOSP HOOR
YEWA LBVI COYE NOMO
OCWA CALT SPTO PSFL

Flower:
Eritas Hir inc Ban lac
mimawir Gle cor Tamarix
Nicyla Boginveae? sea lavender

Checkered White ~~III~~
Lorquin's I
Sulphur sp. II
White III

DOW03 5/4/15 QCB# 12 Amy w/ Laura

Start 1100, 73°F, 0 - 1 mph, 85% clouds

1339 end 1340 74°F 0.4 mph 75% clouds.

				NOMO.
Bainig	Tamarix	Common white		AMCR
Cen mel	Nic gla	卌 卌 卌 卌 |	(21)	LEGO
- Eri fas	Oleander			OCWA
Acacia tree	Helech	white 卌 ||	(7)	WIWA
Bah lac	Ana aru.			Cicada
Zel ren	Stephanomeria, Vir	Cabbage wh ||	(2)	damselfly blue
Dei fas				LBV
Sal api	Mesnod			SOSP
Mal Lau	Bac sal	blue |||	(3)	COYE
Eucalyptus sp.	Gle Cor			honeybee
Sarcostemma-s	2 cactus	Anise swallowtail	(1)	coyote scat
Ras sif	Ane cal	|		MODO
				Killdeer
		San Bernardino blue	(2)	COIZA
		||		tarantula hawk
		Bch's MM ||	(2)	NRWSW
				WEKI
		Sulphur |	(1)	CALT
				ANITH
			39	grasshoper
				humans
				gr squirrel

Hol vir next to lug hay on SE side road.

Attachment B

BUTTERFLY CHECKLIST

2015 Quino Checkerspot Butterfly Survey
Butterfly Checklist

Site Name: Sweetwater Vistas

Dates: February 20 – May 4, 2015

Survey Numbers: 1-12

Surveyors: Jasmine Bakker, Erica Harris, Amy Mattson, Stacy Nigro

(Laura Moreton as supervised individual)

Butterfly Species	No.	Butterfly Species	No.
Checkerspots		**Hairstreaks**	
California patch (*Chlosyne californica*)		great purple hairstreak (*Atlides halesus corcorani*)	
Gabb's checkerspot (*C. gabbii*)		brown elfin (*Callophrys augustinus*)	
Quino checkerspot (*Euphydryas editha quino*)		bramble (perplexing) hairstreak (C. *dumetorum affinis*)	
chalcedon checkerspot (*E. chalcedona chalcedona*)		gray hairstreak (*Strymon melinus pudica*)	
Leanira checkerspot (*Thessalia leanira wrighti*)		**Ladies/Admirals**	
Mylitta crescent (*Phyciodes mylitta*)		California sister (*Adelpha bredowii californica*)	
Blues		Lorquin's admiral (*Limenitis lorquini*)	
western pygmy-blue (*Brephidium exila*)		west coast lady (*Vanessa annabella*)	
western tailed blue (*Everes amyntula*)		red admiral (*V. atalanta rubria*)	1
southern blue (*Glaucopsyche lygdamus australis*)		painted lady (*V. cardui*)	3
Edward's blue (*Hemiargus ceraunus gyas*)		American (Virginia) lady (*V. virginiensis*)	
Acmon blue (*Icaricia acmon acmon*)	4	unidentified lady (*Vanessa* sp.)	11
marine blue (*Leptotes marina*)	4	**Swallowtails**	
unidentified blue	8	pale swallowtail (*Papilio eurymedon*)	
Whites		western tiger swallowtail (*P. rutulus*)	
Sara orangetip (*Anthocharis sara sara*)	4	anise swallowtail (*P. zelicaon*)	2
desert (Felder's) orangetip (*A. cethura*)		**Miscellaneous**	
common California ringlet (*Coenonympha californica*)		monarch (*Danaus plexippus*)	3
cabbage white (*Pieris rapae*)	4	common buckeye (*Junonia coenia grisea*)	
checkered (common) white (*Pontia protodice*)	80	Comstock's fritillary (*Speyeria callippe comstocki*)	
spring white (*P. sisymbrii*)		mourning cloak (*Nymphalis antiopa)*	1
unidentified white	57	**Skippers**	
Metalmarks		funereal duskywing (*Erynnis funeralis*)	26
Behr's metalmark (*Apodemia mormo virgulti*)	95	mournful duskywing (*Erynnis tristis*)	
Wright's metalmark (*Calephelis wrighti*)		fiery skipper (*Hylephila phyleus*)	1
Sulphurs		white (common) checkered-skipper (*Pyrgus albescens*)	
orange sulphur (*Colias eurytheme*)		**Other**	
sleepy orange (*Eurema nicippe*)		striated queen	2
cloudless sulfur (*Phoebus sennae marcellina*)		fritillary	1
unidentified sulphur	47	San Bernardino blue	2
Column Subtotal	**303**	**Column Subtotal**	**53**
		Total Butterflies Observed	**356**

Appendix I

LEAST BELL'S VIREO SURVEY REPORT

HELIX Environmental Planning, Inc.
7578 El Cajon Boulevard
Suite 200
La Mesa, CA 91942
619.462.1515 tel
619.462.0552 fax
www.helixepi.com

August 20, 2015 DOW-03

Ms. Stacey Love
U.S. Fish & Wildlife Service
2177 Salk Ave., Suite 250
Carlsbad, CA 92008

Subject: Year 2015 Least Bell's Vireo (*Vireo bellii pusillus*) Survey Report for the Sweetwater Vistas Project

Dear Ms. Love:

This letter presents the results of a U.S. Fish and Wildlife Service (USFWS) protocol presence/absence survey for the least Bell's vireo (*Vireo bellii pusillus*; LBVI) conducted by HELIX Environmental Planning, Inc. (HELIX) for the Sweetwater Vistas Project (project). This report describes the methods used to perform the survey and the results. It is being submitted to the USFWS as a condition of HELIX's Threatened and Endangered Species Permit (TE778195-12).

PROJECT LOCATION AND DESCRIPTION

The project site is generally located north of Sweetwater Reservoir, south and west of State Route 94, and east of State Route 125 in the unincorporated community of Spring Valley in San Diego County, California (Figure 1). Specifically, the site is located near the northwest corner of Jamacha Boulevard and Sweetwater Springs Boulevard. It is located within the San Diego land grant in unsectioned lands of the U.S. Geological Survey (USGS) 7.5-minute Jamul Mountains quadrangle map (Figure 2). Furthermore, the project site is located on unincorporated lands within the South County and Lakeside-Metro-Jamul segments of the County's Multiple Species Conservation Program (MSCP) Subarea Plan. The site is part of a previously-approved Specific Plan known as The Pointe. The site is being considered for residential development and open space.

METHODS

Eight surveys were conducted by HELIX biologists Benjamin Rosenbaum, Laura Moreton, and Talaya Rachels, according to the schedule in Table 1. The survey was conducted by walking along the edges of, as well as within, suitable LBVI habitat while listening for LBVI and viewing birds with the aid of binoculars. Suitable LBVI habitat that occurs on and in the immediate vicinity of the project site was targeted during the survey. This area totaled approximately 6.9 acres and is referred to herein as the survey area. Suitable LBVI habitat within the survey area includes southern willow scrub, mule fat scrub, arundo dominated riparian, non-native riparian, and tamarisk scrub. Stands of freshwater marsh, cismontane alkali marsh, eucalyptus woodland, and disturbed habitat were also included in the survey due to their close proximity to suitable LBVI habitat. The rest of the habitat on the project site is not suitable for LBVI and was not surveyed.

Table 1
LEAST BELL'S VIREO SURVEY INFORMATION

Site Visit	Date	Biologist	Time (start/stop)	Approximate Acres (ac) Covered/ Survey Rate*	Weather Conditions (start/stop)
1	4/13/15	Laura Moreton	0745/1100	6.9/ 2.1 ac/hr	62°F, wind 0-1 mph, 50% clouds 70°F, wind 0-1 mph, 0% clouds
2	4/23/15	Laura Moreton	0735/1055	6.9/ 2.1 ac/hr	62°F, wind 0-1 mph, 100% clouds 65°F, wind 0-2 mph, 100% clouds
3	5/04/15	Benjamin Rosenbaum and Talaya Rachels	0720/0930	6.9/ 3.5 ac/hr	59°F, wind 1-2 mph, 90% clouds 63°F, wind 1-2 mph, 90% clouds
4	5/14/15	Laura Moreton	0800/1100	6.9/ 2.3 ac/hr	60°F, wind 1-3 mph, 75% clouds 64°F, wind 1-4 mph, 10% clouds
5	5/27/15	Benjamin Rosenbaum	0820/0950	6.9/ 4.6 ac/hr	59°F, wind 2-5 mph, 90% clouds 63°F, wind 2-5 mph, 90% clouds
6	6/09/15	Laura Moreton	0815/1045	6.9/ 2.8 ac/hr	71°F, wind 0-2 mph, 100% clouds 85°F, wind 0-1 mph, 75% clouds
7	6/25/15	Benjamin Rosenbaum	0800/0930	6.9/ 4.6 ac/hr	66°F, wind 1-2 mph, 60% clouds 72°F, wind 1-2 mph, 0% clouds
8	7/06/15	Laura Moreton	0800/1015	6.9/ 3.1 ac/hr	64°F, wind 1-3 mph, 100% clouds 66°F, wind 0-1 mph, 100% clouds

*Includes time for travel between habitat patches

RESULTS

LBVI was detected at four locations within the survey area during each of the eight 2015 surveys (Figure 3). LBVI were heard vocalizing at each of the four locations, but individuals were not visually observed. Of the four locations, three occur on site within Hanson's Creek and Little Hanson's Creek, and one occurs off site within Little Hanson's Creek. LBVI were detected within southern willow scrub in Hanson's Creek and within southern willow scrub and non-native vegetation (immediately adjacent to southern willow scrub and cismontane alkali marsh) within Little Hanson's Creek. Three additional special status species were incidentally observed or otherwise detected within the project site during the LBVI surveys: yellow warbler (*Setophaga petechia*), California gnatcatcher (*Polioptila californica californica*), and Cooper's hawk (*Accipiter cooperii*). Brown-headed cowbird (*Molothrus ater*) was not observed within the project site. A list of all animal species observed or detected is included in Attachment A.

CERTIFICATION

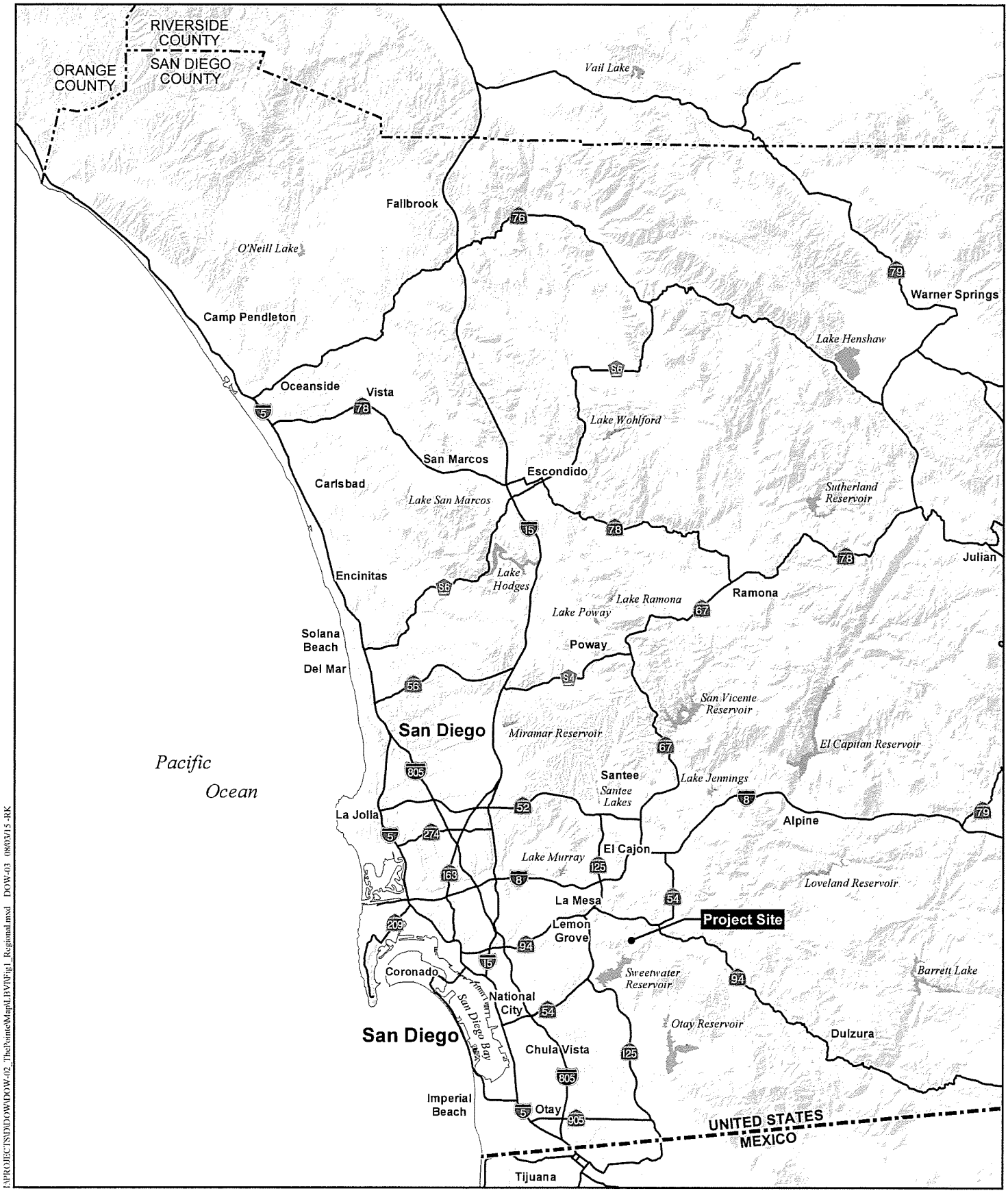
I certify that the information in this survey report and enclosed exhibit fully and accurately represents our work.

Please contact Ben Rosenbaum at (619) 462-1515 if you have any questions.

Sincerely,

Benjamin Rosenbaum	Laura Moreton	Talaya Rachels
Biologist	Biologist	Biologist

Enclosures:
Figure 1 Regional Location Map
Figure 2 Project Vicinity Map
Figure 3 Least Bell's Vireo Survey Results
Attachment A Animal Species Observed or Detected



I:\PROJECTS\DDO\WDOW-02_ThePointe\Map\LBV\Fig1_Regional.mxd DOW-03 08/03/15 -RK

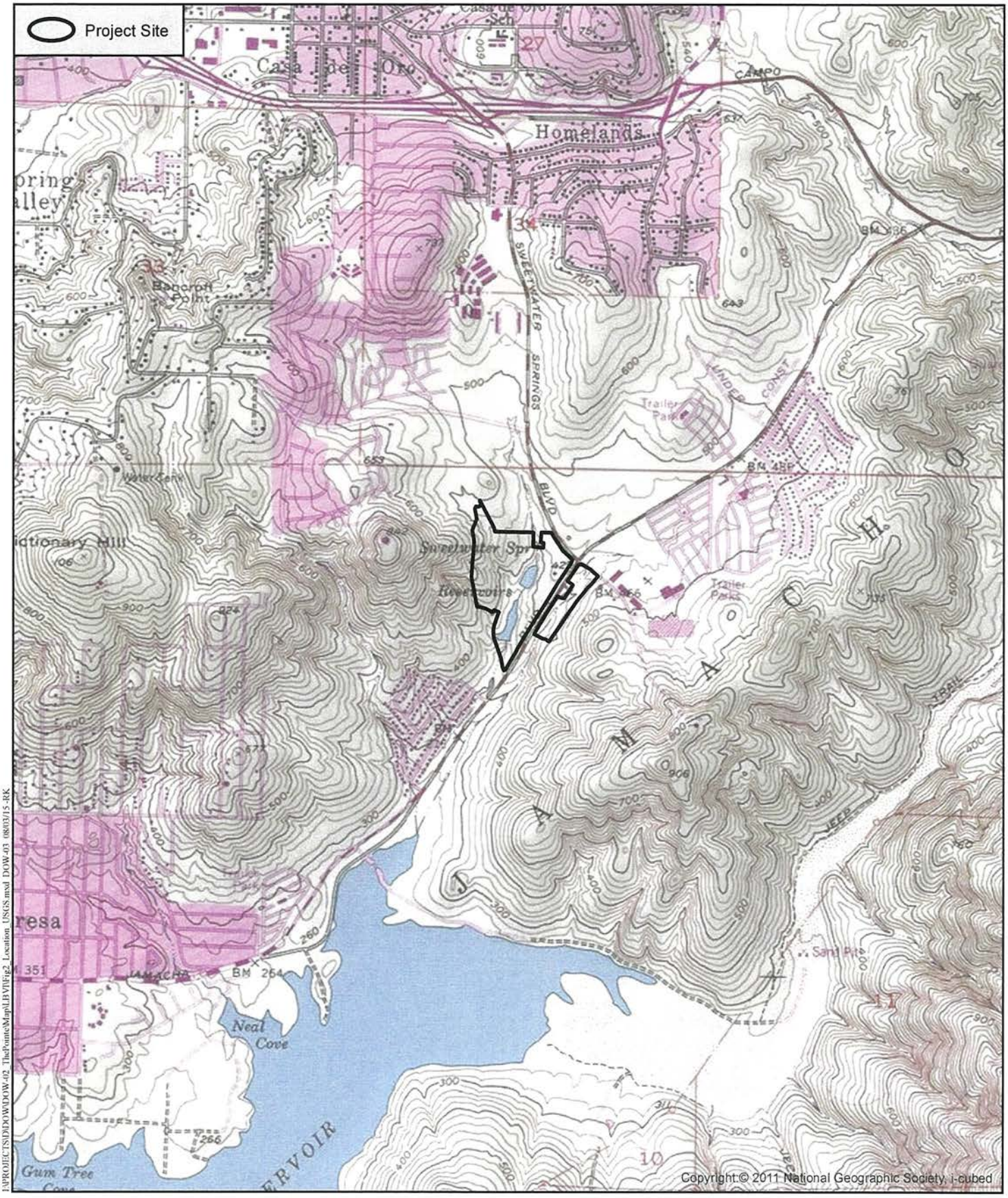
Regional Location Map

SWEETWATER VISTAS

HELIX Environmental Planning

N 0 8 Miles

Figure 1



L:\PROJECTS\DDOW\DOW-02_ThePointe\Map\LBV\Fig2_Location_USGS.mxd DOW-03 08/03/15 -RK

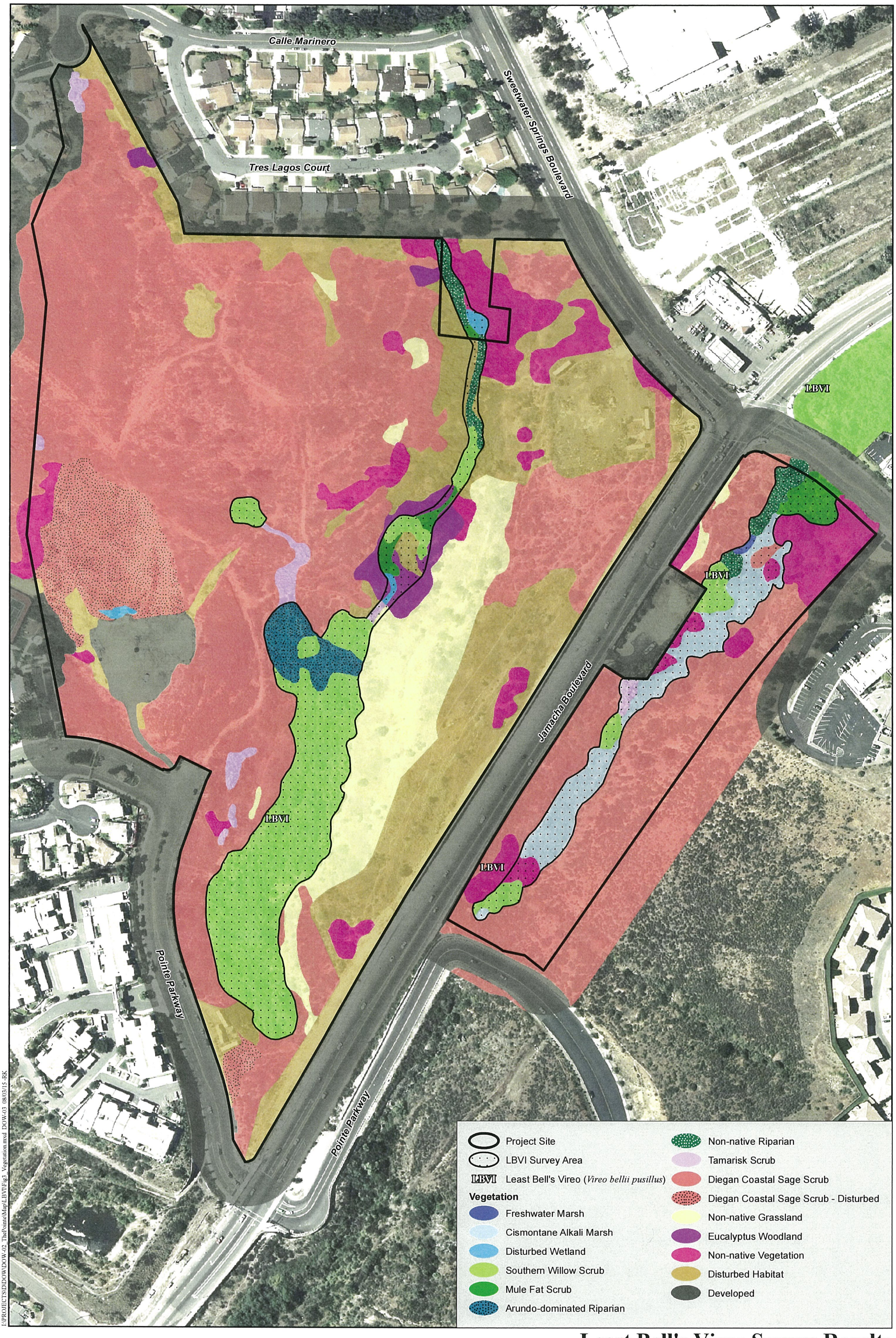
Project Vicinity Map (USGS Topography)

SWEETWATER VISTAS

HELIX Environmental Planning

0 2,000 Feet

Figure 2



I:\PROJECTS\DOW\DOW-02_ThePointe\Map\LBVI\Fig3_Vegetation.mxd DOW-03 08/03/15 -RK

Least Bell's Vireo Survey Results

SWEETWATER VISTAS

HELIX Environmental Planning

N 0 200 Feet

Figure 3

Attachment A
SWEETWATER VISTAS
ANIMAL SPECIES OBSERVED OR DETECTED

TAXON		SCIENTIFIC NAME	COMMON NAME
VERTEBRATES			
Order	Family		
Accipitriformes	Accipitridae	*Accipiter cooperii*	Cooper's hawk†
		Buteo jamaicensis	red-tailed hawk
		Circus cyaneus	northern harrier†
Anseriformes	Anatidae	*Anas platyrhynchos*	mallard
Apodiformes	Trochilidae	*Calypte anna*	Anna's hummingbird
		Calypte costae	Costa's hummingbird
Charadriiformes	Charadriidae	*Charadrius vociferus*	killdeer
Columbiformes	Columbidae	*Zenaida macroura*	mourning dove
Cuculiformes	Cuculidae	*Geococcyx californianus*	greater roadrunner
Galliformes	Odontophoridae	*Callipepla californica*	California quail
Passeriformes	Aegithalidae	*Psaltriparus minimus*	bushtit
	Cardinalidae	*Passerina caerulea*	blue grosbeak
	Corvidae	*Aphelocoma californica*	western scrub jay
		Corvus brachyrhynchos	American crow
		Corvus corax	common raven
	Emberizidae	*Melospiza melodia*	song sparrow
		Melozone crissalis	California towhee
		Pipilo maculatus	spotted towhee
	Estrildidae	*Lonchura punctulata*	nutmeg mannikin
	Fringillidae	*Haemorhous mexicanus*	house finch
		Spinus psaltria	lesser goldfinch
		Spinus tristis	American goldfinch
	Hirundinidae	*Petrochelidon pyrrhonota*	American cliff swallow
		Stelgidopteryx serripennis	northern rough-winged swallow
	Icteridae	*Icterus cucullatus*	hooded oriole
	Mimidae	*Toxostoma redivivum*	California thrasher
	Parulidae	*Cardellina pusilla*	Wilson's warbler
		Geothlypis trichas	common yellowthroat
		Setophaga petechia	yellow warbler†
	Passeridae	*Passer domesticus*	house sparrow
	Polioptilidae	*Polioptila californica californica*	coastal California gnatcatcher†
	Sylviidae	*Chamaea fasciata*	wrentit

Attachment A (cont.)
SWEETWATER VISTAS
ANIMAL SPECIES OBSERVED OR DETECTED

Passeriformes, cont.	Troglodytidae	*Thryomanes bewickii*	Bewick's wren
	Tyrannidae	*Empidonax difficilis*	pacific-slope flycatcher
		Myiarchus cinerascens	ash-throated flycatcher
		Sayornis nigricans	black phoebe
	Vireonidae	*Vireo bellii pusillus*	least Bell's vireo†
Pelecaniformes	Ardeidae	*Ardea alba*	great egret
Piciformes	Picidae	*Picoides nuttallii*	Nuttall's woodpecker

Mammals

Order	Family		
Lagomorpha	Leporidae	*Sylvilagus audubonii*	desert cottontail

†Special Status Species

Appendix J

JURISDICTIONAL DELINEATION DATA SHEETS

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: The Pointe City/County: Spring Valley/San Diego Sampling Date: Oct 16, 2014

Applicant/Owner: State: CA Sampling Point: 1

Investigator(s): S. Nigro & G. Aldridge; HELIX JO# DOW-02 Section, Township, Range: unsectioned lands, 17 South, 1 West

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

Subregion (LRR): C Lat: 32.72294335850 Long: -116.97257889800 Datum:

Soil Map Unit Name: Las Posas fine sandy loam, 9 to 15 % slopes, eroded NWI classification: PSSC/Pal Shrub-Scrub

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:

Sampling point located in southern willow scrub along the main drainage. USACE, CDFW, and County RPO wetland.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 20' X 20')	Absolute % Cover	Dominant Species?	Indicator Status
1. Salix lasiolepis	30	X	FACW
2. Salix gooddingii	20	X	FACW
3. Washingtonia robusta	30	X	FACW
4.			
	80	= Total Cover	
Sapling/Shrub Stratum (Plot size: 20' X 20')			
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	
Herb Stratum (Plot size: 20' X 20')			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	0	= Total Cover	
Woody Vine Stratum (Plot size: 20' X 20')			
1.			
2.			
	0	= Total Cover	

% Bare Ground in Herb Stratum 15 % Cover of Biotic Crust 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A =

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:

Wetland vegetation present.

Photos 8-10.

SOIL

Sampling Point: 1

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

[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:

Hydric soil assumed present based on long duration of inundation/perennial stream conditions.

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): up to 6"

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:

Wetland hydrology present based on presence of one primary and three secondary indicators.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: The Pointe City/County: Spring Valley/San Diego Sampling Date: Oct 16, 2014

Applicant/Owner: State: CA Sampling Point: 2

Investigator(s): S. Nigro & G. Aldridge; HELIX JO# DOW-02 Section, Township, Range: unsectioned lands, 17 South, 1 West

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

Subregion (LRR): C Lat: 32.72293463230 Long: -116.97264303700 Datum:

Soil Map Unit Name: Las Posas fine sandy loam, 9 to 15 % slopes, eroded NWI classification: PSSC/Pal Shrub-Scrub

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:

Sampling point located in southern willow scrub on a terrace of the main drainage approximately 2 feet above the channel bottom. Meets CDFW and County RPO wetland criteria. Does not meet USACE wetland criteria.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 12' X 20')	Absolute % Cover	Dominant Species?	Indicator Status
1. Salix lasiolepis	45	X	FACW
2. Washingtonia robusta	15	X	FACW
3.			
4.			
	60	= Total Cover	
Sapling/Shrub Stratum (Plot size: 12' X 20')			
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	
Herb Stratum (Plot size: 12' X 20')			
1. Stellaria media	5	X	FACU
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	5	= Total Cover	
Woody Vine Stratum (Plot size: 12' X 20')			
1.			
2.			
	0	= Total Cover	

% Bare Ground in Herb Stratum 30 % Cover of Biotic Crust 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 67 (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A = _____

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:

Wetland vegetation present.

Photos 2-7.

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
0-2	10YR 3/2	100	-	-	-	-	sdy cly lm	
2-5	10YR 3/2	100	-	-	-	-	clay loam	
5-20	10YR 3/2	100	-	-	-	-	sdy cly lm	pit moist at 19", not saturated

[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:

Hydric soil indicators absent.

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:

Wetland hydrology present based on presence of two secondary indicators.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: The Pointe City/County: Spring Valley/San Diego Sampling Date: Oct 16, 2014

Applicant/Owner: State: CA Sampling Point: 3

Investigator(s): S. Nigro & G. Aldridge; HELIX JO# DOW-02 Section, Township, Range: unsectioned lands, 17 South, 1 West

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

Subregion (LRR): C Lat: 32.72420785050 Long: -116.97195921900 Datum:

Soil Map Unit Name: Las Posas fine sandy loam, 9 to 15 % slopes, eroded NWI classification: PSSC/Pal Shrub-Scrub

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:

Sampling point located in arundo-dominated riparian habitat on a terrace of the main drainage approximately 4 feet above the channel bottom. Meets CDFW and County RPO wetland criteria. Does not meet USACE wetland criteria.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 15' X 20')	Absolute % Cover	Dominant Species?	Indicator Status
1. Salix lasiolepis	10	X	FACW
2.			
3.			
4.			
	10	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15' X 20')			
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	
Herb Stratum (Plot size: 15' X 20')			
1. Arundo donax	80	X	FACW
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	80	= Total Cover	
Woody Vine Stratum (Plot size: 15' X 20')			
1.			
2.			
	0	= Total Cover	

% Bare Ground in Herb Stratum 10 % Cover of Biotic Crust 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A =

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:

Wetland vegetation present.

Photos 14-15.

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
0-19	2.5Y 3/2	100	-	-	-	-	sdy cly lm	

[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:

Hydric soil indicators absent.

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:

Wetland hydrology absent - no primary and only one secondary indicator present. Water present in adjacent creek channel approximately 4 ft lower than soil pit elevation.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: The Pointe City/County: Spring Valley/San Diego Sampling Date: Oct 16, 2014

Applicant/Owner: State: CA Sampling Point: 4

Investigator(s): S. Nigro & G. Aldridge; HELIX JO# DOW-02 Section, Township, Range: unsectioned lands, 17 South, 1 West

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

Subregion (LRR): C Lat: 32.72505575720 Long: -116.97120860300 Datum:

Soil Map Unit Name: Diablo clay, 9 to 15 % slopes NWI classification: PSSC/Pal Shrub-Scrub

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:

Sampling point located in mule fate scrub on a terrace of the main drainage several feet above the channel bottom. Meets CDFW and County RPO wetland criteria. Does not meet USACE wetland criteria.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 10' X 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. Eucalyptus camaldulensis	10	X	FAC
2.			
3.			
4.			
	10	= Total Cover	
Sapling/Shrub Stratum (Plot size: 10' X 30')			
1. Baccharis salicifolia	40	X	FAC
2.			
3.			
4.			
5.			
	40	= Total Cover	
Herb Stratum (Plot size: 10' X 30')			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	0	= Total Cover	
Woody Vine Stratum (Plot size: 10' X 30')			
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: 2 (A)

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A = _____

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:

Wetland vegetation present.

Photos 26-30.

SOIL

Sampling Point: 4

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-24	10YR 3/2	100	-	-	-	-	sdy cly lm	

[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:

Hydric soil indicators absent. Adjacent channel is incised in this location.

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:

Wetland hydrology absent - no primary or secondary indicators present.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: The Pointe City/County: Spring Valley/San Diego Sampling Date: Oct 16, 2014

Applicant/Owner: State: CA Sampling Point: 5

Investigator(s): S. Nigro & G. Aldridge; HELIX JO# DOW-02 Section, Township, Range: unsectioned lands, 17 South, 1 West

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

Subregion (LRR): C Lat: 32.72504553830 Long: -116.97259797100 Datum:

Soil Map Unit Name: Las Posas fine sandy loam, 9 to 15 % slopes, eroded NWI classification: R4SBA/Riverine

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:

Sampling point located in southern willow scrub on a hillslope. Meets USACE, CDFW, and County RPO wetland criteria.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 15' X 15')	Absolute % Cover	Dominant Species?	Indicator Status
1. Salix lasiolepis	40	X	FACW
2.			
3.			
4.			
	40	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15' X 15')			
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	
Herb Stratum (Plot size: 15' X 15')			
1. Typha sp.	60	X	OBL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	60	= Total Cover	
Woody Vine Stratum (Plot size: 15' X 15')			
1.			
2.			
	0	= Total Cover	

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

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A =

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:

Wetland vegetation present.

Photos 48-49.

SOIL

Sampling Point: 5

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
0-12	2.5Y 3/2	90	10YR 5/8	10	C	M	clay loam	

[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:

Hydric soil indicator present as redox dark surface.

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:

Wetland hydrology criterion met due to presence of a primary indicator.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: The Pointe City/County: Spring Valley/San Diego Sampling Date: Oct 16, 2014

Applicant/Owner: State: CA Sampling Point: 6

Investigator(s): S. Nigro & G. Aldridge; HELIX JO# DOW-02 Section, Township, Range: unsectioned lands, 17 South, 1 West

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

Subregion (LRR): C Lat: 32.72460947280 Long: -116.97226916100 Datum:

Soil Map Unit Name: Las Posas fine sandy loam, 9 to 15 % slopes, eroded NWI classification: R4SBA/Riverine

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:

Sampling point located in tamarisk scrub downslope of SP 5; a narrow channel connects these areas. Meets CDFW and County RPO wetland criteria. Does not meet USACE wetland criteria. One foot-wide non-wetland waters present.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 10' X 10')	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 10' X 10')			
1. Tamarix ramosissima	65	X	FAC
2. Baccharis sarothroides	10		FACU
3.			
4.			
5.			
	75 = Total Cover		
Herb Stratum (Plot size: 10' X 10')			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	0 = Total Cover		
Woody Vine Stratum (Plot size: 10' X 10')			
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: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A =

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:

Wetland vegetation present.

Photos 51-53.

SOIL

Sampling Point: 6

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 4/3	100	-	-	-	-	sndy loam	

[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:

Hydric soil absent.

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:

Wetland hydrology criterion not met -- no primary or secondary indicators present.

Appendix K

FINDINGS OF CONFORMANCE MULTIPLE SPECIES CONSERVATION PROGRAM

APPENDIX K

FINDINGS OF CONFORMANCE
MULTIPLE SPECIES CONSERVATION PROGRAM
March 2017
Sweetwater Vistas PDS2015-SPA-15-002

I. Introduction

The project as currently planned would include the development of a new master planned community consisting of 218 multi-family residential units and approximately 27.9 acres of biological open space. Under the previously approved Specific Plan, approximately 51.5 acres were disturbed leaving only 0.4 acre in open space. The residential development to occur on the 43.4-acre parcel west of Jamacha Boulevard would be divided into three planning areas (Lots 1, 2, and 3). The 8.6-acre parcel east of Jamacha Boulevard, herein referred to as the "eastern parcel" and "mitigation parcel," would be placed in biological open space. The project is anticipated to require a General Plan Amendment, Specific Plan Amendment, Rezone, MSCP Boundary Line Adjustment, Tentative Map, and Major Use Permit. The General Plan Amendment would update the Spring Valley Community Plan map and text. The proposed amendment would change the land use designation from Specific Plan to Village Residential and Open Space-Conservation (OS-C) and would delete language related to the "promised resort, restaurants, and businesses" in the text of the Spring Valley Community Plan. The Specific Plan Amendment would update The Pointe San Diego Specific Plan to delete language related to the resort.

The property that encompasses the approximately 51.9-acre project site is generally located north of Sweetwater Reservoir, south and west of State Route 94, and east of State Route 125 in the unincorporated community of Spring Valley in San Diego County, California (Figure 1). Specifically, the site is located southwest and southeast of the intersection of Jamacha Boulevard and Sweetwater Springs Boulevard (Figure 2). It is located within the San Diego land grant in unsectioned lands, of the U.S. Geological Survey (USGS) 7.5-minute Jamul Mountains quadrangle map (Figure 3). The project site is located on unincorporated lands within the South County and Metro-Lakeside-Jamul segments of the County's Multiple Species Conservation Program (MSCP) Subarea Plan. The site is part of a previously-approved Specific Plan known as The Pointe. The two types of designations found in the South County segment of the site are "Take Authorized" and "Preserved Lands", while the Metro-Lakeside-Jamul portion includes both "Pre-Approved Mitigation Area" (PAMA) and non-PAMA land. The project would include two modifications to the MSCP: a Boundary Line Adjustment to transfer the Metro-Lakeside-Jamul portion of the site into the South County Segment, and a Hardline Adjustment (Minor Amendment) to adjust the boundaries of the designations pursuant to the "like or equivalent exchange" guidelines for Preserve Boundary Adjustments within the MSCP Subregional Plan (August 1998).

The Pointe San Diego Final EIR, certified on August 1, 1990, identified significant and unmitigable impacts to several subject areas including biology. Biological resources were evaluated and reported by PSBS, WESTEC, and Michael Brandman Associates, Inc. (MBA) in multiple surveys conducted between 1978 and 1988. The Pointe project, which covered a larger area than the current Sweetwater Vistas project, was approved with mitigation included for all significant impacts and a Statement of Overriding Considerations was provided by the Board of Supervisors. The approved Pointe San Diego project included a much more aggressive development footprint than the current proposed project. The project would have impacted almost the entire project site, including all of Hansen's Creek and Little Hansen's Creek. Only a small area of open space was to be retained in the northwest corner of the site.

The updated Biological Technical Report (BTR) for this project, dated November 4, 2016, explains that the project was redesigned to change the use from resort to residential, while maintaining and exceeding the MSCP Preserve's biological functions and values and maintaining or improving upon the original MSCP impact footprint. The preserve design was enhanced while achieving 27.9 acres of biological open space to be designated Hardline Preserve, compared to the current MSCP designation of 5.1 acres of Hardline Preserve. The proposed Boundary Amendment would convert Take Authorized areas of the South County Segment to Preserve and would also preserve land in the Metro-Lakeside-Jamul Segment, resulting in a net gain of approximately 22.9 acres of habitat within the Preserve.

The findings contained within this document are based on County records, staff field site visits and the BTR prepared by Karl Osmundson of HELIX Environmental Planning Inc., dated March 2017. The information contained within these Findings is correct to the best of staff's knowledge at the time the findings were completed. Any subsequent environmental review completed due to changes in the proposed project or changes in circumstance shall need to have new findings completed based on the environmental conditions at that time.

The applicant also analyzed a Project Alternative that would reduce lot 2 on the north side. Although the alternative would slightly improve habitat connectivity and slightly reduce habitat impacts and Hardline Take, there are no significant impacts of the proposed project that would be reduced to less than significant by the alternative. After reviewing the project documents, visiting the site, and discussing the project in multiple meetings, the Wildlife Agencies provided their support of the proposed project on November 30, 2016. The proposed project was selected over the project alternative because it provides additional coastal sage scrub restoration and land being placed into conservation and management; it substantially improves upon the historic approved development footprint on the project site for The Pointe San Diego; and the open space primarily is expected to function for local movement by the coastal California gnatcatcher. Therefore, the alternative is no longer under consideration.

Proposed Finding: The project has been found to conform to the County's Multiple Species Conservation Program (MSCP) Subarea Plan and the Implementation

Agreement between the County of San Diego, the CA Department of Fish and Game and the US Fish and Wildlife Service. Third Party Beneficiary Status and the associated take authorization for incidental impacts to sensitive species (pursuant to the County's Section 10 Permit under the Endangered Species Act) shall be conveyed only after the project has been approved by the County, these Findings are adopted by the hearing body and all MSCP-related conditions placed on the project have been satisfied.

II. Section 5.4.2 of the MSCP Subregional Plan - Subarea Plan Amendments and Preserve Boundary Adjustment Process

Amendments to subarea plans may occur according to the amendment process specified in subarea plans and/or their implementing agreements. Amendments to subarea plans will be included in annual reports to the wildlife agencies and in MSCP status reports, prepared every 3 years.

Adjustments to Boundaries of the Subarea Plan Preserve – "Like or Equivalent" Exchange Concept

Adjustments to the MSCP boundaries and/or approved Subarea Plan Preserve Boundaries may be desirable under some circumstances. For example:

- New biological information is obtained through site-specific studies;
- Unforeseen engineering design opportunities or constraints may be identified during the siting or design of projects that require modification of the Preserve Boundary; and/or
- A landowner may request that a portion or all of his property be included within the Preserve Boundary.

The existing MSCP designations for the site were generally based on the approved Pointe project, and covered almost the entire 51.9-acre project site, leaving only a small 5.1-acre preserve on the west side. Based on the new project description of residential rather than resort use, there are unforeseen design opportunities to greatly expand the Preserve boundary across the site; however, this improved design does require redesignating 2.1 acres of preserve to Take Authorized. New biological information obtained through the site-specific BTR shows that the southern end of the preserve area, where take is proposed, supports comparatively lower quality habitat based on the history of disturbance and prevalence of non-native species, while the areas proposed for addition to the preserve support both a higher quality and greater quantity of Coastal Sage Scrub and other habitats, This new biological information, combined with unforeseen design opportunities, makes the proposed adjustment desirable.

Adjustments to the MSCP and/or Preserve Boundaries can be made without the need to amend the MSCP Plan or subarea plan if the adjustment will result in the same or higher biological value of the Preserve. The determination of biological value of the

proposed change is made by the local jurisdiction and must have the concurrence of the wildlife agencies. No amendment of the subarea plan is needed for an approved equivalent exchange. Tables 1 and 2 provide a quantitative summary of the proposed changes to the Preserve.

Table 1. Like or Equivalent Quantitative Analysis for Habitats

	Existing Habitat (both segments)	Existing Hardline	Removed from Preserve (Hardline Take)	Added to Preserve (Hardline Give)	Net Change
Tier I					
Arundo-dominated Riparian (65100)	0.49	0	--	0.49	0.49
Cismontane Alkali Marsh (52300)	1.17	0	--	1.17	1.17
Disturbed Wetland (11200)	0.02	0	--	0.02	0.02**
Freshwater Marsh (52400)	0.02	0	--	0.02	0.02
Mule Fat Scrub (63310)	0.33	0	--	0.33	0.33
Non-native Riparian (65000)	0.32	0	--	0.31	0.31**
Southern Willow Scrub (63320)	3.76	0	--	3.75	3.75
Tamarisk Scrub (63810)[2]	0.41	0.02	--	0.21	0.21**
Tier II					
Diegan coastal sage scrub (32500)	25.5	2.5	0.2	9.7	9.5
Diegan coastal sage scrub - disturbed (32500)	2.1	1.8	1.5	0.2	-1.3
Tier III					
Non-native grassland (42200)	3.6	0	--	2.7	2.7**
Tier IV					
Disturbed Habitat (11300)	9.1	0.1	0.1	3.7	3.6**
Eucalyptus Woodland (79100)	0.7	0	--	0.6	0.6**
Non-native Vegetation (11000)	3	0.2	--	1.8	1.8**
N/A					
Urban/Developed (12000)	1.3	0.4	0.3		-0.3
TOTAL	**51.9**	**5.0**	**2.1**	**25.1**	**22.9**

[1] Upland communities/habitat types are rounded to the nearest 0.1 acre, while wetland communities are rounded to the nearest 0.01; totals do not reflect rounding.

[2] Tamarisk scrub at this location is within an upland landscape position and not associated with a streambed, riparian habitat, or wetlands.

* This stand of southern willow scrub supports wetland conditions and provides superior functions and values compared to the disturbed wetland proposed for Hardline Take.

** Area is identified as candidate for potential restoration to demonstrate equivalent or superior preservation.

Table 2. Like or Equivalent Analysis for Species

Sensitive Species	Status	Occurs in Preserve?	Added to the Preserve	Removed from the Preserve	Net Change in Preserve
California gnatcatcher	Listed	Yes	Yes	Yes	Better
Least Bell's vireo	Listed	No	Yes	No	Better
Cooper's hawk	Group 1	Foraging	Yes	Yes	Better
Yellow warbler	Group 1	No	Yes	No	Better
Turkey vulture	Group 1	Foraging	Yes	Yes	Better
Northern harrier	Group 1	Foraging	Yes	Yes	Better
Red-shouldered hawk	Group 1	Foraging	Yes	Yes	Better
Monarch butterfly	Group 2	Possible	Yes	Yes	Better
Southwestern spiny rush	List D	Yes	2 locations	1 location	Better
Graceful tarplant	List D	No	No	No	Same
Munz's sage	List B	Yes	No	No	Same
San Diego County sunflower	List D	Yes	Yes	No	Better
San Diego marsh-elder	List B	No	Yes	No	Better
Ashy spike-moss	List D	Yes	No	No	Same

III. Like or Equivalent Exchange Analysis

The comparison of biological value will be based on the following biological factors:

1. **Effects on significantly and sufficiently conserved habitats (i.e., the exchange maintains or improves the conservation, configuration, or status of significantly or sufficiently conserved habitats, as defined in Section 4.2.4);**

   Coastal sage scrub, disturbed wetland, freshwater marsh, riparian scrub are all sufficiently or significantly conserved habitats according to Section 4.2.4. The proposed adjustment improves the conservation and configuration of these habitats. The original Preserve as established under the previous approvals was 5.1 acres on this site. The proposed adjustment would convert 2.1 acres to Take Authorized, but add 25.1 acres, resulting in an effective gain of approximately 22.9 acres of habitat within the Preserved Lands. There would be a net loss of 1.3 acres of disturbed CSS, but a net gain of 9.5 acres of intact CSS (8.2 net gain for combined CSS). Every other sensitive habitat type would have net gains: 0.49 acre of arundo-dominated riparian, 1.17 acres of cismontane alkali marsh, 0.02 acre of disturbed wetland, 0.02 acre of freshwater marsh, 0.33 acre of mule fat scrub, 0.31 acre of non-native riparian, 3.75 acres of southern willow scrub, 0.21 acre of tamarisk scrub, and 2.7 acres of non-native grassland. Furthermore, the proposed project would accomplish the following:

   - Better preserve design by targeting higher-quality and occupied habitat
   - Preserve to be managed with RMP
   - Preserve to be protected by open space fencing and signage
   - Provides a wildlife corridor through the site
   - More consolidated project footprint
   - Restoration of 3.7 acres of Tier IV habitat to additional CSS (net preservation gain of 8.2 plus restoration of 3.7 means net gain of 11.0 acres).
   - Enhancement of 0.4 acre of disturbed CSS adjacent to the expected gnatcatcher movement route

2. **Effects to covered species (i.e., the exchange maintains or increases the conservation of covered species);**

   As shown in Table 2 above, the boundary adjustment would increase preservation of habitat for California gnatcatcher, least Bell's vireo, Cooper's hawk, yellow warbler, turkey vulture, northern harrier, red-shouldered hawk, and monarch butterfly. California gnatcatcher in particular would benefit from the boundary adjustment by adding 9.7 acres of intact coastal sage scrub to the preserve (and 0.2 of disturbed CSS) and restoring and enhancing another 4.1 acres, while taking only 0.2 acre of intact CSS (and 1.5 of disturbed CSS). The project would provide an open space corridor through the site, facilitating east-west movement that is not provided by the current Preserve footprint. The high quality CSS that supports a

breeding gnatcatcher pair in the northwestern portion of the site would be retained and slightly expanded to the north, while the proposed road and homes on Lot 1 would be located at a lower elevation to provide separation between development and open space.

The adjustment would increase preservation of known locations of southwestern spiny rush, San Diego County sunflower, and San Diego marsh-elder. Conservation of graceful tarplant, Munz's sage, and ashy spike-moss would be maintained and would not be affected by the adjustment.

3. Effects on habitat linkages and function of preserve areas (i.e., the exchange maintains or improves a habitat linkage or wildlife corridor);

The proposed adjustment will improve the function of the preserve through this area by improving habitat connectivity across the site, thereby improving wildlife movement, interbreeding and dispersal between Dictionary Hill and the Sweetwater River. The adjustment would also improve access from the current preserve area to the water sources in Hansen's Creek and Little Hansen's Creek. The existing preserve area is located on the far western side of the project site, with no connection to the east side of the site. Under current designations there is a gap of about 970 feet between the edge of the preserve on the western parcel and the edge of PAMA designation on the eastern parcel. Measuring from edge of preserve to the edge of preserve to the east, the gap is over 1400 feet.

The proposed project would create a continuous open space connection all the way across the site, interrupted only by two roadways: existing Jamacha Boulevard and proposed Avenida Bosque. The Design Criteria for Linkages and Corridors (Attachment H) specify, "If the minimum width of a corridor is 400 feet, it should be no longer than 500 feet." Although the distance between structures of Lots 1 and 2 would be only 250 feet at their closest point, this is not a continuous corridor width but only a pinch point, with the linkage widening immediately on either side. The portion of the linkage that's less than 400 feet between structures is only about 200 feet long, well below the 500 foot length guideline in the design criteria. The proposed open space widens to over 1,250 feet at Jamacha Boulevard. See sections 1.4.12, 2.4, and 6.2 of the BTR for further discussion of wildlife movement, corridors and habitat connectivity. The proposed open space corridor of up to 1,250 feet in width would maintain the function of the existing constrained wildlife linkage, and represents a dramatic improvement over the existing discontinuous Preserve designation.

4. Effects on preserve configuration and management (i.e., the exchange results in similar or improved management efficiency and/or protection for biological resources);

The overall preserve configuration proposed with this boundary adjustment is biologically superior to the current design. The area to be removed from Hardline

Preserve was disturbed by previous grading such that it supports a significant proportion of non-native species and would require significant effort to restore its habitat value. The areas to be added include more intact coastal sage scrub that would require less intervention by a habitat manager. The proposed Preserve is larger, and thus includes more edge than the existing preserve; however, the increased size of the preserve significantly increases its protection of biological resources. The applicant will be responsible for management and monitoring of the site to protect its biological value in perpetuity by preparing a Resource Management Plan, establishing a funding mechanism, and engaging a Habitat Manager.

5. **Effects on ecotones or other conditions affecting species diversity (i.e., the exchange maintains topographic and structural diversity and habitat interfaces of the preserve);**

   The exchange will improve topographic diversity by adding areas of natural slope extending from the current preserve area down to the two creek bottoms, with the slopes on either side, while the area to be removed was previously graded to a flat pad and graded slope. The areas to be added likewise include not only the scrub habitat currently included in the preserve, but grassland and riparian habitats too. This promotes species diversity, since the areas to be added support additional species such as least Bell's vireo and yellow warbler that are not found in the current preserve area.

6. **Effects to species of concern not on the covered species list (i.e., the exchange does not significantly increase the likelihood that an uncovered species will meet the criteria for listing under either federal or state Endangered Species Acts).**

   The project site supports several species that are not on the covered species list: Yellow warbler, Turkey vulture, Red-shouldered hawk, Monarch butterfly, Southwestern spiny rush, Graceful tarplant, Munz's sage, San Diego County sunflower, San Diego marsh-elder, and Ashy spike-moss. As discussed above, the exchange would increase increase preservation of habitat for yellow warbler, turkey vulture, red-shouldered hawk, and monarch butterfly, as well as known locations of southwestern spiny rush, San Diego County sunflower, and San Diego marsh-elder. Conservation of graceful tarplant, Munz's sage, and ashy spike-moss would be maintained and would not be affected by the adjustment. Therefore, there would be no new adverse impacts to uncovered species and no potential conflicts with federal or state species regulations.

Based on the above findings, the project is consistent with the MSCP Subregional and Subarea Plans; and the proposed boundary adjustment will have an overall net benefit to the MSCP Preserve System.

Appendix L

SWEETWATER VISTAS PROJECT CONCEPTUAL COASTAL SAGE SCRUB RESTORATION AND ENHANCEMENT PLAN

HELIX
Environmental Planning

Sweetwater Vistas Project

Conceptual Coastal Sage Scrub Restoration and Enhancement Plan

PDS2015-SPA-15-002

March 6, 2017

Larry Sward
County Approved Revegetation Consultant
County Approved Biological Consultant

Prepared for:
Sweetwater Vistas, LLC
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Prepared by:
HELIX Environmental Planning, Inc.
7578 El Cajon Boulevard
La Mesa, CA 91942

Sweetwater Vistas
Conceptual Coastal Sage Scrub Restoration and Enhancement Plan

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LIST OF ABBREVIATIONS

AMSL	above mean sea level
Cal-IPC	California Invasive Plant Council
DCSS	Diegan coastal sage scrub
GPS	global positioning system
HELIX	HELIX Environmental Planning, Inc.
LLC	limited liability corporation
MSCP	Multiple Species Conservation Program
NRCS	Natural Resource Conservation Service
POC	Point of Connection
USGS	U.S. Geological Survey

1.0 INTRODUCTION

This report presents a restoration plan for impacts to the sensitive upland habitat type, Diegan coastal sage scrub (DCSS), as a result of the Sweetwater Vistas Project (project) located in the unincorporated community of Spring Valley, San Diego County, California. Included in this document are an implementation plan, maintenance plan, and monitoring plan for on-site restoration of approximately 3.7 acres and enhancement of approximately 0.4 acre of DCSS.

The goal of the overall project is to fully compensate project impacts to DCSS and contribute additional native habitat to the on-site biological open space for the project, which is referred to herein as the preserve. The expanded habitat is expected to approach the function and value of similar coastal sage scrub habitat in the local area within 5 years. Nomenclature used in this report follows Oberbauer (2008) for vegetation communities, Baldwin (2012) for plants, and American Ornithologists' Union (2008) for birds.

2.0 PROJECT DESCRIPTION

2.1 RESPONSIBLE PARTY

Sweetwater Vistas LLC will be responsible for financing the installation and 5-year maintenance and monitoring of the habitat restoration proposed in this plan. Contact information is provided below:

Contact: Terry Plowden
Sweetwater Vistas LLC
1620 Fifth Ave., Suite 400
San Diego, CA 92101
(619) 906-4352
tplowden@douglaswilson.com

2.2 PROJECT LOCATION

The 51.9-acre project site is generally located north of Sweetwater Reservoir, south and west of State Route 94, and east of State Route 125 in the unincorporated community of Spring Valley in San Diego County, California (Figure 1). Specifically, the site is located southwest and southeast of the intersection of Jamacha Boulevard and Sweetwater Springs Boulevard (Figure 2). It is located within the San Diego land grant in unsectioned lands of the U.S. Geological Survey (USGS) 7.5-minute Jamul Mountains quadrangle map (Figure 3). The site is situated within the South County and Metro-Lakeside-Jamul segments of the County of San Diego (County)'s Multiple Species Conservation Program (MSCP) Subarea Plan. The restoration and enhancement areas are located in the western portion of the project site.

2.3 PROJECT SUMMARY

The proposed project would develop 23.1 acres and place the remaining 27.9 acres into biological open space. The proposed residential development would occur on the 43.4-acre

parcel west of Jamacha Boulevard and be divided into three planning areas (Lots 1, 2, and 3). The 8.6-acre parcel east of Jamacha Boulevard would be placed in biological open space. This plan provides for 3.7 acres of DCSS restoration in areas that are currently disturbed or support non-native species or will be graded by the project, and 0.4 acre of DCSS enhancement. The restoration would be done by removing non-native plants, installing temporary irrigation, planting container stock, and seeding with native DCSS species.

2.3.1 Current Environmental Setting and Site Conditions

The project site contains mostly undeveloped land with varied topography, made up of hilly terrain with steep slopes rising upward from Hansen's Creek (west of Jamacha Boulevard), and gradual slopes rising upward from Little Hansen's Creek (east of Jamacha Boulevard). Elevations range from approximately 320 feet (98 meters) above mean sea level (amsl) to 540 feet (165 meters) amsl, with the lowest elevation occurring in Hansen's Creek and the highest elevation in the northwest corner. Elevation generally increases from east to west on the parcel west of Jamacha Boulevard and from west to east on the parcel east of Jamacha Boulevard. Hansen's Creek and Little Hansen's Creek converge off site to the south of the project site and drain southward, before discharging into Sweetwater River and Sweetwater Reservoir.

Seven soil types have been mapped in the project site (Natural Resource Conservation Service [NRCS] 2015; Figure 4). Those soils types covering the most area included: Las Posas fine sandy loam, 9 to 15 percent slopes, eroded; Diablo clay, 9 to 15 percent slopes; and Linne clay loam, 9 to 30 percent slopes. Less common in the project site were Diablo clay, 15 to 30 percent slopes; Friant rocky fine sandy loam, 30 to 70 percent slopes; San Miguel-Exchequer rocky silt loams, 9 to 70 percent slopes; and Diablo-Urban land complex, 15 to 50 percent slopes. The majority of the surface soils on the site west of Jamacha Boulevard appear to have been subject to previous grading and filling disturbance.

2.3.2 Vegetation Communities

Fourteen vegetation communities/habitat types occur in the project site, as presented in Table 1 and shown on Figure 5.

Table 1
EXISTING VEGETATION COMMUNITIES[1]

VEGETATION COMMUNITY	TIER LEVEL	ACREAGE
Disturbed wetland (11200)	I	0.02
Cismontane alkali marsh (52310)	I	1.17
Freshwater marsh (52400)	I	0.02
Mule fat scrub (63310)	I	0.33
Southern willow scrub (63320)	I	3.76



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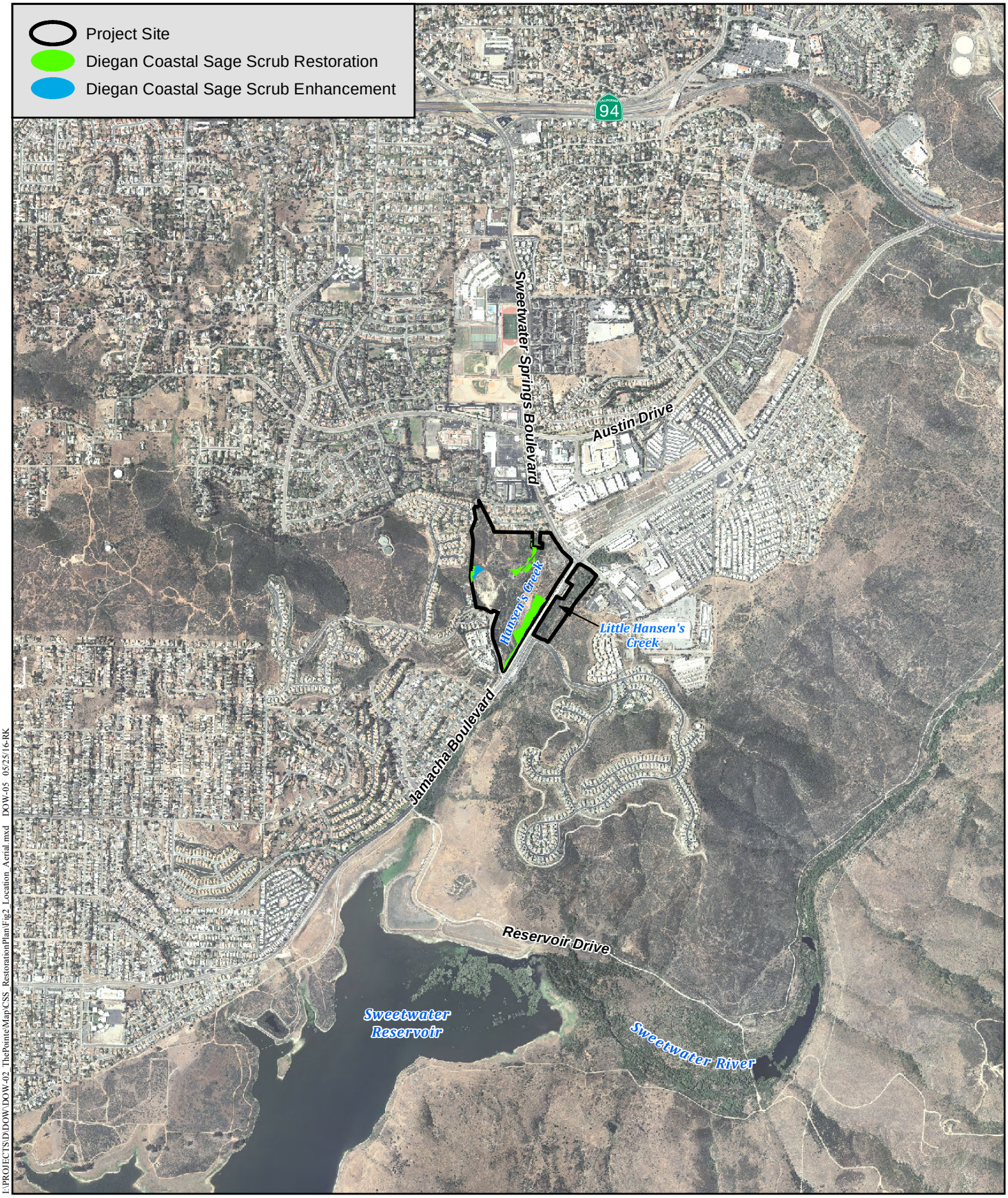
Regional Location Map

SWEETWATER VISTAS

HELIX Environmental Planning

N 0 8 Miles

Figure 1



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Project Vicinity Map (Aerial Photograph)

SWEETWATER VISTAS

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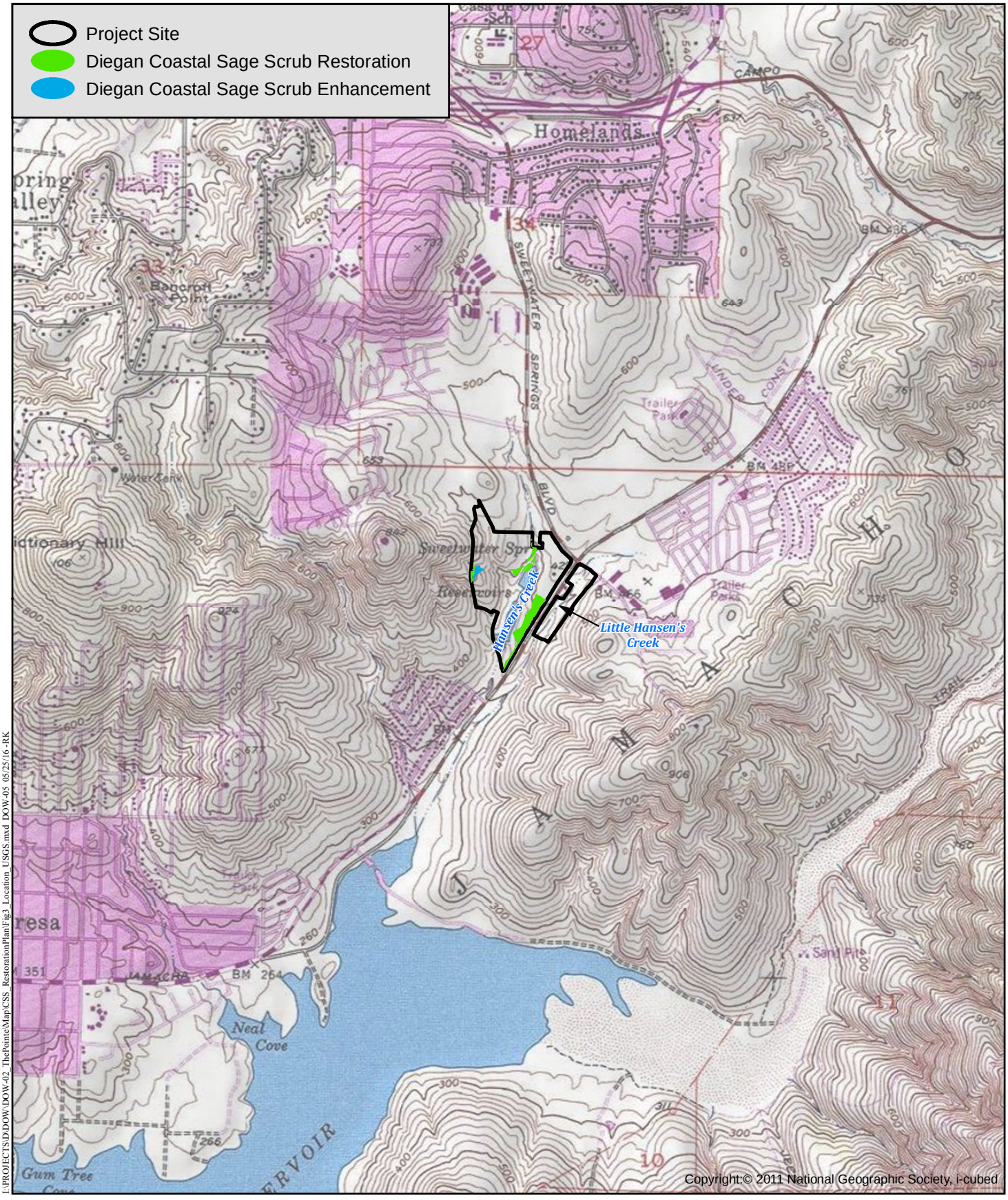
Figure 2



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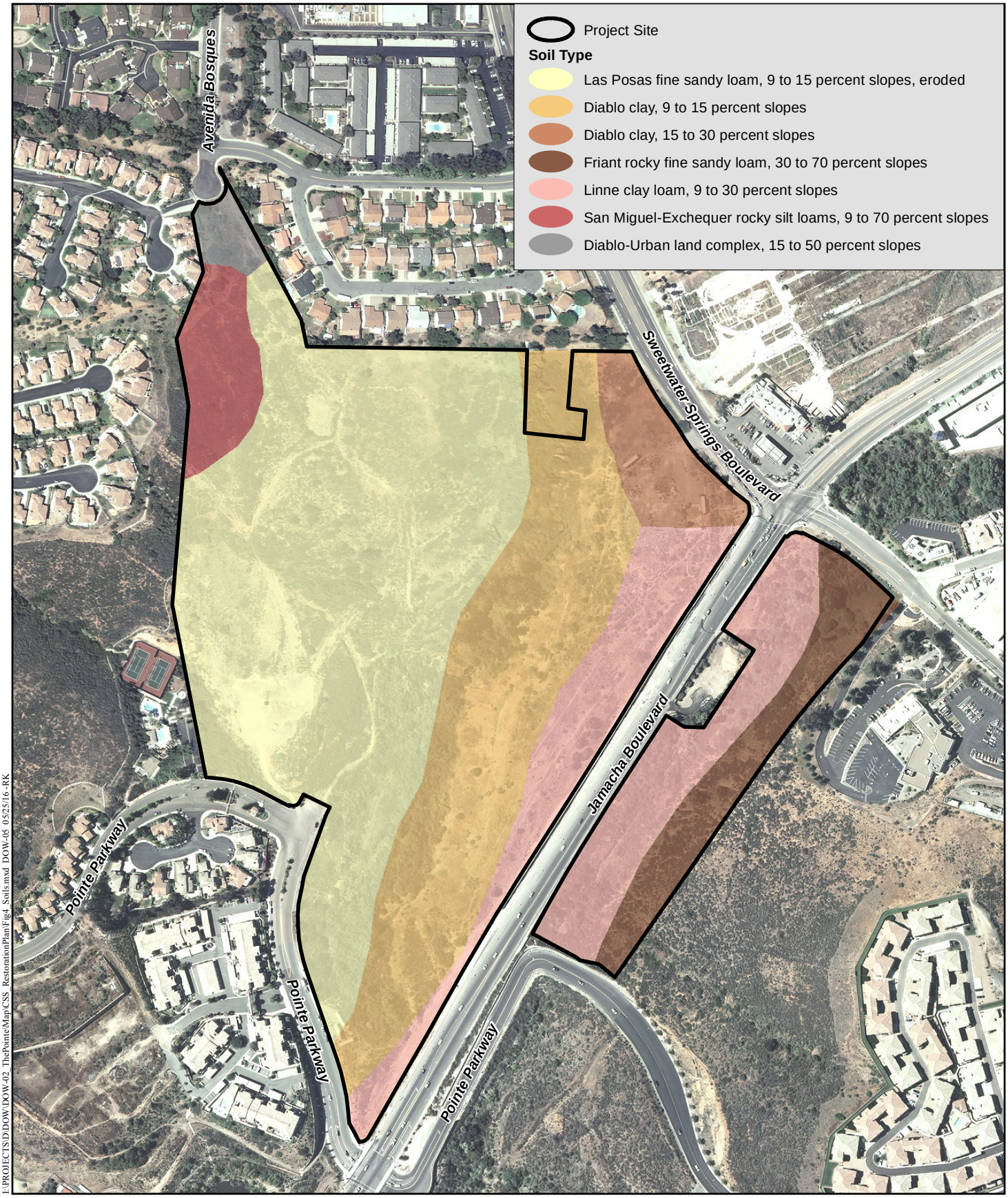
Project Vicinity Map (USGS Topography)

SWEETWATER VISTAS

HELIX Environmental Planning

N 0 2,000 Feet

Figure 3



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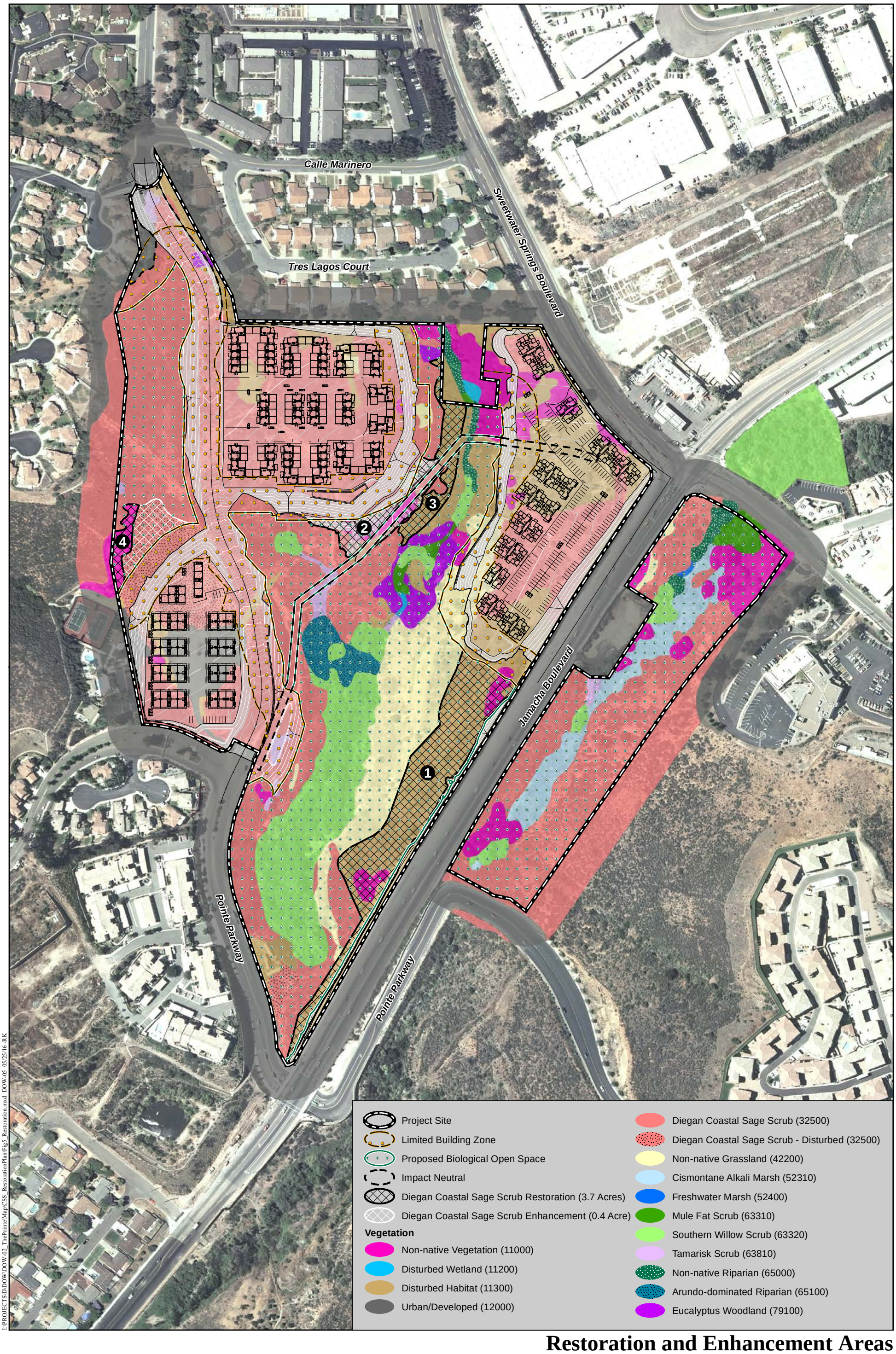
Soils Map

SWEETWATER VISTAS

HELIX Environmental Planning

Figure 4



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Restoration and Enhancement Areas

SWEETWATER VISTAS

HELIX Environmental Planning

N 0 250 Feet

Figure 5

Table 1 (cont.)
EXISTING VEGETATION COMMUNITIES[1]

VEGETATION COMMUNITY	TIER LEVEL	ACREAGE
Arundo-dominated riparian (65100)	I	0.49
Diegan coastal sage scrub (32500), including disturbed	II	25.7
Non-native grassland (42200)	III	3.6
Disturbed habitat (11300)	IV	9.2
Eucalyptus woodland (79100)	IV	0.7
Non-native vegetation (11000)	IV	3
Urban/developed (12000)	N/A	1.3
TOTAL		**51.9**

[1] Upland communities/habitat types are rounded to the nearest 0.1 acre, while wetland communities are rounded to the nearest 0.01; totals do not reflect rounding.

[2] Portions of the tamarisk scrub are within an upland landscape position and not associated with a streambed, riparian habitat, or wetlands. Those portions are considered Tier IV not Tier I.

2.3.3 Wildlife

A total of 82 animal species were observed or otherwise detected in the project site during the biological surveys, including 20 invertebrate, 3 reptile, 54 bird, and 5 mammal species (HELIX 2016a).

2.3.4 Sensitive Species

Six special status plant species were observed in the project site: ashy spike-moss (*Selaginella cinerascens*), graceful tarplant (*Holocarpha virgata* ssp. *elongata*), Munz's sage (*Salvia munzii*), San Diego County sunflower (*Bahiopsis laciniata*), San Diego marsh-elder (*Iva hayesiana*), and southwestern spiny rush (*Juncus acutus* ssp. *leopoldii*). Four special status animal (bird) species were determined to be breeding on the project site during 2015 surveys: coastal California gnatcatcher (*Polioptila californica californica*), Cooper's hawk (*Accipiter cooperi*), least Bell's vireo (*Vireo bellii pusillus*), and yellow warbler (*Setophaga petechia*) (HELIX 2016a).

2.3.5 Sensitive Resources Affected

The project would permanently impact 15.7 acres of sensitive upland vegetation communities, including 14.9 acres of DCSS and 0.9 acre of non-native grassland (Table 2; HELIX 2016a).

Table 2
IMPACTS TO VEGETATION COMMUNITIES[1]

VEGETATION COMMUNITY	TIER LEVEL	PROJECT SITE EXISTING	TOTAL IMPACTS
Disturbed wetland (11200)	I	0.02	0
Cismontane alkali marsh (52310)	I	1.17	0
Freshwater marsh (52400)	I	0.02	0
Mule fat scrub (63310)	I	0.33	0
Southern willow scrub (63320)	I	3.76	0
Tamarisk scrub (63810)[2]	I	0.41	0.132
Non-native riparian (65000)	I	0.32	0
Arundo-dominated riparian (65100)	I	0.49	0
Diegan coastal sage scrub (32500), including disturbed	II	25.7	14.9
Non-native grassland (42200)	III	3.6	0.9
Disturbed habitat (11300)	IV	9.2	5
Eucalyptus woodland (79100)	IV	0.7	0.1
Non-native vegetation (11000)	IV	3	1.1
Urban/developed (12000)	N/A	1.3	1.4
	TOTAL	**51.9**	**23.4**

[1] Upland communities/habitat types are rounded to the nearest 0.1 acre, while wetland communities are rounded to the nearest 0.01; totals do not reflect rounding.

[2] Impacts to tamarisk scrub at this location are within an upland landscape position and not associated with a streambed, riparian habitat, or wetlands. They are therefore considered Tier IV impacts not Tier I impacts.

Restoration and enhancement of DCSS are addressed in this mitigation plan. Mitigation for impacts to jurisdictional waters is being achieved by on and/or off-site methods not intended to be addressed in this plan. Non-native grassland and raptor foraging mitigation will be provided through on-site preservation, with no restoration component.

The project would impact several individuals of Munz's sage, San Diego sunflower, and southwestern spiny rush. These impacts are less than significant; however, both Munz's sage and San Diego sunflower are included in the planting palette.

Project impacts to coastal California gnatcatcher are significant and will mitigated partly through habitat-based mitigation, including this restoration plan. Significant impacts to other sensitive bird species could occur during the breeding season; mitigation will occur through breeding season avoidance and not through habitat restoration.

2.3.6 Types, Functions, and Values of Habitat to be Restored

Restoration will occur in areas of disturbed habitat and non-native vegetation. Disturbed habitat in the project site includes unvegetated areas such as dirt roads and rock piles, in addition to areas of disturbed land vegetated by non-native forbs such as star-thistle (*Centaurea melitensis*)

and garland daisy (*Glebionis coronaria*). Non-native vegetation on the project site consists primarily of acacia, with lesser coverage by hottentot-fig (*Carpobrotus* sp.). Non-native vegetation in the western restoration area consists of a steep graded slope planted with fountain grass. These areas provide marginal habitat for birds and small mammals.

The restoration area also includes 0.5 acre of proposed fill slope in an area that currently supports DCSS, non-native grassland, and non-native vegetation. The habitat within this area was counted as impacted by the project; however, following restoration it will become part of the biological open space.

Enhancement will occur in an area of heavily disturbed DCSS dominated by broom baccharis and fountain grass, located just south of the expected wildlife movement path onto the site. Gnatcatchers can pass through or forage briefly in this area, but are expected to spend most of their time in the higher quality DCSS to the north.

3.0 GOALS OF COMPENSATORY MITIGATION

The goal of the restoration plan is to replace functions and services associated with the DCSS lost as a result of the proposed project, and enhance the function of the disturbed DCSS along the wildlife movement path.

3.1 RESPONSIBILITIES

3.1.1 Project Proponent

Sweetwater Vistas LLC will be responsible for financing the installation, maintenance, and monitoring of the mitigation effort. The responsible party may change with the sale of the property. Ultimately, the biological open space may be transferred in fee title (subject to County approval) to a public or private entity specializing in long-term management of open space. If such a transfer were to occur prior to sign off by the County, this entity would become responsible for the maintenance program.

3.1.2 County of San Diego

As part of the monitoring program, annual reports prepared by the restoration specialist will be submitted to the County for review, in addition to the U.S. Fish and Wildlife Service (USFWS) and California Department of Fish and Wildlife (CDFW), collectively referred to herein as the Wildlife Agencies. The County will review these reports for completeness and can participate in annual site inspections and determine the success of the mitigation effort.

3.1.3 Compensatory Mitigation Project Designer

A licensed landscape architect will prepare any necessary construction documents, including irrigation and planting plans. This person will inspect the irrigation system prior to seeding and planting to help assure complete coverage of the restoration area while minimizing runoff into the adjacent habitat.

3.1.4 Installation Contractor

The installation contractor will have at least 5 years of experience in successful native upland habitat restoration in Southern California and be under the direction of the restoration specialist, who will assist the contractor with the installation of the target vegetation type. Different contractors may be used for the installation and maintenance phases of the upland restoration effort, or they may be the same entity. The project proponent may change contractors at its discretion, as long as the contractor has the required level of experience, as stated above. Installation would include but not be limited to removing non-native plants, decompacting soil if needed, installing container plants, seeds, and irrigation lines. Project grading will be done be a separate contractor before the restoration installation starts.

3.1.5 Restoration Specialist

Overall supervision of the installation, maintenance, and monitoring of this restoration effort will be the responsibility of a qualified restoration specialist with at least 5 years of experience with successful native upland habitat restoration in Southern California. The restoration specialist will oversee the efforts of the installation and maintenance contractor for the duration of the restoration effort. Specific tasks of the restoration specialist include educating all participants with regard to mitigation goals and requirements, as well as directly overseeing fencing, planting, seeding, weeding, and other maintenance activities. The restoration specialist will explain to the contractor how to avoid impacts to existing sensitive habitat and sensitive species. When necessary, the restoration specialist will provide the project proponent and contractor with a written monitoring memo, including a list of items in need of attention. The restoration specialist also will conduct annual assessments of the restoration effort and prepare and submit an annual report to the County each year during the 5-year maintenance and monitoring period.

3.1.6 Maintenance Contractor

The maintenance contractor will have at least 5 years of experience in successful native upland habitat restoration in Southern California and be under the direction of the restoration specialist, who will assist the contractor with the maintenance of the target vegetation type. Different contractors may be used for the installation and maintenance phases of the upland restoration effort, or they may be the same entity. The project proponent may change contractors at its discretion, as long as the contractor has the required level of experience, as stated above. The contractor will service the entire restoration and enhancement area as required, meet the restoration specialist at the site when requested, and perform all checklist items in a timely manner as directed by the project proponent. The maintenance contractor will be knowledgeable regarding the maintenance of native habitat and the difference between native and non-native plants. Maintenance would include but not be limited to non-native plant species control, trash removal, irrigation, and potentially re-seeding and/or re-planting. All maintenance activities would be seasonally appropriate and approved by the restoration specialist.

4.0 TYPES AND AREAS OF HABITAT TO BE ESTABLISHED

The project must mitigate for impacts to 14.9 acres of DCSS with Tier II or better habitat at a 1.5:1 ratio, which is 22.4 acres. The Resolution of Approval including applicable conditions of approval will be attached to the Final Revegetation Plan submitted after discretionary approval and prior to grading permit issuance. The project will provide 22.4 acres by preserving 12.3 acres of DCSS and 6.4 acres of Tier I habitat, and restoring (establishing) an additional 3.7 acres of DCSS. The project will also enhance 0.4 acre of disturbed DCSS by removing existing fountain grass and other non-native species, and restoring it with the same DCSS plant palettes as the restoration area (Table 3). The plant palette includes Munz's sage and San Diego sunflower because these species occur within the impact area; however, this is not mitigation since the project's impacts to these species are less than significant. The enhancement area will not count toward the required mitigation but is being provided to enhance the value of the on-site open space both for gnatcatcher movement and live-in habitat.

4.1 FUNCTIONS AND VALUES

The goal of the proposed mitigation effort is to establish DCSS habitat with the same or greater functions and values (e.g., habitat for wildlife) as the impacted DCSS. Fewer, and often different, wildlife species tend to use areas dominated by non-native vegetation, and native habitat restoration will increase the value of these areas to native flora and fauna, including providing cover for wildlife movement and foraging and nesting habitat for the coastal California gnatcatcher. At the end of 5 years of maintenance and monitoring, the habitat is expected to replace the habitat functions and values lost from project implementation and to continue on the trajectory toward developing functions and values of adjacent native DCSS habitat without further active management. However, once the success criteria have been met, this area will be managed in perpetuity, along with the rest of the preserve.

4.2 TIME LAPSE

Restoration installation should occur during the fall of the year in which project grading is initiated. Compensatory mitigation success is expected by the end of the 5-year monitoring period, with interim success criteria each year.

4.3 COST

A complete itemized cost estimate will be included in the Final Revegetation Plan submitted after discretionary approval and prior to grading permit issuance.

5.0 DESCRIPTION OF THE PROPOSED COMPENSATORY MITIGATION SITE

5.1 SITE SELECTION

As depicted on Figure 5, the selected restoration sites are located at four locations within the project's biological open space: (1) immediately west of Jamacha Boulevard south of Lot 3; (2)

on the graded slope southeast of Lot 1; (3) in the adjacent disturbed area just west of Hansen's Creek; and (4) on the steep graded slope on the western project boundary north of Lot 2. Enhancement will occur in the disturbed DCSS north of Lot 2 (Figure 5).

The project site and immediate vicinity likely supported DCSS prior to the present day disturbances and developments. The soil types and landscape characteristics are similar to those in the immediate area that also support DCSS. Soil testing and supplements may be required in areas where the native soil has been displaced by past grading. These areas are part of a larger contiguous block of open space that currently supports sensitive species, including coastal California gnatcatcher and Munz's sage. Selecting a few large restoration areas rather than a larger number of smaller areas makes the installation and maintenance more efficient and minimizes the need to cross through the open space in between restoration areas. The areas selected are adjacent to residential pads, which allows for easier water connection for the temporary irrigation system. Restoring DCSS right along Jamacha Boulevard facilitates gnatcatcher movement across the road by; reducing the distance between existing stands of good quality habitat and establishing habitat at topographic high spots along likely sight lines and movement avenues. The restoration and enhancement areas north of Lot 2 were also selected to enhance conditions for gnatcatcher movement through that area. The restoration areas will be easily accessible for maintenance and monitoring activities, but will not be accessible to vehicular traffic or readily accessible to pedestrians.

5.2 LOCATION AND SIZE OF COMPENSATORY MITIGATION SITE

The restoration and enhancement sites are located on site, between approximately 32.7210 and 32.7265 north latitude and between -116.9705 and -116.9742 west longitude. The restoration sites total 3.7 acres and the enhancement site totals 0.4 acre in size.

5.3 FUNCTIONS AND VALUES

The areas proposed for restoration are disturbed areas dominated by non-native species as well as bare ground. The disturbed DCSS area to be restored is similar but does support a few native plants, notably broom baccharis. The functions and values of these areas include very limited wildlife habitat. Percent cover by native/non-native species was not calculated for these areas; however, areas mapped as disturbed habitat generally had very little vegetative cover, and the vegetation present was dominated by non-native forbs. Areas mapped as non-native vegetation included stands of non-native trees and shrubs, with little or no native cover.

5.4 PRESENT AND PROPOSED USES

The project site is currently undeveloped. Much of the project site west of Jamacha Boulevard has been subjected to past human disturbance, including previous clearing and grading, which has resulted in some areas now supporting disturbed habitat, non-native grassland, and other non-native vegetation communities. Surrounding land uses generally include residential development to the north and south, residential development and undeveloped lands in MSCP hardline preserve to the west, and a combination of undeveloped land, and commercial and residential development to the east. Sweetwater Reservoir is located approximately one-half mile south of the site.

Following successful habitat restoration and sign off by the County, the on-site restored and enhanced habitat will be added to the approximately 27.9-acre newly established biological open space on the site and will be managed over the long term by a habitat manager according to the Sweetwater Vistas Resource Management Plan (HELIX 2016b). The biological open space will also be added to the MSCP South County Segment Hardline Preserve through an MSCP Boundary Adjustment. The site will also include 23.1 acres of new master planned community consisting of 243 multi-family residential units split into three separate lots.

No fencing will be installed along restoration boundaries; however, fencing will be installed on the edges of the residential pads to keep people out of the biological open space. Open space signs will be installed between the fuel modification zone and the biological open space to ensure that fuel modification does not encroach on the biological open space, including the restoration areas. Fuel modification zones will be planted with native species.

Restoration areas are expected to be accessed be via three routes. Two of the access routes will be off of Pointe Parkway, and the third will be off of Jamacha Boulevard.

5.5 REFERENCE SITE

Reference site(s) to be used for the proposed restoration effort will be determined prior to finalizing this plan. A biological survey of the reference site, including percent cover by native species, percent cover by weeds, percent cover by target invasive species, and species diversity, will be conducted for the Final Revegetation Plan. The survey will include qualitative assessment and one 50-meter transect, as described below. The reference site will be flagged so that a County representative can review the site when the Final Revegetation Plan is submitted. Success criteria for tracking the success of the restoration effort are provided below.

6.0 IMPLEMENTATION PLAN

This section provides the details for the execution of the restoration plan.

6.1 RATIONALE FOR EXPECTING IMPLEMENTATION SUCCESS

The proposed restoration effort is anticipated to be successful based on the following: (1) the presence of native soils in portions of the restoration area; (2) the use of plantings and seed of native species known to occur on site; (3) the use of temporary irrigation to aid plant establishment; and (4) a financial commitment to ensure the long-term management of the mitigation land. In addition, the presence of adjacent undeveloped lands containing native habitat will aid the dispersal of microorganisms and seed from healthy habitat into the created DCSS habitat.

6.2 FINANCIAL ASSURANCES

A revegetation agreement shall be signed and notarized by the property owner following approval of this revegetation plan and accompanied by the required security as agreed upon by the County.

6.3 SCHEDULE

Restoration should occur in the fall of the year in which site grading is initiated. Plantings and hydroseed can be installed after the first rains of the season, as soon as initial weeding and irrigation installation has been completed (and after grading by the grading contractor in the fill slope area). Monitoring of the mitigation effort will begin during site preparation (i.e., non-native plant removal), and will continue throughout the installation and the following 5 years. Maintenance of the restored habitats will begin following completion of installation and will continue for 5 years.

6.4 SITE PREPARATION

Soil and Duff Salvage

Native vegetation located in the areas to be impacted by the project will be driven over with heavy equipment (e.g., tracked bulldozer) to crush the vegetation. The crushed vegetation and top 4 inches of soil, collectively referred to as duff, will be collected and reused in the DCSS establishment areas. The duff processing, collection, and storage, will be done by the installation contractor under the direction of the Restoration Specialist. The installation contractor, general contractor, and Restoration Specialist will meet prior to any duff related work to determine how and where this should be done, as well as where and how the duff will be stored.

Reuse of duff provides plant propagules and soil microflora that are important in the establishment of native vegetation in highly disturbed places. Duff should be collected between September 1 and October 15, prior to seasonal rains, when the ground and vegetation is dry and most habitat constituents are dormant. This period for grading also avoids damaging the biological components of the soil and disruptions to the avian breeding season (February 15 to August 31). If there are no conflicts with the avian breeding season, duff may be collected in August. Duff will be stockpiled in 3-foot-tall windrows, if necessary, or an alternative method determined by the Restoration Specialist.

The stockpiled duff will be covered with a waterproof covering, provided it is dry when collected. Duff will only be applied after the soil surface has been prepared and any necessary weed control has been completed.

Decompaction

The restoration areas exclusive of manufactured slopes will be decompacted and left in a rough condition. The area should be ripped, disced, or otherwise prepared to at least 6 inches. Soil decompaction should occur horizontally along the topographic contours (vs. perpendicular to the

contours or up and down the slope). Soil roughening will provide an uneven surface for the duff to cling to and safe sites for the seeds.

Weed control

Non-native vegetation will be removed from the restoration and enhancement areas. In areas with sparse cover removal will entail removing the above ground plant parts. In areas with dense weed cover, control will include removal of the plant and top 2 inches of soil. Soil removal in these areas is necessary to control future weeds by significantly reducing the amount of weed seeds in the soil. All soil and weed biomass will be disposed of in a legal manner.

Soil and Duff Application

The duff will be spread evenly over the restoration areas. Ideally most of the duff can be collected and placed directly into the restoration areas. The only place where this cannot occur is where restoration will occur on manufactured slopes.

6.5 PLANTING PLAN

After site preparation and irrigation installation have been completed, native plants and seed will be installed within the DCSS restoration and enhancement areas. The species selected for planting and seeding (Table 3) have been observed within DCSS habitat on site. Plants and seed for the restoration effort should be obtained from southern San Diego County, whenever possible. If possible, container stock production and seed collection should be under contract 12 months prior to the anticipated installation date. Species substitutions, quantity changes, or use of commercial seed may be allowed, if necessary, at the discretion of the Restoration Specialist. The Restoration Specialist must approve all seed and container stock orders prior to ordering. The source and proof of locally-sourced native plant material and seed should be provided in the Year 1 restoration annual report. The Restoration Specialist must inspect all plant material prior to installation; root bound material, any material with argentine ants or other pests, and any other plants deemed damaged will not be accepted. Fast-growing annual species that are quick to germinate will be included in the seed mix to provide initial cover and protect the landscape from erosion. Slower-growing perennials will provide further protection against erosion.

Container stock would be one-gallon size, rooted appropriately for a one-gallon pot (i.e., neither root bound or insufficiently developed), and should be installed in holes that larger than the planting container and backfilled afterward. Holes will be dug with mechanical augers where possible and by hand elsewhere. Plants will be installed so that their root crown is above the finished grade. Plants installed on manufactured slopes and recently exposed sterile subsoil will receive a small dose of slow release fertilizer.

Plants should be installed in a way that mimics natural plant distribution; therefore, container plantings will be installed in groupings proportional to their density per acre. California adolphia (*Adolphia californica*) will be installed in areas of clay soil. Taller species such as laurel sumac (*Malosma laurina*), lemonadeberry (*Rhus integrifolia*), and blue elderberry (*Sambuccus nigra* ssp. *caerulea*) will be primarily used in groupings/clusters, in draws, and on north-facing slopes. Container stock should be made mycorrhizal at the nursery, prior to delivery. After plant

installation, seed should be applied by a hydromulch application to tackify the seed and stabilize the soil surface. The hydromulch should be applied at 1,500 pounds per acre.

Table 3
DIEGAN COASTAL SAGE SCRUB PLANTING AND SEED PALETTE

CONTAINER PLANTINGS			
Scientific Name	**Common Name**	**Number Per Acre**	**Amount to be Ordered**
Adolphia californica	California adolphia	30	123
Artemisia californica	California sagebrush	500	2,050
Bahiopsis laciniata	San Diego sunflower	170	697
Baccharis sarothroides	broom baccharis	50	205
Cylindropuntia prolifera	coast cholla	60	246
Encelia californica	coast sunflower	60	246
Eriogonum fasciculatum	buckwheat	360	1,476
Isocoma menziesii	coastal goldenbush	60	246
Malosma laurina	laurel sumac	60	246
Mimulus aurantiacus var. *puniceus*	red monkey flower	90	369
Opuntia littoralis	coast prickly pear	60	246
Rhus integrifolia	lemonadeberry	60	246
Salvia mellifera	black sage	170	697
Salvia munzii	Munz's sage	90	369
Sambuccus nigra ssp. *caerulea*	Blue elderberry	10	41
	TOTAL	**1,830**	**7,503**

NATIVE HYDROSEED				
Scientific Name	**Common Name**	**Percent Purity/ Germination**	**Pounds Per Acre**	**Amount to be Ordered**
Acmispon glaber	deerweed	95/80	4	16.4
Artemisia californica	California sagebrush	15/60	5	20.5
Bahiopsis laciniata	San Diego sunflower	31/45	2	8.2
Encelia californica	California encelia	40/60	2	8.2
Eriogonum fasciculatum	buckwheat	50/20	4	16.4
Eriophyllum confertiflorum	golden-yarrow	30/70	4	16.4
Lupinus bicolor	lupine	95/80	2	8.2

Table 3 (cont.) **DIEGAN COASTAL SAGE SCRUB PLANTING AND SEED PALETTE**				
NATIVE HYDROSEED				
Scientific Name	**Common Name**	**Percent Purity/ Germination**	**Pounds Per Acre**	**Amount to be Ordered**
Lupinus succulentus	arroyo lupine	95/85	4	16.4
Phacelia parryi	Parry's phacelia	95/80	1	4.1
Salvia mellifera	black sage	70/50	1	4.1
Stipa pulchra	purple needlegrass	90/80	2	8.2
		TOTAL	**31**	**127.1**

The species listed in Table 3 may be adjusted by the Restoration Specialist based on site-specific conditions and suitability for the habitat goals of this plan. In addition to the species listed in Table 3, Coast barrel cactus (*Ferocactus viridescens*) may be transplanted onto the site if available through salvage from other sites, but is not a required species and does not have success criteria.

6.6 IRRIGATION PLAN

Temporary, above-ground irrigation will be installed throughout the restoration and enhancement areas. The project landscape architect, together with the installation contractor, will inspect the irrigation to ensure full coverage for the overhead spray prior to plant/seed installation. The irrigation schedule will attempt to help establish habitat with evenly spaced, infrequent, deep applications of water. Irrigation will be minimized following natural rainfall events, but in the absence of rain events, will occur at a minimum of once every 2 weeks or as needed for the first 2 years to ensure plant establishment. Once plant material is established, the system will be deactivated. To demonstrate that vegetation is self-sustaining, the irrigation system must be turned off for at least 2 years prior to the end of the mitigation effort. All above-ground portions of the irrigation system should be removed prior to the end of the 5-year maintenance and monitoring period, following sign off by the County.

Irrigation plans included with the Final Revegetation Plan will show the Point of Connection (POC), available pressure, controller location, valves, piping, and head locations. If the POC is beyond the limits of the revegetation area, the off-site irrigation service line to the POC will be identified. Irrigation plans will provide the required backflow protection at the POC and identify the power source for the irrigation controller (if applicable).

6.7 EROSION CONTROL

Erosion control measures may be used in the restoration area wherever deemed necessary by the Restoration Specialist. These may include, but are not limited to organic matting, fiber rolls (straw wattles), and silt fencing. Any installed erosion control materials will be removed from the site once sufficient native plant cover is established. In addition, a hydro-slurry containing

tackifier and wood fiber/mulch will be applied with the seed mixture to provide erosion control across the site.

6.8 HABITAT FEATURES

In addition to planting, the restoration areas will provide microhabitats for a variety of wildlife use. This can include using rocks salvaged from the impact area to create rock piles for small animal shelter and rocks in openings for reptile basking. Cacti can be planted in groups to support San Diego cactus wren. Additional microhabitat features could include drilled logs for solitary bees and sand/dust bath areas for birds and small mammals. Specific microhabitat features will be determined for the final restoration plan, in consultation with the County and Wildlife Agencies.

7.0 MAINTENANCE DURING MONITORING

7.1 MAINTENANCE ACTIVITIES

A 5-year maintenance program is proposed to ensure the successful establishment and persistence of DCSS habitat within the restoration areas. The maintenance program will involve removal of non-native species and trash, irrigation maintenance, and any remedial measures deemed necessary for the success of the restoration program (e.g., re-seeding and re-planting). Maintenance activities will be directed by the Restoration Specialist and implemented by the maintenance contractor.

7.1.1 General Maintenance

The maintenance guidelines are tailored for native plant establishment. Maintenance personnel will be informed of the goals of the restoration effort and the maintenance requirements. A professional with experience and knowledge in native habitat restoration maintenance will supervise maintenance. It is the maintenance contractor's responsibility to keep seeded and planted areas free of debris, and to monitor irrigation function and scheduling, plant material condition and health, and removal of non-native species. The maintenance contractor will also be responsible for replacing any dead or terminally stressed plants, at the direction of the restoration specialist. Damage to plants, irrigation systems, and other facilities occurring as a result of unusual weather or vandalism will be repaired as directed by the Restoration Specialist. The cost of such repairs will be paid for as extra work. The contractor will be responsible for damage caused by the contractor's inadequate maintenance or operation of irrigation systems, as determined by the Restoration Specialist.

7.1.2 Non-native Plant Control

Particular emphasis will be placed on proactive removal of non-native plants. Weeding will be conducted as necessary, but at a minimum of six times (monthly) per rainy season (November to April) through Year 3, then quarterly through Year 5, to minimize competition that could prevent native species establishment. As non-native plants become evident, they should be removed by hand or controlled with the proper herbicides (if approved by the Restoration Specialist). The

Restoration Specialist will oversee non-native plant control by the maintenance contractor; however, maintenance personnel must be knowledgeable in distinguishing non-native species from desirable native vegetation. If maintenance personnel mistakenly remove native species the maintenance contractor will be responsible for rectifying the damage, at the direction of the restoration contractor.

Non-native species considered to be moderately or highly invasive by the California Invasive Plant Council (Cal-IPC 2016) shall be totally eradicated within restoration and enhancement boundaries (4.1 acres). Examples of invasive plants observed on site include but are not limited to fennel (*Foeniculum vulgare*), hottentot-fig (*Carpobrotus edulis*), and artichoke thistle (*Cynara cardunculus*). Additional species may be added to this list, at the discretion of the Restoration Specialist. Non-native grasses listed as moderately or highly invasive will be controlled on site, but due to their abundance in the local area, total eradication is not considered feasible.

7.1.3 Other Pests

Insects, vertebrate pests, and diseases will be monitored. Generally, pests will be tolerated unless they pose a significant threat to restoration success. If deemed necessary, a licensed pest control adviser will make specific pest control recommendations. All applicable federal and state laws and regulations will be closely followed. The Restoration Specialist will be consulted on any pest control matters.

7.1.3 Irrigation

The goal is to obtain germination and growth with the least amount of irrigation. Too much irrigation results in abnormal habitat and encourages invasion by non-native plants, leaches nutrients from the soil, and can increase erosion; therefore, water will be applied infrequently and only as needed to prevent plant mortality. As a general rule, following the 120-day establishment period, the amount of irrigation applied in any week will not exceed the average weekly amount for that month[1]. Native plantings that are infrequently irrigated may grow slower initially but will ultimately be better able to withstand natural variations in rainfall and, therefore, be more successful long-term. The irrigation schedule will attempt to develop deep root growth with evenly spaced, infrequent, deep applications of water. To obtain deep penetration of water, the irrigation system may be activated several times in one 24-hour period. Irrigation will be minimized to limit runoff and will be turned off during and following natural rainfall events.

The irrigation system will be maintained until the restoration specialist determines that supplemental water is no longer required. At that time, irrigation will be permanently disconnected (e.g., the mainline will be cut), but not removed. Above-ground portions of irrigation will be removed when directed by the Restoration Specialist, or following restoration sign off by the County.

[1] The average weekly amount is calculated by dividing the average rainfall for a given month by the number of weeks in that month.

7.1.4 Fertilization

Fertilizer will not be applied in the maintenance phase, except in extraordinary circumstances and only at the written direction of the Restoration Specialist.

7.1.5 Sensitive Species Issues

Maintenance activities will not include use of heavy equipment or vehicles and as such are not anticipated to have adverse effects on sensitive species. Nonetheless, all maintenance activities will be carried out under the direction of the Restoration Specialist, as necessary, to avoid any impacts to sensitive species.

7.1.6 Remedial Installation

Areas with low seed germination and establishment of native plantings will be re-seeded and/or re-planted, at the direction of the Restoration Specialist.

7.1.7 Pruning

No post-installation pruning is necessary unless otherwise directed by the Restoration Specialist. For example, if it is necessary to remove an obstruction from or for repair of the irrigation system.

7.2 SCHEDULE

Maintenance will be performed as necessary to prevent re-seeding by non-native plants and will likely change with varying site conditions and seasons; the schedule outlined herein serves only as a guideline (Table 4). At a minimum, the installation contractor will conduct monthly maintenance during the 120-day establishment period until the Restoration Specialist recommends sign off in writing. The maintenance contractor will be responsible for maintenance activities during the 5-year maintenance period. For the first three years, maintenance is expected to be required every month between November and April (to cover the peak growing period for upland species) and two additional times during the remainder of the year. Maintenance visits may be reduced to four per year in Years 4 and 5 if approved by the Restoration Specialist and County, and shall be timed to best control invasive species, based on weather patterns and monitoring results. The installation/maintenance contractor(s) will complete maintenance requests from the Restoration Specialist within 14 days of any written request or monitoring report.

Table 4 MAINTENANCE SCHEDULE*	
PHASE	**SCHEDULE**
Installation	
120-day establishment period	Monthly
Maintenance	
Year 1 through Year 3 November to April May to October	Total 8 Visits/Year Every Month (6 Visits) June and August (2 Visits)
Years 4 and 5	Total 4 Visits/Year (3 in Spring and 1 in Summer)

*This schedule is only a guideline; maintenance will be performed as necessary and as directed by the restoration specialist.

8.0 MONITORING PLAN

8.1 PERFORMANCE STANDARDS FOR TARGET DATES AND SUCCESS CRITERIA

To complete the 120-day establishment period, irrigation must be functional, container plantings must have 100 percent survivorship, and all target invasive species (Cal-IPC Moderate and High species) must be removed from the restoration area. Any replacement plantings added to attain the survivorship criterion must be installed for at least 30 days prior to sign off of the 120-day establishment period.

Success criteria provide specific standards to evaluate the progress of the restoration effort. Attainment of these standards indicates that the restoration area is progressing toward, and has the habitat function and services specified by, this plan. Restoration success will be determined by comparing measures of planting survivorship, vegetative cover, and native plant recruitment within the restoration and enhancement areas to specified targets, based on visual observations. The following parameters will determine success of the restoration and enhancement effort: (1) native cover of at least 80 percent relative to the reference site(s); (2) absolute non-native cover (excluding target species) of no more than 10 percent; (3) no cover by target invasive plants (Cal-IPC Moderate and High species; not including annual grasses); and (4) recruitment (the successful, natural reproduction and/or establishment of plants in a given area) of native species (Table 5). These criteria are based on observations of intact native habitat located on site.

Interim success criteria, demonstrating that the restoration effort is on track to meet the final criteria, are also provided for Years 1 through 5 (Table 5). No native cover success criteria are specified for Years 1 and 2; however, the visual estimates should indicate that the restoration effort is progressing towards final goals.

Table 5
SUCCESS CRITERIA MILESTONES

CRITERIA	TARGET PERCENTAGE				
	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5
Planting survivorship	90	80	--	--	--
Minimum native vegetation cover*	--	--	45	65	80
Maximum non-native vegetation cover	10	10	10	10	10
Maximum target invasive species cover	0	0	0	0	0
Recruitment**	--	--	1	2	6

* Percent cover of native vegetation is relative to the reference site. For example, if cover is 100 percent it is equal to the cover in the reference habitat.

** Shown as number of species. It is expected that at least 6 species will have recruited onto the site by the end of Year 5.

8.1.1 Survivorship

Container plant survival within the DCSS restoration areas should be 90 percent of the initial plantings in Year 1 and 80 percent in Year 2. If this target is not met, dead plants should be replaced unless their function has been replaced by natural recruitment.

8.1.2 Native Cover

Cover by native vegetation should increase over time and ultimately approach that of the native habitat that occurs in the reference habitat. By the end of the five-year establishment period, native cover in the DCSS restoration areas should be at least 80 percent of the native cover in the reference areas, and be dominated by perennial plants.

8.1.3 Non-Native Cover

Non-native cover is typically a problem with habitat restoration, particularly at the outset of a restoration effort. However, as the restoration takes hold and with diligent maintenance efforts, non-native cover should decrease to an acceptable level. Given the maintenance schedule for the site, non-native cover within the DCSS restoration and enhancement areas should be better than the reference area by Year 5 and should not exceed 10 percent total cover.

8.1.4 Target Invasive Species

Target invasive non-native species should be completely eradicated from the DCSS restoration and enhancement areas each year. No target invasive species (i.e., 0 percent cover) shall be allowed to persist within these areas.

8.1.5 Recruitment

By Year 3, the natural successful, natural reproduction and/or establishment of plants should begin to replace container stock survivorship as the main driver of habitat growth and longevity. Therefore, at least 6 native species, either one of the planted species or a native species that was not planted, should establish on their own within the restoration area by Year 5.

8.1.6 Irrigation

To provide evidence that vegetation is self-sufficient, irrigation of the DCSS restoration and enhancement areas must be shut off at least 2 years prior to the end of the maintenance/monitoring period.

8.2 TARGET FUNCTIONS AND VALUES

Upon meeting success criteria, the restoration and enhancement areas will have a net functional lift in habitat values over the existing condition by providing higher quality foraging and nesting habitat as well as greater vegetative cover and microhabitat features.

8.3 MONITORING METHODS

Monitoring will be carried out by the restoration specialist, beginning with site preparation and habitat installation, and continuing through sign off, approximately 5 years after the start of the restoration effort. Monitoring will include (1) documenting pre-restoration site conditions; (2) installation monitoring; (3) maintenance monitoring; and (4) annual technical monitoring. The methods for the annual technical monitoring are provided further below. During each visit, the restoration specialist will inspect the site to ensure that the restoration effort is progressing as planned and identify any problems that may affect the effort.

8.4 MONITORING SCHEDULE

8.4.1 Pre-Restoration Site Assessment

The restoration specialist will visit the site prior to the start of installation to document existing site conditions by taking photographs, listing additional plants and animals present, and noting any special conditions within the proposed restoration area.

To document the progress of the mitigation effort, the restoration specialist will identify at least two photographic documentation locations per acre. The location, camera height, angle (0° is level and above level is plus degrees, and below level is negative degrees), and compass bearing will recorded for each location. Photo stations will be mapped with a sub-meter accuracy GPS and plotted on a map. Photos will be used for future comparison with post-installation and annual assessment photos.

8.4.2 Installation Monitoring

The restoration specialist will be on-site daily during installation to ensure that activities are being conducted per this plan. The restoration specialist will monitor all phases of the installation process, including site preparation and installation of plants and seed. The restoration specialist must inspect and authorize each phase of work before the next phase may begin.

8.4.3 Maintenance Monitoring

Maintenance monitoring will consist of general site inspections focusing on visual observations of native plant establishment and growth and other site conditions (e.g., presence of non-native plants, erosion, etc.). Following installation, the restoration specialist will direct maintenance activities conducted by the installation contractor during the 120-day establishment period and by the maintenance contractor for the 5-year maintenance and monitoring period (Table 4). In Years 1 through 3, visits will be conducted monthly from November through April (to cover the peak establishment and growth period for upland vegetation) and twice in the remainder of the year, for a total of 5 visits per year (Table 6). During Years 4 and 5 monitoring will be conducted quarterly. This monitoring schedule is the minimum; more frequent inspections may be necessary if there are problems with contractor performance or habitat development. Monitoring memos noting any issues with plant establishment, irrigation, sediment control, etc., will be provided as necessary to the installation/maintenance contractor(s) and the project proponent.

Table 6
MAINTENANCE MONITORING SCHEDULE

PHASE	SCHEDULE
Installation Monitoring	
Site preparation and installation	Daily
120-day establishment period	Monthly (4 visits)
Maintenance Monitoring	
Year 1 through Year 3 November to April May to October	5 visits Monthly June and August
Years 4 and 5	Quarterly

8.4.4 Annual Technical Monitoring

The restoration specialist will conduct annual technical monitoring in April or May of each year during the 5-year maintenance and monitoring period. The visits are scheduled to coincide with the peak of the growing season for most native upland herbs and shrubs. The exact timing of the visits will depend on site and weather conditions. Technical monitoring will include both qualitative and quantitative (cover estimates and measurements) sampling. This sampling will include assessments of container plant survivorship in Years 1 and 2, native and non-native cover, target invasive species cover, recruitment, and lists of wildlife and plant species observed on site each year. The success of the restoration will be evaluated by comparing the habitat development with success criteria derived from the reference habitat (Table 5).

A total of four 50-meter transects will be used to collect data for the technical monitoring, one transect in each of the four restoration areas. These transects will be randomly located during the first quantitative sampling event. Species data will be collected along each transect using the point intercept line transect sampling method (California Native Plant Society's Field Sampling

Protocol; Sawyer and Keeler-Wolf 1995). Native, non-native, and invasive plant cover data will be collected by recording all of the species intercepted at each 0.5-meter interval along the length of each transect. Vegetation will be recorded separately for herb (0 to 0.6 meters), shrub (0.6 to 2 meters), and tree (greater than 2 meter) layers.

Because the DCSS enhancement area is not required as mitigation, there will not be a transect located in the enhancement area. Native, non-native, and invasive plant cover will be visually estimated within the DCSS enhancement area during each annual assessment. Observations of wildlife within the restoration and enhancement areas will be documented and included in each annual report. No focused wildlife surveys will be conducted.

The photo documentation stations established at the start of the restoration effort will be re-photographed each year during the annual assessment to further document the development of the mitigation site.

The report will also provide a qualitative assessment of the condition of the restored habitats. Along with this assessment, an opinion on the prognosis of the habitat to meet success criteria will be provided. The opinion will be based on all of the data collected during the annual assessment. At Year 3, if all or some part of the restored habitat is not projected to meet success criteria at Year 5, the project proponent, County, maintenance contractor, and restoration specialist will meet to determine how to best meet the project's mitigation obligation.

8.5 MONITORING REPORTS

An annual report including qualitative and quantitative analysis will be prepared each year during the 5-year monitoring period and submitted to the County by August 31 of each year. Monitoring and maintenance field data shall be included as an addendum to each report.

Any significant issue or contingency that arises on the job site (e.g., plant survival issues, fire, or flooding) shall be reported in writing to the County within 2 weeks from the date of the incident. Accompanying the report shall be a plan for remediation, with an implementation schedule and a monitoring schedule.

9.0 COMPLETION OF COMPENSATORY MITIGATION

The County will be notified of completion of the restoration effort through submittal of a final (Year 5) monitoring report. After receipt of the final monitoring report, the County may inspect the mitigation site to determine the success of the restoration effort. After evaluating the final report, the County shall determine if the restoration effort is acceptable. If the restoration meets all success standards at the end of the 5-year monitoring period or sooner, then the restoration will be considered a success; if not, the maintenance and monitoring program will be extended until the standards are met. Specific remedial measures (approved by the County) will be used during any extension. Monitoring extensions will be done only for areas that fail to meet final success criteria. This process will continue until all Year 5 standards are attained or until the County determines that other mitigation measures are appropriate. Should the restoration effort meet all goals prior to the end of the 5-year monitoring period, the County, at its discretion, may

terminate the monitoring effort. If requested, a site visit may be conducted with the County and/or Wildlife Agencies following year 3 and/or year 5 to verify site conditions.

10.0 CONTINGENCY MEASURES

10.1 INITIATING CONTINGENCY MEASURES

If the County determines upon receipt of any of the annual monitoring reports that the restoration effort is not meeting success standards for the project, the County shall notify the project proponent in writing that the restoration effort may require augmentation for successful implementation. The project proponent shall then have 30 days to respond to the notification. During this period, the project proponent may discuss alternatives to the suggestions of the County.

10.2 ALTERNATIVE LOCATIONS FOR CONTINGENCY COMPENSATORY MITIGATION

Sufficient area for contingency restoration is present at the property. If the success criteria are not being met, the County will work together with the project proponent to reach an alternative mutually acceptable solution.

10.3 FUNDING

The permittee shall be responsible for all costs associated with any remedial measures.

10.4 DRAWING REQUIREMENTS

The Final Revegetation Plans will include construction drawings prepared by a California registered landscape architect meeting the requirements in the County's Report Format and Content Requirements for Revegetation Plans section 2.11.

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Appendix M

SWEETWATER VISTAS PROJECT CONCEPTUAL RESOURCE MANAGEMENT PLAN

HELIX
Environmental Planning

Sweetwater Vistas Biological Open Space Preserve

Conceptual Resource Management Plan

PDS2015-SPA-15-002

March 6, 2017



Karl Osmundson
County Approved Biological Consultant

Prepared for:
Sweetwater Vistas, LLC
1620 Fifth Ave., Suite 400
San Diego, CA 92101

Prepared by:
HELIX Environmental Planning, Inc.
7578 El Cajon Boulevard
La Mesa, CA 91942

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March 6, 2017

Sweetwater Vistas Biological Open Space Preserve
Resource Management Plan

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1.0 INTRODUCTION

This Conceptual Resource Management Plan (RMP) has been prepared for the proposed 27.9-acre Sweetwater Vistas Biological Open Space Preserve (preserve) in accordance with mitigation requirements identified in the project's biological technical report (HELIX Environmental Planning, Inc. [HELIX] 2016a). This RMP provides direction for the permanent preservation and management of the preserve in accordance with County of San Diego (County) regulations.

1.1 PURPOSE OF BIOLOGICAL RESOURCE MANAGEMENT PLAN

The purpose of this RMP is to provide guidance in which to ensure preservation of native habitats and long-term management of the preserve. This RMP:

1. Guides management of vegetation communities and habitats, plant and animal species, and programs described herein to protect and, where appropriate, enhance biological resources;

2. Serves as a descriptive inventory of vegetation communities and plant and animal species that occur within the preserve;

3. Establishes the baseline conditions from which adaptive management will be determined and success will be measured; and

4. Provides an overview of the operation, maintenance, administrative, and personnel requirements to implement management goals, and serves as a budget planning aid.

The Sweetwater Vistas project site consists of an approximately 51.9-acre property (project site or site) in the unincorporated community of Spring Valley, San Diego County, California. The proposed project would (i) develop 23.1 acres into a new master planned community consisting of 243 multi-family residential units; and (ii) place 27.9 acres into biological open space. The proposed residential development would occur on the 43.4-acre parcel west of Jamacha Boulevard, which would be divided into three residential pads (Lots 1, 2, and 3) and biological open space. The 8.6-acre parcel east of Jamacha Boulevard would be placed in biological open space.

A total of 23.1 acres of the 51.9-acre project site will be impacted. Of the 23.1 acres of impact, 0.5 acre will be restored to coastal sage scrub and placed into biological open space. Areas of existing fire clearing and an existing County sewer easement (1.3 acres) were mapped as impact neutral. A total of 27.9 acres within the project site would be placed in biological open space and serve as the preserve, which includes the 0.5 acre of impact area that will be restored to coastal sage scrub. The project will further restore an additional 3.2 acres of disturbed habitat and non-native vegetation within the preserve to coastal sage scrub, and enhance 0.4 acre of existing disturbed coastal sage scrub within the preserve. Creation, restoration, and/or enhancement of stream and/or riparian habitat are also envisioned for portions of the preserve. These restoration and enhancement actions are fundamental components of the project's proposal to improve habitat quality and function for wildlife movement through the site, particularly for the coastal

California gnatcatcher (*Polioptila californica californica*). Considering the total biological open space area, the proposed project's conservation percentage is 54 percent.

Project impacts include 14.9 acres of Diegan coastal sage scrub (Tier II); 0.9 acre of non-native grassland (Tier III); 5.0 acres of disturbed habitat, 0.1 acre of eucalyptus woodland, 1.1 acres of non-native vegetation, 1.4 acres of urban/developed land, and 0.1 acre of upland tamarisk scrub (Tier IV). The project would avoid impacts to on-site Tier I habitats: disturbed wetland, cismontane alkali marsh, freshwater marsh, mule fat scrub, southern willow scrub, non-native riparian, and arundo-dominated riparian.

The project would impact several individuals of Munz's sage (*Salvia munzii*), San Diego sunflower (*Bahiopsis laciniata*), and southwestern spiny rush (*Juncus acutus* ssp. *leopoldii*). These impacts are less than significant, and all three species also occur within the open space. Munz's sage and San Diego sunflower are also included in the planting palette. The open space also supports graceful tarplant (*Holocarpha virgata* ssp. *elongata*), San Diego marsh-elder (*Iva hayesiana*), and ashy spike-moss (*Selaginella cinerascens*).

Project implementation would directly impact Diegan coastal sage scrub habitat suitable for the coastal California gnatcatcher and raptor foraging habitat known to support turkey vulture (*Cathartes aura*) and northern harrier (*Circus cyaneus*). In addition to those three species, the open space supports Cooper's hawk (*Accipiter cooperii*), least Bell's vireo (*Vireo bellii pusillus*), monarch butterfly (*Danaus plexippus*), red-shouldered hawk (*Buteo lineatus*), and yellow warbler (*Setophaga petechia*).

Preservation of 27.9 acres on site will permanently protect high quality habitat suitable for numerous sensitive species.

1.1.1 Conditions and/or Mitigation Measures that Require an RMP

This RMP satisfies County requirements for public review of the project pursuant to the California Environmental Quality Act (CEQA) and conditions that will be part of the Resolution of Approval. Project conditions requiring an RMP include mitigation for impacts to Diegan coastal sage scrub, non-native grassland, and sensitive animals (coastal California gnatcatcher, turkey vulture, and northern harrier).

1.2 IMPLEMENTATION

1.2.1 Resource Manager Qualifications and Responsible Parties

Proposed Resource Manager: The project applicant will contract with a qualified entity to serve as Resource Manager, such as the San Diego Habitat Conservancy.

The County Planning & Development Services (PDS) and project applicant will jointly approve the selection of a Resource Manager, who must be an established conservancy group or land manager, County Department of Parks and Recreation, County Department of Public Works, a federal or state wildlife agency, or a federal land manager.

Additionally, the Resource Manager must possess the following qualifications:

- Ability to carry out habitat monitoring or mitigation activities;
- Fiscal stability, including preparation of an operational budget (using an appropriate analysis technique) for the management of this RMP;
- Have at least one staff member with a biology, ecology, or wildlife management degree, or have a Memorandum of Understanding (MOU) with a qualified person with such a degree; and
- Experience with habitat management in southern California.

The preserve and/or conservation easements must be recorded prior to initiation of project impacts. Fee title of preserve could be transferred to the Resource Manager prior to the Resource Manager initiating long-term management responsibilities

Proposed Land Owner: San Diego Habitat Conservancy

Proposed Easement Holder: County of San Diego

1.2.2 Financial Responsibility/Mechanism

The project applicant is responsible for RMP funding requirements, including direct funds to support the RMP start-up tasks as well as an on-going funding source for annual tasks.

The proposed funding mechanism for implementation of the RMP for the preserve is an endowment.

1.2.3 Cost Estimate/Budge

A cost estimate / Property Analysis Record (PAR) will be prepared for the 27.9-acre preserve once a Resource Manager has been identified.

1.2.4 Reporting Requirements

An RMP annual report will be submitted to the County, US Fish and Wildlife Service (USFWS), and California Department of Fish and Wildlife (CDFW), along with the submittal fee to cover County staff review time. The report will summarize the previous year's management and monitoring, as well as a work plan for the upcoming year. The report will provide a summary of methods employed, identify new management issues, and address the success or failure of previous management approaches based on monitoring. It shall include a summary of the overall condition of vegetation communities and sensitive species in the preserve, assess any changes from the baseline or from the previous year's conditions, and address any monitoring and management limitations. The report shall list the expenses from the year, the proposed budget for the upcoming year, and the status of the endowment. Adaptive management (changes) resulting from previous monitoring results and methods for measuring the success for such adaptive management will be discussed.

The results of updated vegetation mapping and sensitive plant and animal surveys will be included in the annual reports. For new sensitive species observations or significant changes to previously reported species, the annual report shall include copies of completed California Natural Diversity Database (CNDDB) forms with evidence that they have been submitted to the State. The report shall also include copies of invasive plant species forms submitted to the State or County.

A fee for staff's review time will be collected by PDS upon submittal of the annual report. The RMP may also be subject to an ongoing deposit account for staff to address management challenges as they arise. Deposit accounts, if applicable, must be replenished to a defined level as necessary.

1.2.5 Open Space Maintenance Agreement

The County requires an Agreement with the project applicant and Resource Manager when an RMP is required. The Agreement will be executed upon County acceptance of this RMP. The Agreement will obligate the applicant to implement the RMP and provide a source of funding to pay the cost to implement the RMP in perpetuity. The Agreement shall also provide a mechanism for the funds to be transferred to the County in the event of failure of the Resource Manager to meet the goals outlined in this RMP. The Agreement shall also provide that all RMP funding has been provided or that the funding mechanism has been established prior to the approval of grading or improvement plans, or prior to approval of the Parcel/Final Map, whichever is first.

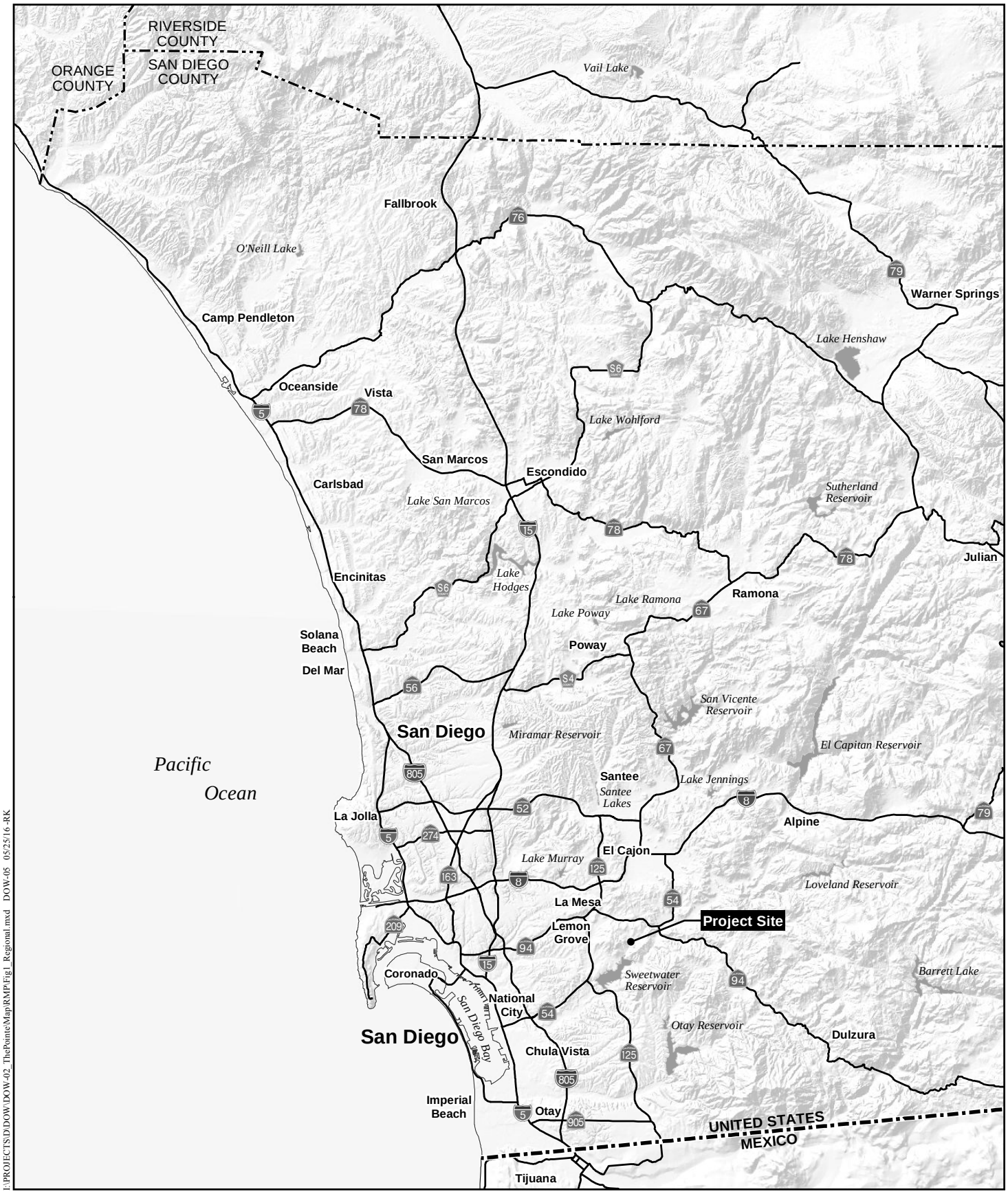
2.0 PROPERTY DESCRIPTION

2.1 PROPERTY LOCATION

The 51.9-acre project site is generally located north of Sweetwater Reservoir, south and west of State Route 94, and east of State Route 125 in the unincorporated community of Spring Valley in San Diego County, California (Figure 1). Specifically, the site is located southwest and southeast of the intersection of Jamacha Boulevard and Sweetwater Springs Boulevard (Figure 2). It is located within the San Diego land grant in unsectioned lands of the U.S. Geological Survey (USGS) 7.5-minute Jamul Mountains quadrangle map (Figure 3). The project site is located on unincorporated lands within the South County and Metro-Lakeside-Jamul segments of the County's Multiple Species Conservation Program (MSCP) Subarea Plan. The project site consists of Assessor's Parcel Numbers (APNs) 505-672-03, 505-672-07, 505-672-09, 505-672-10, 505-672-23, and 505-672-37.

2.2 GEOGRAPHICAL SETTING

The project site contains mostly undeveloped land with varied topography, made up of hilly terrain with steep slopes rising upward from Hansen's Creek, and gradual slopes rising upward from Little Hansen's Creek. Elevations range from approximately 320 feet (98 meters) above mean sea level (amsl) to 540 feet (165 meters) amsl, with the lowest elevation occurring in Hansen's Creek and the highest elevation in the northwest corner. Elevation generally increases



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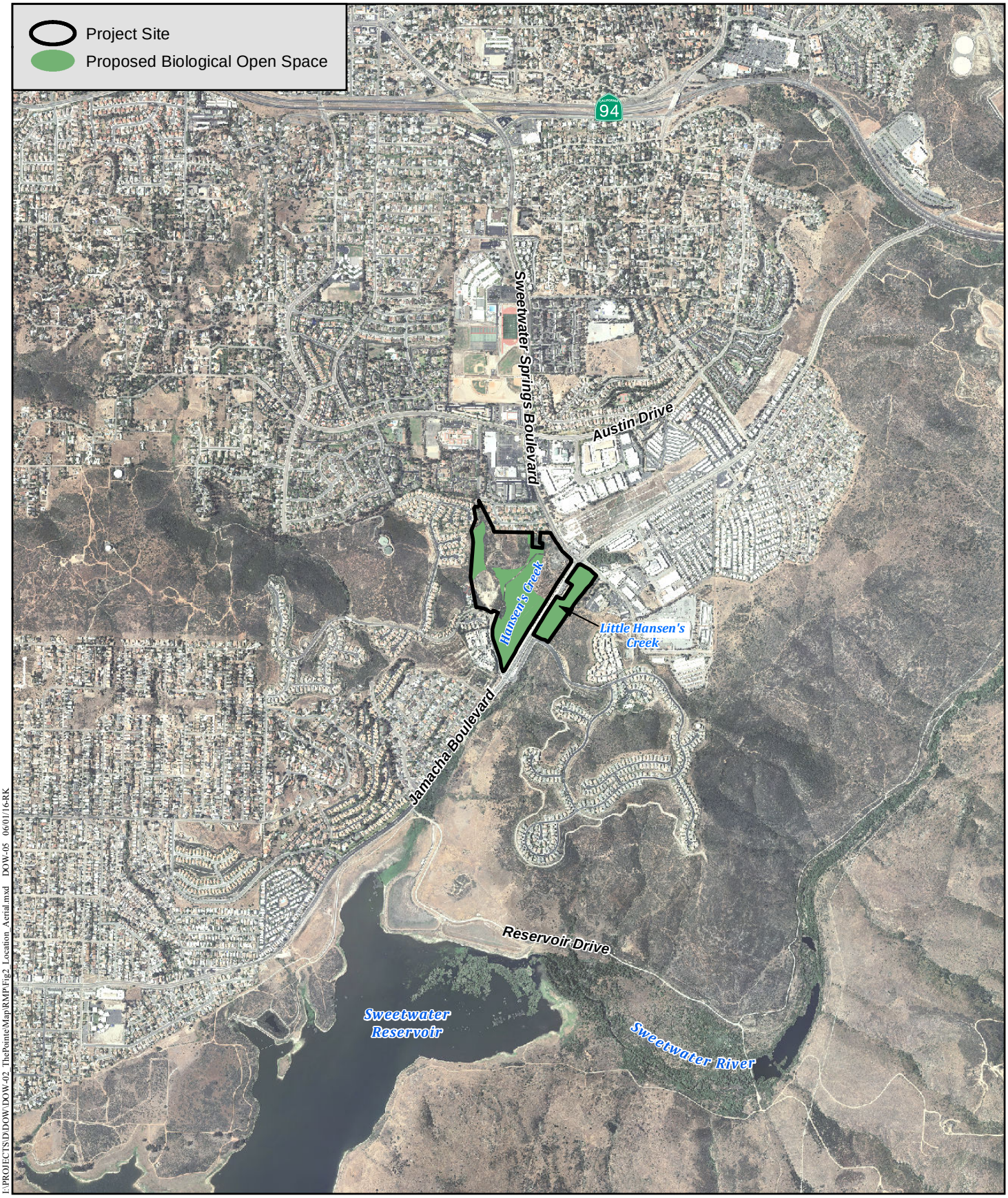
Regional Location Map

SWEETWATER VISTAS

HELIX Environmental Planning

N 0 8 Miles

Figure 1



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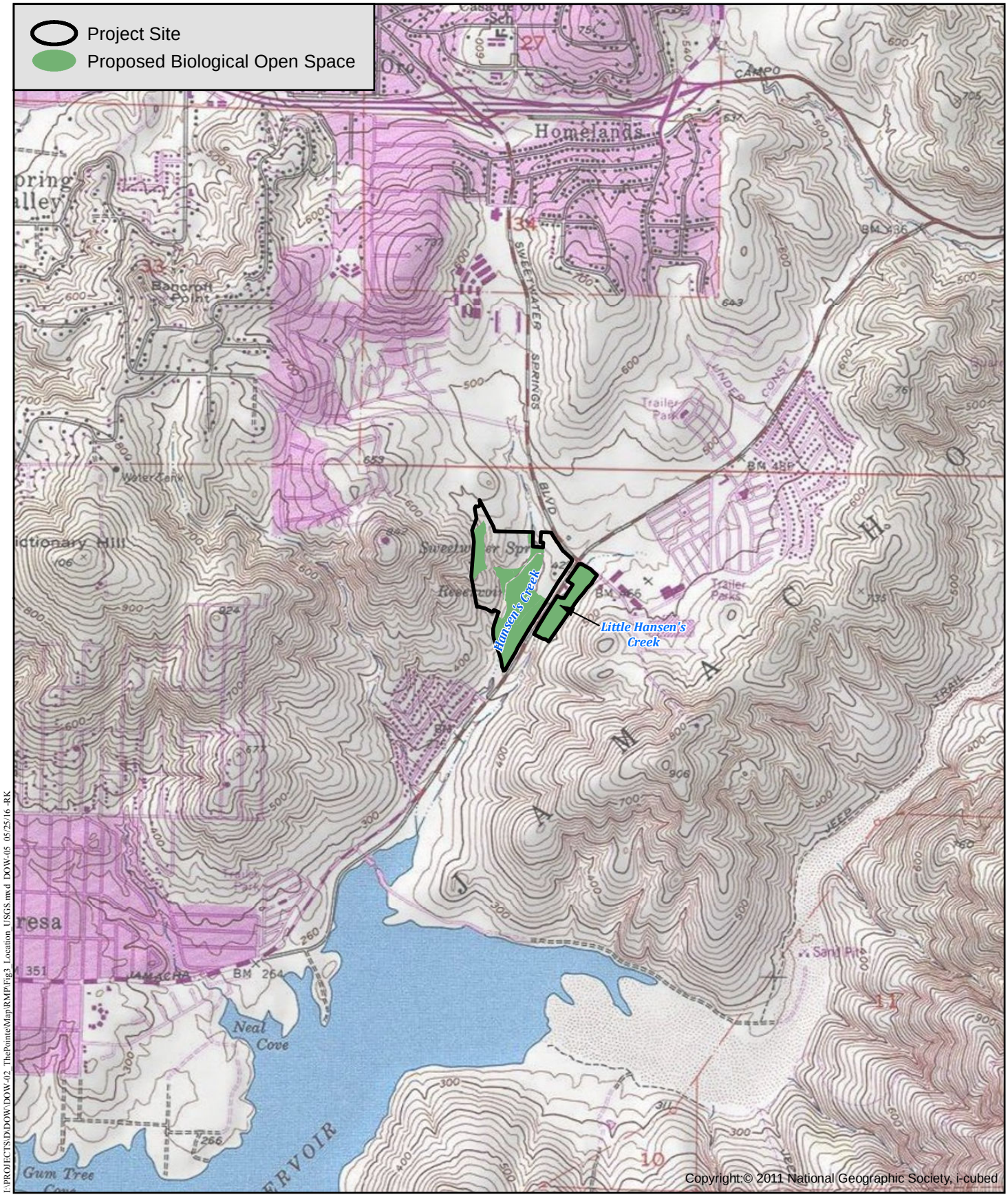
Project Vicinity Map (Aerial Photograph)

SWEETWATER VISTAS

HELIX Environmental Planning

N 0 2,000 Feet

Figure 2



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Project Vicinity Map (USGS Topography)

SWEETWATER VISTAS

HELIX Environmental Planning

N 0 2,000 Feet

Figure 3

from east to west on the parcel west of Jamacha Boulevard and from west to east on the mitigation parcel. Hansen's Creek and Little Hansen's Creek converge off site to the south of the project site and drain southward, before discharging into Sweetwater River and Sweetwater Reservoir.

The project site occurs within both the northern portion of the South County Segment and southwestern portion of the Metro-Lakeside-Jamul Segment of the adopted County MSCP Subarea Plan. A good portion of the intact habitat within the site is designated as Very High on Attachment J (Habitat Evaluation Map) of the Biological Mitigation Ordinance (BMO [County 2010b]); however, the majority of this habitat is also designated as Take Authorized Areas depicted on Attachment B (County of San Diego MSCP Sub-Area Take Authorized Areas) of the BMO. The MSCP Hardline is mapped within approximately 5.0 acres in the western portion of the site (Figure 4). This MSCP Hardline continues off site to the west toward the Bancroft Creek and Dictionary Hill open space blocks. MSCP Hardline is further mapped off site to the east, within Homeowners Association (HOA)-maintained open space, and then stretches even further east toward the San Diego National Wildlife Refuge. Pre-Approved Mitigation Area (PAMA) is mapped in the extreme eastern portion of the site.

2.3 LAND USE

General land uses in the project site include undeveloped land, much of which has been subject to repeated mechanical disturbance over the last several decades. Diegan coastal sage scrub covers approximately half of the site, much of which is disturbed, with non-native grassland and disturbed habitat comprising the next largest habitat areas. The project site contains two stream corridors supporting wetland and riparian habitats, Hansen's Creek (located west of Jamacha Boulevard) and Little Hansen's Creek (located east of Jamacha Boulevard). These creeks traverse the parcels from north to south and are tributary to the Sweetwater River at the Sweetwater Reservoir. The remains of a historic spring water bottling plant (formerly Isham Spring) are located immediately off site to the north, at the headwaters of Hansen's Creek. Surrounding land uses generally include residential development to the north and south, residential development and undeveloped lands in MSCP hardline preserve to the west, and a combination of undeveloped land, and commercial and residential development to the east. Sweetwater Reservoir is located approximately one-half mile south of the site.

2.4 GEOLOGY, SOILS, CLIMATE, AND HYDROLOGY

Seven soil types have been mapped in the project site (Natural Resource Conservation Service [NRCS] 2015a; Figure 7). Those soils types covering the most area included: Las Posas fine sandy loam, 9 to 15 percent slopes, eroded; Diablo clay, 9 to 15 percent slopes; and Linne clay loam, 9 to 30 percent slopes. Less common in the project site were Diablo clay, 15 to 30 percent slopes; Friant rocky fine sandy loam, 30 to 70 percent slopes; San Miguel-Exchequer rocky silt loams, 9 to 70 percent slopes; and Diablo-Urban land complex, 15 to 50 percent slopes. None of the named soils mapped in the project site are listed as hydric (NRCS 2015b). The majority of the surface soils on the site west of Jamacha Boulevard appear to have been subject to previous grading and filling disturbance.

The climate in San Diego County is generally mild and arid. Temperatures in Spring Valley are generally highest in August (average high temperature of 86˚F) and lowest in December (average low temperature is 46˚F). Average annual precipitation in Spring Valley is approximately 12.8 inches, with the highest average rainfall totals occurring in January, February, and March (2.4 inches, 2.5 inches, and 2.4 inches, respectively). The driest months are June, July, and August with approximately 0.1 inch of rainfall in June and less than 0.1 inch in July and August (Weather.com 2016).

According to the project's SWQMP (Fuscoe 2016), the site is located within the Jamacha Hydrologic Subareas (909.21) of the Sweetwater Hydrologic Unit (HU). Site runoff flows into Hansen's Creek and Little Hansen's Creek, which flow south and are tributary to the Sweetwater River. Additional waters in the project site include a small unnamed ephemeral tributary to Hansen's Creek in the northern portion of the site that was created as a result of a storm drain outfall directed onto the site and a small unnamed ephemeral tributary to Hansen's Creek in the central portion of the site. These features are tributary to the Sweetwater River and Sweetwater Reservoir.

2.5 TRAILS

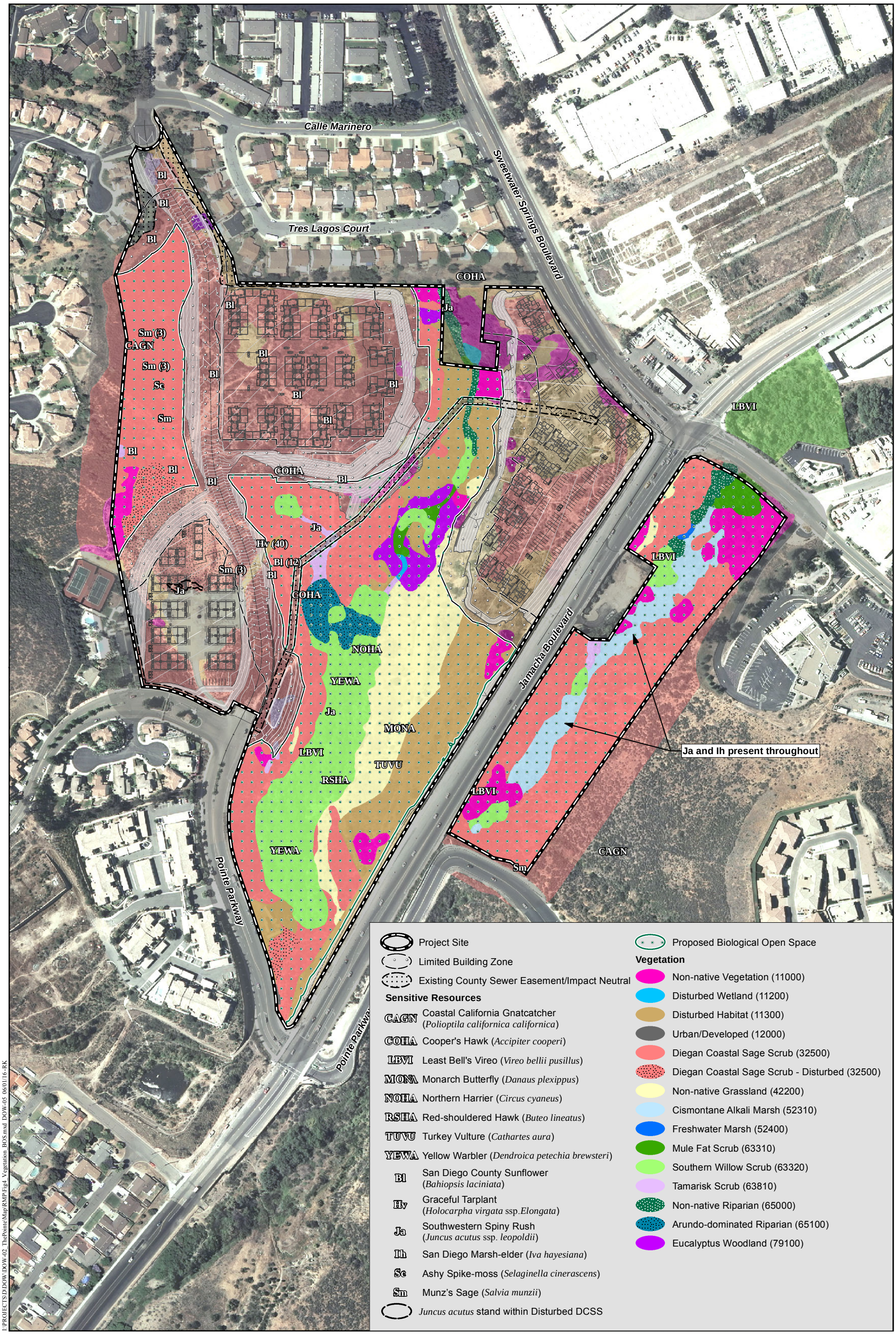
A number of dirt trails cross the preserve. These areas will be closed to the public following implementation of the RMP. No trails are proposed in the preserve.

2.6 EASEMENTS OR RIGHTS

An existing County sewer line and easement crosses the western portion of the preserve and will remain. The sewer easement is excluded from the preserve.

2.7 FIRE HISTORY

The rate of fires in San Diego County coastal shrublands generally increased over the last half of the 20th century. Over 600 fires have occurred in the foothills and mountains of San Diego County between 1910 and 1999, and several major fires in excess of 50,000 acres have occurred in recent years. According to a review of the County's fire burn data and CalFire burn data, the last time the preserve burned was in 1945 (SanGIS 2016, CalFire 2016).



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Vegetation and Sensitive Resources in the Biological Open Space

SWEETWATER VISTAS

HELIX Environmental Planning

Figure 4

3.0 BIOLOGICAL RESOURCES DESCRIPTION

3.1 VEGETATION COMMUNITIES

A total of 14 vegetation communities occur within the preserve (Figure 4; Table 1).

Table 1
VEGETATION COMMUNITIES WITHIN THE SWEETWATER VISTAS PRESERVE[1]

Vegetation Community	Tier Level	Acreage Before Restoration	Acreage After Restoration
Disturbed wetland (11200)	I	0.02	0.02
Cismontane alkali marsh (52310)	I	1.17	1.17
Freshwater marsh (52400)	I	0.02	0.02
Mule fat scrub (63310)	I	0.33	0.33
Southern willow scrub (63320)	I	3.76	3.76
Tamarisk scrub (63810)[2]	I	0.22	0.22
Non-native riparian (65000)	I	0.31	0.31
Arundo-dominated riparian (65100)	I	0.49	0.49
Diegan coastal sage scrub (32500), including disturbed	II	12.5	15.9
Non-native grassland (42200)	III	2.7	2.7
Disturbed habitat (11300)	IV	3.7	0.9
Eucalyptus woodland (79100)	IV	0.6	0.6
Non-native vegetation (11000)	IV	2.0	1.4
Urban/developed (12000)	N/A	<0.1	<0.1
TOTAL		**27.9**	**27.9**

[1] Upland communities/habitat types are rounded to the nearest 0.1 acre, while wetland communities are rounded to the nearest 0.01; totals do not reflect rounding. Acreage after restoration refers to the acreage that will result following completion of the project's coastal sage scrub restoration and enhancement plan (HELIX 2016b).

[2] Portions of the tamarisk scrub are within an upland landscape position and not associated with a streambed, riparian habitat, or wetlands. Those portions are considered Tier IV not Tier I.

Non-native Vegetation

Non-native vegetation is a category describing stands of naturalized trees and shrubs (e.g., acacia [*Acacia* sp.], peppertree [*Schinus* sp.]), many of which are also used in landscaping. Non-native vegetation on the project site consists primarily of acacia, with lesser coverage by hottentot-fig (*Carpobrotus* sp.). Approximately 2.0 acres of non-native vegetation are mapped within the preserve, of which 0.6 acres will be restored to Diegan coastal sage scrub by the project's coastal sage scrub restoration and enhancement plan (HELIX 2016b).

Disturbed Wetland

Disturbed wetland is dominated by exotic wetland species that invade areas that have been previously disturbed or undergone periodic disturbances. These non-natives become established more readily following natural or human-induced habitat disturbance than the native wetland flora. Characteristic species of disturbed wetlands include giant reed (*Arundo donax*), cocklebur (*Xanthium strumarium* var. *canadense*), umbrella sedge (*Cyperus involucratus*), wild celery (*Apium graveolens*), and tamarisk (*Tamarix* sp.). Disturbed wetland on site consists of areas

within Hansen's Creek that are dominated by umbrella sedge. Approximately 0.02 acre of disturbed wetland is mapped within the preserve.

Disturbed Habitat

Disturbed habitat includes areas in which the vegetative cover makes up less than 10 percent of the surface area (disregarding natural rock outcrops) and where there is evidence of soil surface disturbance. Disturbed habitat supports a predominance of non-native and/or weedy species that are indicators of such surface disturbance (County 2010a). Disturbed habitat in the project site includes unvegetated areas such as dirt roads and rock piles, in addition to areas of disturbed land vegetated by non-native forbs such as star-thistle (*Centaurea melitensis*) and garland daisy (*Glebionis coronaria*). Disturbed habitat also occurs along the northern reach of Hansen's Creek, as well as on previously graded land adjacent to Jamacha Boulevard. Approximately 3.7 acres of disturbed habitat are mapped within the preserve, of which 2.8 acres will be restored to Diegan coastal sage scrub.

Diegan Coastal Sage Scrub (including Disturbed)

Coastal scrub is one of the two major shrub types that occur in coastal southern California, occupying xeric sites characterized by shallow soils (the other is chaparral). Diegan coastal sage scrub may be dominated by a variety of species depending upon soil type, slope, and aspect. Typical species found within Diegan coastal sage scrub include California sagebrush (*Artemisia californica*), California buckwheat (*Eriogonum fasciculatum*), laurel sumac (*Malosma laurina*), lemonadeberry (*Rhus integrifolia*), white sage (*Salvia apiana*), and black sage (*Salvia mellifera*; Holland 1986). The disturbed phase of Diegan coastal sage scrub contains many of the same shrub species as undisturbed Diegan coastal sage scrub, but is sparser and has a higher proportion of disturbance-tolerant and non-native species.

Non-native fountain grass (*Pennisetum setaceum*) and broom baccharis (*Baccharis sarothroides*), species typically associated with areas subject to surface soil disturbance, are prevalent throughout the coastal sage scrub on site. Other species observed include traditional coastal sage scrub associates, such as California sagebrush and California buckwheat. This community occurs throughout the western portion of the site and adjacent to both sides of Hansen's Creek. The highest quality stand occurs in the extreme northwest portion of the site, where constituent species California sagebrush and California buckwheat are dominant and there is less evidence of previous disturbance. This area is within Hardline Preserve and was determined to support a breeding pair of coastal California gnatcatchers in 2015. A second breeding pair of gnatcatchers was confirmed off site to the east in 2015. Approximately 12.5 acres of Diegan coastal sage scrub are mapped within the preserve; this will increase to 15.9 acres following completion of the project's upland restoration plan (HELIX 2017b).

Non-native Grassland

Non-native grassland is a mixture of annual grasses and broad-leaved, herbaceous species. Annual species make up 50 percent to more than 90 percent of the vegetative cover, and most annuals are non-native species. Non-native grasses typically make up at least 30 percent of the vegetative cover, although this percentage can be much higher in some years and lower in others,

depending on land use and climatic conditions. Usually, the grasses are less than 3 feet in height and form a continuous or open cover. Emergent shrubs and trees may be present but do not make up more than 15 percent of the total cover (County 2010a). Most of the non-native grasses originated from the Mediterranean region, an area with a long history of agriculture and a climate similar to California. Non-native grassland on the project site is dominated by common ripgut grass (*Bromus diandrus*), red brome (*Bromus madritensis*), oats (*Avena* sp.), and shortpod mustard (*Hirschfeldia incana*). A variety of other non-native grasses and forbs are also present. Approximately 2.7 acres of non-native grassland occur in the preserve, the majority of which occur in a roughly 50- to 200-foot-wide swath along the steep eastern slope of the Hansen's Creek corridor.

Cismontane Alkali Marsh

Cismontane alkali marsh is characterized by wet or inundated areas dominated by emergents, but often with an understory of grasses or sedges. Standing water or saturated soil is present during the entire or majority of the year. High evaporation and low input of fresh water result in high salinity, especially during the summer (Holland 1986). Characteristic species include yerba mansa (*Anemopsis californica*), salt grass (*Distichlis spicata*), cattails (*Typha* sp.), and rushes (*Juncus* sp.). San Diego marsh-elder (*Iva hayesiana*) is the dominant species occurring within this habitat on site, with scattered individuals of southwestern spiny rush. This habitat occurs over approximately 1.17 acres along Little Hansen's Creek.

Mule Fat Scrub

Mule fat scrub is a depauperate, shrubby, riparian scrub community dominated by mule fat and interspersed with small willows. This vegetation community occurs along intermittent stream channels with a fairly coarse substrate and moderate depth to the water table. This early seral community is maintained by frequent flooding, the absence of which could lead to a riparian woodland or forest (Holland 1986). In some environments, limited hydrology may favor the persistence of mule fat. Mule fat scrub on the project site occurs as three small stands of mule fat within Hansen's Creek and Little Hansen's Creek, with scattered umbrella sedge, tamarisk (*Tamarix ramosissima*), and red gum eucalyptus (*Eucalyptus camaldulensis*) also present. A total of 0.33 acre of mule fat scrub is mapped in the preserve.

Southern Willow Scrub

Southern willow scrub consists of dense, broadleaved, winter-deciduous stands of trees dominated by shrubby willows (*Salix* sp.) in association with mule fat (*Baccharis salicifolia*), and with scattered emergent western cottonwood (*Populus fremontii*) and western sycamore (*Platanus racemosa*). This vegetation community occurs on loose, sandy or fine gravelly alluvium deposited near stream channels during flood flows. Frequent flooding maintains this early seral community, preventing succession to a riparian woodland or forest (Holland 1986). In the absence of periodic flooding, this early seral type would be succeeded by southern cottonwood or western sycamore riparian forest. Southern willow scrub on site is characterized by dense stands of arroyo willow with a mix of other native and non-native riparian species occurring throughout, including black willow (*Salix gooddingii*), red willow (*Salix laevigata*), Mexican fan palm (*Washingtonia robusta*), giant reed, cattail, mule fat, wild celery, California

bulrush (*Schoenoplectus californicus*), castor-bean (*Ricinus communis*), and pampas grass. This habitat occurs along both on-site creeks, although it is more prevalent within Hansen's Creek. A total of 3.76 acres of southern willow scrub is mapped in the preserve.

Tamarisk Scrub

Tamarisk scrub typically comprises shrubs and/or small trees of exotic tamarisk species but may also contain willows, salt bushes (*Atriplex* spp.), and salt grass. This habitat occurs along intermittent streams in areas where high evaporation rates increase the salinity level of the soil. Tamarisk is a phreatophyte, a plant that can obtain water from an underground water table. Because of its deep root system and high transpiration rates, tamarisk can substantially lower the water table to below the root zone of native species, thereby competitively excluding them. As a prolific seeder, it may rapidly displace native species within a stream channel (Holland 1986). Tamarisk scrub on site is dominated by tamarisk with occasional southwestern spiny rush and broom baccharis. It is found in six general locations on site, three of which occur in association with riparian habitat, and three of which occur on hill slopes in upland landscape positions. A total of 0.22 acre of tamarisk scrub is mapped in the preserve.

Non-native Riparian

Non-native riparian comprises densely vegetated riparian thickets dominated by non-native, invasive species. Characteristic species include giant reed, tamarisk, eucalyptus (*Eucalyptus* sp.), palms (*Phoenix* spp. and *Washingtonia* spp.), Bermuda grass (*Cynodon dactylon*), castor-bean (*Ricinus communis*), and pampas grass (*Cortaderia* spp.), along with natives such as arrowweed (*Pluchea sericea*), western cottonwood, and willows. Non-native riparian habitat on site is dominated by Mexican fan palm, with occasional Brazilian pepper (*Schinus terebinthifolius*). This habitat is found along the northern reaches of Hansen's Creek and Little Hansen's Creek. Approximately 0.31 acre of non-native riparian is mapped in the preserve.

Arundo-dominated Riparian

Arundo-dominated riparian consists of densely vegetated riparian thickets dominated almost exclusively by giant reed. It occurs along disturbed water courses. On site, this habitat occurs as a near monoculture of giant reed within a portion of Hansen's Creek and an associated tributary. A total of 0.49 acre of arundo-dominated riparian is mapped in the preserve.

Eucalyptus Woodland

Eucalyptus woodland is dominated by eucalyptus (*Eucalyptus* sp.), an introduced genus that produces a large amount of leaf and bark litter. The chemical and physical characteristics of this litter, combined with the shading effects of the trees, limit the ability of other species to grow in the understory, and floristic diversity decreases. If sufficient moisture is available, eucalyptus becomes naturalized and is able to reproduce and expand its cover. Eucalyptus woodland occurs adjacent to riparian habitat in the central portion of the site, as well as a small stand in the northwest corner. Approximately 0.6 acre of this habitat type is mapped in the preserve.

3.2 PLANT SPECIES

3.2.1 Plant Species Present and Correlation with Habitat on Site

HELIX identified a total of 137 plant species on the project site, of which 61 (45 percent) are non-native species (Appendix A). Habitats within which these species were observed are listed in Appendix A.

3.2.2 Rare, Threatened, or Endangered Plant Species Present or Likely to Occur

Six special status plant species were observed in the preserve, as listed below in alphabetical order by scientific name. Each is also described below and shown on Figure 4.

San Diego County sunflower (*Bahiopsis laciniata*)
Listing: California Rare Plant Rank 4.2; County List D (Appendix E).
Distribution: San Diego and Orange County; Baja California, Mexico.
Habitat(s): Diegan coastal sage scrub is the preferred habitat of this perennial shrub that may bloom from February to August.
Presence on Site: San Diego County sunflower was observed in scattered patches and as individuals intermixed within the coastal sage scrub throughout the western side of the preserve.
MSCP Management Requirements: This species is not covered under the MSCP; therefore, area specific management directives have not been established for this species.

Graceful tarplant (*Holocarpha virgata* ssp. *elongata*)
Listing: California Rare Plant Rank 4.2; County List D (Appendix E).
Distribution: San Diego, Orange, and Riverside counties.
Habitat: Coastal mesas and foothills with grassland habitats.
Presence on Site: Approximately 40 individuals were observed in disturbed habitat adjacent to coastal sage scrub in the central western portion of the preserve.
MSCP Management Requirements: This species is not covered under the MSCP; therefore, area specific management directives have not been established for this species.

San Diego marsh-elder (*Iva hayesiana*)
Listing: California Rare Plant Rank 2B.2; County List B (Appendix E).
Distribution: San Diego County; Baja California, Mexico.
Habitat(s): Creeks of intermittent streambeds are the preferred habitat of this conspicuous perennial herb. Typically, the riparian canopy is open, allowing substantial sunlight to reach this species. Sandy alluvial embankments with cobbles are frequently utilized.
Presence on Site: This species is present throughout the cismontane alkali marsh habitat along Little Hansen's Creek in the eastern portions of the preserve.
MSCP Management Requirements: This species is not covered under the MSCP; therefore, area specific management directives have not been established for this species.

Southwestern spiny rush (*Juncus acutus* ssp. *leopoldii*)
Status: California Rare Plant Rank 4.2; County List D (Appendix E).
Distribution: Los Angeles, San Bernardino, San Luis Obispo, Ventura, and San Diego counties; Baja California, Mexico.

Habitat(s): Moist, saline, or alkaline soils in coastal salt marshes and riparian marshes are the preferred habitats of this perennial, rhizomatous herb that may bloom from March to June.
Presence on Site: Relatively low numbers of spiny rush were found in the central western portion of the preserve, with the highest concentrations in Hansen's Creek. This species is also present throughout the cismontane alkali marsh habitat along Little Hansen's Creek in the eastern portion of the preserve.
MSCP Management Requirements: This species is not covered under the MSCP; therefore, area specific management directives have not been established for this species.

Munz's sage (*Salvia munzii*)
Listing: California Rare Plant Rank 2B.2; County List B (Appendix E).
Distribution: Southern foothill and coastal region of San Diego County below approximately 1,640 feet in elevation; Baja California, Mexico.
Habitat: Chaparral and Diegan coastal sage scrub are both utilized by this perennial evergreen shrub that may bloom from February to April.
Presence on Site: Eight individuals were observed in the preserve, including seven in the northwestern portion of the site and one in the southeastern portion.
MSCP Management Requirements: This species is not covered under the MSCP; therefore, area specific management directives have not been established for this species.

Ashy spike-moss (*Selaginella cinerascens*)
Status: California Rare Plant Rank 4.1; County List D (Appendix E)
Distribution: Orange and San Diego counties; northwestern Baja California, Mexico.
Habitat(s): This perennial, rhizomatous herb can be found on flat mesas in coastal sage scrub and chaparral.
Presence on Site: Species was present in small numbers in undisturbed areas of sage scrub in the far western portion of the preserve.
MSCP Management Requirements: This species is not covered under the MSCP; therefore, area specific management directives have not been established for this species.

3.2.3 Rare, Threatened, or Endangered Plant Species Not Observed but with Potential to Occur

A list of sensitive plant species with potential to occur within the preserve is provided in Appendix B. There are no sensitive plant species not observed on site that have a moderate or high potential to occur.

3.2.4 Non-native and/or Invasive Plant Species

The preserve is dominated by native plant species; however, numerous non-native plants were identified on site during 2015 field surveys (Appendix A), including species identified on the California Invasive Plant Council's (Cal-IPC's) inventory (2016). The ratings assigned to the species observed on site range from Limited to High. The following High- and Moderate-rated species were observed in the preserve:

Table 2
INVASIVE PLANTS OBSERVED WITHIN THE SWEETWATER VISTAS PRESERVE

Scientific Name	Common Name	Vegetation Community[1]	Cal-IPC Rating	SDMMP Rating
Ailanthus altissima	tree of heaven	NNR	moderate	
Arundo donax	giant reed	SWS, AR	high	3
Brassica nigra	black mustard	DH, DCSS, NNG	moderate	
Bromus diandrus	ripgut brome	DCSS, NNG	moderate	
Bromus madritensis ssp. r*ubens*	red brome	DH, NNR, NNG, DCSS	high	
Carduus pycnocephalus	Italian thistle	DH, NNG, TS	moderate	
Carpobrotus sp.	hottentot fig	NNR, NNV	high	
Centaurea melitensis	tocalote	DH, DCSS, NNG	moderate	
Cirsium vulgare	bull thistle	DH, NNG	moderate	
Cortaderia sp.	pampas grass	DCSS, DW, SWS	high	3
Cynara cardunculus	artichoke thistle	DH	moderate	3
Dipsacus fullonum	teasel	NNG, NNR	moderate	
Ficus carica	fig	NNR, SWS	moderate	
Glebionis coronaria	garland daisy	DH	moderate	5
Foeniculum vulgare	fennel	DH, NNG	high	4
Hirschfeldia incana	short-pod mustard	DH, EUCW, NNG, TS	moderate	
Mesembryanthemum crystallinum	crystalline iceplant	DH	moderate	
Nicotiana glauca	tree tobacco	DH, EUCW	moderate	
Oxalis pes-caprae	Bermuda buttercup	NNG	moderate	
Pennisetum setaceum	fountain grass	DH, NNG, NNV	moderate	
Phoenix canariensis	Canary Island date palm	NNR, SWS	moderate	
Tamarix ramosissima	tamarisk	NNR, SWS, AR, CAM, TS, MFS	high	
Washingtonia robusta	Mexican fan palm	DH, NNR, NNG, SWS	moderate	

[1]CAM=cismontane alkali marsh, DW=disturbed wetland, MFS=mule fat scrub; SWS= southern willow scrub, AR=arundo-dominated riparian, NNR=non-native riparian, TS=tamarisk scrub, DCSS=Diegan coastal sage scrub; NNG=non-native grassland; EUCW=eucalyptus woodland; NNV=non-native vegetation; DH=disturbed habitat, DEV=developed

Additional non-native grasses and forbs have also been documented on site, including filaree (*Erodium* spp.), Crete hedypnois (*Hedypnois cretica*), wild radish (*Raphanus sativa*), castor bean (*Ricinus communis*), and Russian thistle (*Salsola tragus*), among others.

3.3 WILDLIFE SPECIES

3.3.1 Wildlife Species Present and Correlation with Habitat on Site

A total of 82 animal species were observed or otherwise detected in the project site during the biological surveys, including 20 invertebrate, 3 reptile, 54 bird, and 5 mammal species (Appendix C).

3.3.2 Rare, Threatened, or Endangered Wildlife Species Present

Special Status Animals Determined to Occupy the Site (Breeding)

Four special status animal (bird) species were determined to be breeding on the project site during 2015 surveys. Three of the four species are MSCP Covered Species. Each species is listed below in alphabetical order by scientific name, is described, and is shown on Figure 4.

Cooper's hawk (*Accipiter cooperii*)
Status: State Watch List; County Group 1, MSCP Covered Species (Appendix E).
Distribution: Widespread throughout San Diego County.
Habitat(s): Tends to inhabit lowland riparian areas and oak woodlands in proximity to suitable foraging areas such as scrublands or fields.
Presence on Site: Cooper's hawk was observed in areas surrounding Hansen's Creek consistently during 2015 surveys and is presumed to be using the area for breeding.
MSCP Management Requirements: Area specific management directives must include 300-foot impact avoidance areas around active nests, and minimization of disturbance in oak woodlands and oak riparian forests. Nest locations were not determined during 2015 surveys; however, future detection and avoidance will be addressed through general wildlife surveys and sensitive species monitoring, as described in management tasks 4.2.1, 4.2.4, and 4.2.7.

Coastal California gnatcatcher (*Polioptila californica californica*)
Status: Federal Listed Threatened; State Species of Special Concern; County Group 1; MSCP Covered Species (Appendix E).
Distribution: In San Diego County, occurs throughout coastal lowlands.
Habitat(s): Coastal sage scrub, coastal bluff scrub, and coastal sage-chaparral scrub.
Presence on Site: Gnatcatcher was confirmed to be breeding in the northwestern portion of the preserve and immediately east of the southeastern portion of the preserve.
MSCP Management Requirements: Area-specific management directives must include measures to reduce edge effects and minimize disturbance during the nesting period, fire protection measures to reduce the potential for habitat degradation due to unplanned fire, and management measures to maintain or improve habitat quality including vegetation structure. No clearing of occupied habitat may occur between March 1 and August 15. This RMP addresses edge effects to coastal California gnatcatcher through implementation of management task 4.4.3, below. Fire protection is addressed through implementation of management task 4.2.9 and fire management element 4.6, and habitat management is addressed through implementation of management tasks 4.2.4, 4.2.5, and 4.2.7.

Yellow warbler (*Setophaga petechia*)
Status: Federal Bird of Conservation Concern, State Species of Special Concern; County Group 2 (Appendix E).
Distribution: Observed throughout California during the breeding season with rare sightings in winter.
Habitat(s): Riparian woodland, riparian forest, mule fat scrub, and southern willow scrub.
Presence on Site: Yellow warbler was observed in Hansen's Creek during the 2014 surveys and is presumed to be using the area for breeding.

MSCP Management Requirements: This species is not covered under the MSCP; therefore, area specific management directives have not been established for this species.

Least Bell's vireo (*Vireo bellii pusillus*)
Status: Federal Listed Endangered; State Listed Endangered; County Group 1. MSCP Covered Species (Appendix E).
Distribution: Observed throughout coastal southern California in the breeding season, south of Santa Barbara, but in smaller numbers in foothills and mountains.
Habitat(s): Riparian woodland, riparian forest, mule fat scrub, and southern willow scrub.
Presence on Site: Least Bell's vireo was confirmed to be breeding at multiple locations within Hansen's and Little Hansen's Creeks.
MSCP Management Requirements: New developments adjacent to preserve areas that create conditions attractive to brown-headed cowbirds shall monitor and control cowbirds. Area-specific management directives must include measures to provide appropriate successional habitat, upland buffers for all known populations, cowbird control, and specific measures to protect against detrimental edge effects to this species. Any clearing of occupied habitat must occur between September 15 and March 15 (i.e., outside of the nesting period). This RMP addresses edge effects to least Bell's vireo through implementation of management task 4.4.3, below. The preserve includes upland buffers of coastal sage scrub and non-native grassland surrounding the riparian areas. Brown-headed cowbirds were not observed on site during 2014 or 2015 surveys; therefore, specific cowbird control measures are not included in this RMP. If brown-headed cowbirds become an issue in the future, they will be addressed through adaptive management element 4.3.

Special Status Animals Observed on the Site (Non-Breeding)

Four special status animal species were observed foraging and/or moving through or over the project site during 2015 surveys. These species were determined not to use the site for breeding. One of the four species is a MSCP Covered Species. Each species is listed below in alphabetical order by scientific name, is described, and is shown on Figure 4.

Red-shouldered hawk (*Buteo lineatus*)
Status: County Group 1 (Appendix E).
Distribution: Widespread throughout San Diego County.
Habitat(s): Riparian woodland, oak woodland, orchards, eucalyptus groves, or other areas with tall trees.
Presence in the Project Site: Red-shouldered hawk was observed in areas surrounding Hansen's Creek on a single occasion during 2015 surveys. Suitable nesting habitat occurs.
MSCP Management Requirements: This species is not covered under the MSCP; therefore, area specific management directives have not been established for this species.

Turkey vulture (*Cathartes aura*)
Status: County Group 1 (Appendix E).
Distribution: Observed throughout San Diego County with the exception of extreme coastal San Diego where development is heaviest.

Habitat(s): Foraging habitat includes most open habitats with breeding occurring in crevices among boulders.
Presence on Site: Turkey vulture was observed soaring over the preserve during 2015 surveys. No nesting habitat occurs. Marginal foraging habitat occurs.
MSCP Management Requirements: This species is not covered under the MSCP; therefore, area specific management directives have not been established for this species.

Northern harrier (*Circus cyaneus*)
Status: State Species of Special Concern; County Group 1, MSCP Covered Species (Appendix E).
Distribution: Scattered throughout San Diego County lowlands.
Habitat(s): Nests on ground in shrubby vegetation, usually at marsh edge; nest built of a large mound of sticks in wet areas. Typical habitat consists of open grassland and marsh.
Presence on Site: A single harrier was observed flying over the preserve on a single occasion during the 2015 surveys. No suitable nesting habitat occurs. Marginal foraging habitat occurs.
MSCP Management Requirements: Area specific management directives must include 900-foot impact avoidance areas around active nests, and management of foraging habitat within 4 miles of known nesting habitat, including a known nest site in the Sweetwater Marsh area. Monitoring, nest avoidance, and management of foraging habitat are addressed through implementation of management tasks 4.2.1, 4.2.4, and 4.2.7.

Monarch butterfly (*Danaus plexippus*)
Status: --/--, County Group 2
Distribution: Winter roost sites extend along the coast from northern Mendocino to Baja California, Mexico.
Habitat: Roosts located in wind-protected tree groves (eucalyptus, Monterey pine, cypress), with nectar and water sources nearby. Larval host plants consist of milkweeds (*Asclepias* sp.).
Presence on Site: This species was observed flying through the preserve during 2015 surveys. This species is not likely to roost on the site.
MSCP Management Requirements: This species is not covered under the MSCP; therefore, area specific management directives have not been established for this species.

3.3.3 Rare, Threatened, or Endangered Wildlife Species with High Potential to Occur

Six additional special status animal species that were not observed, but still considered to have a high potential to occur, are dun skipper (*Euphys vestries harbisoni*), orange-throated whiptail (*Aspidoscelis hyperythra*), white-tailed kite (*Elanus caeruleus*), yellow-breasted chat (*Ictera virens*), San Diego black-tailed jackrabbit (*Lepus californicus bennettii*), and San Diego desert woodrat (*Neotoma lepida intermedia*). Special status species evaluated for potential to occur are listed in Appendix D. Finally, while the preserve does not currently support suitable habitat for San Diego cactus wren (*Campylorhynchus brunnicapillus couesi*), the inclusion of cactus planting in the restoration plan may lead to its use of the preserve in the future.

3.3.4 Non-native and/or Invasive Wildlife

No invasive animal species have been detected on site. Non-native species detected on site were the European honey bee (*Apis mellifera*), house sparrow (*Passer domesticus*), and nutmeg mannikin (*Lonchura punctulata*). European honey bees were introduced to North America in the 17th century and are important pollinators for many of our food crops. They also act as pollinators for a variety of native plants species, including black sage (*Salvia mellifera*). The house sparrow was introduced to North America in the 19th century and is widespread throughout San Diego County, while the nutmeg mannikin is a popular cage bird native to south Asia and has been observed in San Diego County since about 1999 (Unitt 2004). None of these species poses a significant management risk for the preserve. It is expected that other non-native and/or invasive animals not detected on site, such as Argentine ants (*Linepithema humile*), might occur within the preserve now or in the future.

3.4 OVERALL BIOLOGICAL AND CONSERVATION VALUE

A good portion of the preserve is designated as Very High on the County's Habitat Evaluation Map, Attachment J of the Biological Mitigation Ordinance (BMO [County 2010b]); however, the majority of this habitat is also designated as Take Authorized. The Diegan coastal sage scrub in the northwestern and southeastern portions of the preserve is occupied by the coastal California gnatcatcher and would meet the criteria to be considered Sensitive Habitat Lands and Biological Resource Core Area (BRCA), as defined in the County's Resource Protection Ordinance (RPO) and BMO. The high-quality riparian habitat along Hansen's Creek and Little Hansen's Creek is also considered Sensitive Habitat Lands and BRCA. In addition to providing live-in habitat for gnatcatcher and other animals, the preserve also functions to facilitate bird movement through the local area between Dictionary Hill and the Sweetwater River. In addition to coastal California gnatcatcher, seven other sensitive animal species have been detected in the preserve: Cooper's hawk, least Bell's vireo, yellow warbler, monarch butterfly, northern harrier, red-shouldered hawk, and turkey vulture. Six sensitive plant species were observed in the preserve: San Diego sunflower, graceful tarplant, southwestern spiny rush, San Diego marsh-elder, ashy spike-moss, and Munz's sage.

4.0 BIOLOGICAL RESOURCES MANAGEMENT

4.1 MANAGEMENT GOALS

The purpose of this RMP is to detail the methods to preserve and maintain the long-term viability and the functions and values of native habitats within the preserve along with the listed and sensitive species they support. In addition, this RMP establishes the following goals with regard to biological resources:

- To preserve and manage 27.9 acres of habitat within the preserve in perpetuity for the benefit of sensitive species, MSCP covered species, and existing natural communities;

- To ensure the continued existence of sensitive plant and animal species in the preserve and/or to facilitate their expansion within the preserve;

- To reduce, control, and where feasible eradicate non-native, invasive flora known to be detrimental to native species and/or the local ecosystem.

4.2 BIOLOGICAL MANAGEMENT TASKS

Biological monitoring will be conducted in the preserve to gather information necessary to assist the Resource Manager in making land management decisions and meeting the goals of this RMP. Biological management tasks include a baseline biological inventory, biological mapping updates, botanical inventories, sensitive species monitoring, coastal California gnatcatcher surveys, least Bell's vireo surveys, exotic plant control, predator control, and fire/flood management. These tasks are further described below (Sections 4.2.1 through 4.2.9).

The preserve will be visually inspected for changes during annual maintenance and monitoring visits, and all observations will be documented. Any substantial changes will be monitored more closely to determine the necessity of additional measures. Ongoing maintenance and administration, as further discussed in Section 4.4, is the responsibility of the Resource Manager, and will be conducted to ensure no loss of resource quality within the preserve.

The final RMP will include specific goals and objectives to inform the management tasks and will incorporate current monitoring and management recommendations from the SDMMP Management Strategic Plan (SDMMP 2013) and other regional efforts.

4.2.1 Baseline Biological Inventory

The quantity and quality of vegetation communities within the preserve will be documented during the first year of active management. This inventory will incorporate data from the project's biological technical report (HELIX 2016a) with the findings of an initial baseline inventory field survey. To optimize the probability of detecting sensitive species reported or expected to occur within the preserve, this survey should be conducted between March and May, when the majority of sensitive plant and animal species are most detectable. These data will allow the Resource Manager to measure habitat changes caused by natural and human effects and to evaluate management efforts during subsequent years.

Upon implementation of this RMP, the Resource Manager will be provided digital files containing the existing vegetation and sensitive resources data, which will be updated following the baseline inventory field survey in the first year of active management. The intent of this update is to document current conditions in the open space areas (including graphic and tabular depictions of habitat acreages), document all species observed (either directly or indirectly by sign such as scat, tracks, etc.) within each identified habitat type, and document the locations of any sensitive plant and animal species.

4.2.2 Update Vegetation Mapping

Vegetation mapping will be updated every five years following implementation of this RMP. A site visit will be conducted using updated aerial imagery to determine vegetation communities present at the time of the survey. The biological resources maps of the preserve will be updated accordingly.

4.2.3 Botanical Inventory

An inventory of plant species observed in the preserve will be compiled every five years during the vegetation mapping update. The inventory will include a visual assessment of each population of sensitive plant species observed in the preserve in order to help track overall population trends, and specific attention will be given to any factors that may be negatively affecting those species (i.e., vandalism, mortality, etc.). Any new plant species observed incidentally during maintenance events or other site visits would be listed in that year's annual report, with particular focus on new occurrences rare plants and of invasive species. Any SDMMP management level 1 or 2 species (http://portal.sdmmp.com/msp.php#invasive) will be reported to SDMMP. Locations of sensitive plant species will be added to the biological resources maps of the preserve.

4.2.4 Sensitive Species Monitoring

It is the responsibility of the Resource Manager to evaluate the status of preserved species within the preserve and to institute protective measures if any individual species becomes threatened. Both preservation and monitoring of sensitive plant and animal populations within the preserve are necessary in order to achieve the overall long-term conservation of these species. Sensitive species monitoring will help the Resource Manager identify long- and short-term threats and recommend any necessary protective measures.

Sensitive animal monitoring will occur during annual management activities. In each assessment, the Resource Manager will observe and document sensitive species locations and conditions, and the locations of any observed/detected sensitive species will be documented and added to the biological resources maps. Monitoring/reporting efforts will include sensitive species previously documented within the preserve. In addition, any new animal species observed incidentally during maintenance events or other site visits would be listed in that year's annual report.

Focused surveys are planned every five years for coastal California gnatcatcher and least Bell's vireo, as detailed below. Surveys and monitoring for other sensitive wildlife species with regional monitoring objectives, such as the San Diego cactus wren, will occur concurrent with annual assessments and focused surveys for gnatcatcher and vireo.

4.2.5 Coastal California Gnatcatcher Surveys

Focused surveys for coastal California gnatcatcher, consisting of three site visits spaced at least one week apart, will be conducted every five years during the gnatcatcher breeding season (February 15 through August 31), with a preference to conducting surveys at the height of the breeding season (March –May), within appropriate habitat in the preserve. Any gnatcatchers and other sensitive species observed incidentally during maintenance events or other site visits would also be documented.

4.2.6 Least Bell's Vireo Surveys

Focused surveys for least Bell's vireo, consisting of three site visits spaced at least 10 days apart, will be conducted every five years during the survey period (April 10 to July 31), with a preference to conducting surveys at the height of the breeding season (late April to early July),

within appropriate habitat in the preserve. Any vireos and other sensitive species observed incidentally during maintenance events or other site visits would also be documented.

4.2.7 Exotic Plant Control

The Resource Manager will coordinate with land owners adjacent to the preserve to provide information regarding exotic plant species and to increase the efficiency of exotic plant control programs. The information would provide recommendations for restricting the use of exotic plant species with a Cal-IPC rating of High or Moderate in landscaping efforts. Fuel modification zones adjacent to the preserve will be planted with native species, most of which occur within the preserve.

Invasive non-native plants shall be monitored for and treated twice a year in January/February and April/May, when non-natives are most prevalent. Treatment of non-natives shall occur concurrent with the monthly site visits performed by the Resource Manager if feasible. The Resource Manager is responsible for removal of species rated as High by the Cal-IPC within the same year that they are discovered. Invasive plant removal efforts will be spatially targeted to prioritize the areas of the property with the highest biological value or potential value, and species-targeted to prioritize the exotic species posing the greatest threat across the property, based on monitoring results. For example, removing fountain grass may be a focus for improving coastal sage scrub habitat value, while removing castor bean would benefit riparian habitat. The budget for invasive plant control will be sufficient to perform ongoing work on an annual basis in order to continually improve the property.

If the use of herbicide is deemed necessary, application should be minimal, and may only occur in compliance with all federal and state laws. All herbicide use will be monitored by a biologist, be applied by backpack sprayers or stump painting directly on target weeds, and will involve short duration, biodegradable chemicals.

Non-native plant species treatment and removal activities such as use of gas-powered chainsaws and weed whippers that may disturb raptors and migratory birds should avoid the general bird breeding season (February 1 through September 15). If these activities must occur during the breeding season, they shall be limited to areas where the Preserve Manager has confirmed the absence of active bird nests. Appropriate buffer distances shall be provided for active nests, including a 300-foot avoidance area for Cooper's hawk nests and a 900-foot avoidance area for northern harrier.

4.2.8 Predator Control

A moderate tolerance for pest species will be permitted, but if the Resource Manager determines that pest eradication measures (pesticide application) are required, the County will be contacted to determine the need and appropriate methods, including potentially hiring a licensed pest control advisor. Exotic species control/eradication programs should be implemented at the appropriate time of year depending on the pest species and field conditions, and should be coordinated with efforts on adjacent properties.

4.2.9 Fire and Flood Management

Fire is an important element in the ecology of southern California but can also present potential hazards to habitat within the preserve. If a fire should occur in the preserve, vegetation within the preserve will be allowed to recover naturally; however, seeding and/or planting of container stock may be required at the discretion of the Resource Manager. Special attention to weed establishment following fire will be assessed by the Resource Manager.

Drainages within the preserve may flood during heavy rains. Such flooding could damage habitat within the preserve through scour, erosion, sedimentation, and spread of weeds. The Resource Manager will monitor habitat areas disturbed by flooding and implement remedial efforts as needed. Flood-damaged areas should be allowed to recover naturally; however, remedial measures, including erosion control, seeding, and/or planting of container stock, may be required if natural recovery is inadequate or if unstable conditions (e.g., slope undercutting) are created. The Resource Manager will remove any exotic species introduced during flooding events.

4.3 ADAPTIVE MANAGEMENT

The Resource Manager is responsible for interpreting the results of site monitoring to determine the ongoing success of the RMP. If it is necessary to modify the plan between regularly scheduled updates, plan changes shall be submitted to the County for approval as required. The Final RMP will include additional detail on adaptive management.

4.4 OPERATIONS, MAINTENANCE, AND ADMINISTRATION TASKS

Ongoing maintenance and administration, which is the responsibility of the Resource Manager, will be conducted to ensure no loss of resource quality within the preserve. The general operations, maintenance, and administrative tasks to be conducted by the Resource Manager will include those discussed below.

4.4.1 Annual Monitoring Reports

An annual report will be submitted to the County that will summarize the overall condition of vegetation communities and sensitive species in the preserve, propose management tasks for the following year, and discuss results of management activities proposed in the previous report. Submitted annually by the end of January, this report will compare the most recent data with those collected in previous years, evaluate sensitive species status, and outline appropriate remedial measures. Funds for County review will also be included with submittal of the annual report.

The results of updated vegetation mapping, botanical inventory, coastal California gnatcatcher surveys, and least Bell's vireo surveys (all every fifth year) should be included in the appropriate annual letter reports.

The report shall include a summary of expenses during the past year and projected expenses for the next year, as well as the status of the endowment.

The report (or attached digital files) will also include photos taken each year from representative photo points within the open space, for qualitative comparison of habitat health.

4.4.2 Management Plan Review

This RMP will be reviewed every five years to determine the need for revisions or updates. If conditions change within the preserve, it may be necessary to revise the tasks outlined in this plan to ensure continued success of the stated goals.

4.4.3 Access Control, Fencing, and Signage

To help prevent human-induced degradation of the preserve due to illegal occupancy, trespassing, removal of resources, or dumping of trash or debris, the Resource Manager will restrict access to the preserve. The project applicant will install fencing along roads and residential pad edges abutting the preserve (Figure 5). Fencing will be maintained by the Resource Manager as needed during monthly visits. Permanent signage will be posted every 200 feet along the perimeter of the preserve (Figure 5). Signs will be maintained by the Resource Manager as needed during monthly visits. Signs should be corrosion-resistant (e.g., steel), measure at minimum 6-by-9-inches in size, be posted on a metal post at least 3 feet above ground level, and provide notice in both Spanish and English that the area is an ecological preserve with trespassing prohibited.

The signs will state the following:

> Sensitive Environmental Resources
> Disturbance Beyond this Point is Restricted by Easement
>
> Contact Information:
> County of San Diego Department of Planning & Development Services
> Ref. PDS2015-GPA-15-006
>
> Recursos Ambientalmente Sensibles
> Prohibida Su Entrada

4.4.4 Illegal Occupancy

Illegal occupancy has been an issue in the preserve in the past when the site was vacant, but should become less common once the new homes are built. The Resource Manager will survey the preserve for evidence of illegal access concurrently with other site management activities and file a report with the Sheriff and the County PDS, if necessary.

4.4.5 Removal of Resources

Removal of any plants, animals, rocks, minerals, or other natural resources from the preserve is prohibited. The Resource Manager will maintain a log of illegal collecting and will report individuals caught removing natural resources from the preserve to the USFWS, CDFW, County, and/or Sheriff's Office as needed. The Resource Manager may allow and supervise seed collection and plant cuttings as part of revegetation efforts within the preserve and/or in nearby



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Biological Open Space, Restoration, Conceptual Fencing and Signage

SWEETWATER VISTAS

HELIX Environmental Planning

Figure 5

areas. Any such collected plant materials should be limited to that necessary to ensure successful revegetation while not adversely affecting local plant populations.

4.4.6 Trash Removal and Vandalism Repair

The Resource Manager will conduct general trash removal within the preserve during regular monthly management site visits. Additionally, damage caused by vandalism will be repaired. Trash removal and vandalism repair will occur as needed during regular monthly site visits.

4.4.7 Hazardous Materials Monitoring

The release of hazardous materials such as fuels, oil, vegetation clippings, trash, and landscaping related chemicals (e.g., pesticides and herbicides) has potential to affect the preserve negatively. Although no specific survey will be conducted, if such hazardous materials are observed within the preserve during regular monthly site visits, remedial measures to remove the material will occur.

4.5 PUBLIC USE ELEMENT

The preserve will not have public trails or other recreational facilities. The existing County sewer easement through the preserve will remain in place and be used by the County to access the sewer line for maintenance. The existing flood control facility at the southern tip of the preserve will be privately maintained by the HOA or other qualified entity, in coordination with the Resource Manager. The preserve is intended to serve as a habitat preserve and as such is not compatible with many activities.

Activities that will be specifically prohibited include:

- Use of herbicides or pesticides (except to remove non-native species as necessary), fertilizers (except as approved by the restoration specialist within the restoration area), or other agricultural chemicals;

- Weed abatement activities for fuel management or other incompatible fire protection activities;

- Use of Off Highway Vehicles (OHVs) and any other motorized vehicles except in the execution of management duties;

- Grazing or other agricultural activity of any kind;

- Recreational activities including, but not limited to, hiking, horseback riding, biking, hunting, or fishing;

- Commercial or industrial uses;

- Construction, reconstruction, or placement of any building or other improvement, billboard, or sign, except for open space signs along the edge of the preserve;

- Depositing or accumulation of soil, trash, ashes, refuse, waste, bio-solids or any other material;

- Planting, introduction or dispersal of non-native or exotic plant or animal species;

- Altering the general topography of the preserve, including but not limited to building of roads and flood control work;

- Removing, destroying, or cutting of trees, shrubs or other vegetation, except as deemed necessary by the Resource Manager for sensitive species management; or as required by federal, state or local law or by governmental order for (1) emergency fire breaks; (2) maintenance of existing roads; (3) prevention or treatment of disease; or (4) required mitigation programs; and

- Manipulating, impounding, or altering any natural watercourse, body of water or water circulation on the open space, and activities or uses detrimental to water quality, including but not limited to degradation or pollution of any surface or sub-surface waters.

4.6 FIRE MANAGEMENT ELEMENT

No fire management activities (clearing, thinning, mowing, discing, blading, etc.) are allowed within the preserve. All such measures to reduce wildfire risk are to occur entirely outside of the preserve. As previously discussed, an LBZ has been established between the proposed development and the preserve so that all required fuel modification for the development would occur outside the preserve.

4.7 MANAGEMENT CONSTRAINTS

This RMP follows the requirements of the County. Although it anticipates measures for most foreseeable contingencies, several external constraints remain. For example, changes in rainfall patterns may affect the populations of sensitive plant and animal species within the preserve. Likewise, changes in other environmental factors such as air pollution, hazardous waste runoff, and erosion could have detrimental effects on the habitat within the preserve. A 100-foot wide LBZ will be established between the preserve and the proposed residential development, as well as along areas where existing residential development abuts the site. The LBZ will act as a buffer to protect the preserve from clearing for fire management, as well potential edge effects such as noise and dumping of trash and debris. However, portions of the preserve extend to the property boundary and these areas have greater susceptibility to edge effects from adjacent land uses.

5.0 RESOURCE MANAGEMENT PLAN SUMMARY AND BUDGET

5.1 OPERATIONS AND BUDGET SUMMARY

Table 3 provides a summary of all management tasks described above and the frequency of each task. The budget for these tasks will be provided in a PAR as an appendix to the final RMP after a Resource Manager is identified.

5.2 EXISTING STAFF AND ADDITIONAL PERSONNEL NEEDS SUMMARY

Staff and personnel requirements will be provided in the final RMP after a Resource Manager is identified.

Table 3
MANAGEMENT TASKS

Task	Frequency
Biological Resources Tasks	
Baseline Inventory	One time
Update Biological Mapping	Every 5 years
Botanical Inventory	Every 5 years
Coastal California Gnatcatcher Surveys	Every 5 years
Least Bell's Vireo Surveys	Every 5 years
Educate Surrounding Home Owners	Annually
Exotic Plant Control	As needed; at least twice annually
Predator Control	As needed
Fire and Flood Management	As needed
Operations, Maintenance, and Administration Tasks	
Monitoring Reports	Annually
Management Plan Review	Every 5 years
Access Control	Monthly
Trash Removal and Vandalism Repair	Monthly
Hazardous Materials Monitoring	Monthly

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Appendix A

PLANT SPECIES OBSERVED

Appendix A
PLANT SPECIES OBSERVED
SWEETWATER VISTAS

FAMILY	SCIENTIFIC NAME	COMMON NAME	HABITAT**
Agavaceae	*Chlorogalum parviflorum*	soap plant	DCSS
Adoxaceae	*Sambucus nigra* ssp. *caerulea*	blue elderberry	DCSS
Aizoaceae	*Carpobrotus* sp.*	hottentot fig	NNR, NNV
	*Mesembryanthemum crystallinum**	crystalline iceplant	DH
Anacardiaceae	*Malosma laurina*	laurel sumac	DH, DCSS
	Rhus integrifolia	lemonade berry	DCSS
	*Schinus molle**	Peruvian pepper tree	DCSS, NNV
	*Schinus terebinthifolius**	Brazilian pepper tree	NNR, NNV
Apiaceae	*Apium graveolens**	wild celery	SWS, NNR
	*Daucus carota**	Queen Anne's lace	DCSS, DH
	Daucus pusillus	wild carrot	DCSS, NNG
	*Foeniculum vulgare**	fennel	DH, NNG
Apocynaceae	*Funastrum cynanchoides*	climbing milkweed	DCSS
	*Nerium oleander**	oleander	DH, NNV
Arecaceae	*Phoenix canariensis**	Canary Island date palm	NNR, SWS
	*Washingtonia robusta **	Mexican fan palm	DH, NNR, NNG, SWS
Asteraceae	*Ambrosia psilostachya*	western ragweed	DCSS, NNG, SWS
	Artemisia californica	California sagebrush	DCSS
	Baccharis pilularis	coyote brush	DCSS, NNG
	Baccharis salicifolia	mule fat	MFS, DCSS, SWS, TS
	Baccharis sarothroides	broom baccharis	DCSS, DH, EUCW, NNR, SWS, TS
	Bahiopsis laciniata†	San Diego County viguiera	DCSS
	*Carduus pycnocephalus**	Italian thistle	DH, NNG, TS
	*Centaurea melitensis**	tocalote	DH, DCSS, NNG
	*Cirsium vulgare**	bull thistle	DH, NNG
	Corethrogyne filaginifolia	sand aster	DCSS
	*Cynara cardunculus**	artichoke thistle	DH
	Deinandra fasciculata	clustered tarweed	DCSS, NNG
	Encelia californica	California encelia	DCSS
	Ericameria sp.	goldenbush	DCSS
	Eriophyllum confertiflorum	golden yarrow	DCSS
	*Glebionis coronaria**	garland daisy	DH
	*Hedypnois cretica**	Crete weed	NNG
	*Helminthotheca echioides**	bristly ox-tongue	DH, NNG
	Holocarpha virgata†	graceful tarplant	DH

Appendix A (cont.)
PLANT SPECIES OBSERVED
SWEETWATER VISTAS

FAMILY	SCIENTIFIC NAME	COMMON NAME	HABITAT**
Asteraceae (cont.)	*Hypochaeris glabra**	smooth cat's-ear	DH, NNG
	Isocoma menziesii	San Diego goldenbush	DCSS
	Iva hayesiana†	San Diego marsh-elder	CAM
	Lasthenia californica	goldfields	DCSS
	*Logfia gallica**	narrowleaf filago	DCSS
	Pseudognaphalium californicum	California everlasting	NNG, DCSS
	*Silybum marianum**	milk thistle	DH, NNG, NNR
	*Sonchus asper**	spiny sow-thistle	DH, NNG
	*Sonchus oleraceus**	common sow-thistle	DH
	Stephanomeria virgata	virgate wreath-plant	DCSS
	Stylocline gnaphaloides	everlasting nest straw	DCSS
Boraginaceae	*Amsinckia menziesii*	rancher's fiddleneck	NNG
	Cryptantha intermedia	nievitas	DCSS
	Cryptantha sp.	popcorn flower	DCSS
	Heliotropium curassavicum	salt heliotrope	SWS
	Pectocarya sp.	pectocarya	DCSS
	Plagiobothrys collinus	Cooper's popcornflower	DCSS
Brassicaceae	*Brassica nigra**	black mustard	DH, DCSS, NNG
	*Hirschfeldia incana**	short-pod mustard	DH, EUCW, NNG, TS
	Lepidium nitidum	shining pepperweed	DCSS
	Nasturtium officinale	watercress	DW, NNR
	*Raphanus sativus**	wild radish	DH, NNG
	*Sisymbrium orientale**	hedge mustard	DH
Chenopodiaceae	*Salsola tragus**	Russian thistle	DH
Crassulaceae	*Crassula connata*	pygmy-weed	DCSS
Cucurbitaceae	*Marah macrocarpus*	wild cucumber	DCSS
Cyperaceae	*Cyperus involucratus**	umbrella sedge	DW
	Schoenoplectus californicus	California bulrush	SWS
	Schoenoplectus pungens	three square bulrush	NNR, SWS
Dipsacaeae	*Dipsacus fullonum**	teasel	NNG, NNR
Euphorbiaceae	*Euphorbia peplus**	petty spurge	DH
	*Ricinus communis**	castor-bean	DH, SWS, EUCW
Fabaceae	*Acacia sp.**	acacia	NNV
	Acmispon glaber	deer weed	DCSS
	Astragalus trichopodus	milkvetch	DCSS
	Lupinus sp.	lupine	DCSS
	*Medicago polymorpha**	bur-clover	DH

Appendix A (cont.)
PLANT SPECIES OBSERVED
SWEETWATER VISTAS

FAMILY	SCIENTIFIC NAME	COMMON NAME	HABITAT**
Fabaceae (cont.)	*Melilotus indicus**	Indian sweetclover	DH, DCSS, NNG
Fagaceae	*Quercus agrifolia*	coast live oak	DCSS
Gentianaceae	*Zeltnera venusta*	canchalagua	DCSS
Geraniaceae	*Erodium cicutarium**	red-stemmed filaree	NNG
Hydrophyllaceae	*Phacelia* sp.	phacelia	DCSS
	Phacelia parryi	Parry's phacelia	DCSS
Iridaceae	*Sisyrinchium bellum*	blue-eyed grass	NNG
Juncaceae	*Juncus acutus* var. *leopoldii*†	southwestern spiny rush	DW, SWS, CAM, TS
	Juncus bufonius	toad rush	CAM, DW, NNR
Lamiaceae	*Marrubium vulgare**	horehound	DCSS, DH, NNG
	Salvia apiana	white sage	DCSS
	Salvia mellifera	black sage	DCSS,
	Salvia munzii†	Munz's sage	DCSS
	Trichostema lanceolatum	vinegar weed	DCSS
Liliaceae	*Allium jepsonii*	Jepson's onion	DCSS
Malvaceae	*Malacothamnus fasciculatus*	chaparral mallow	DCSS
Moraceae	*Ficus carica**	fig	NNR, SWS
Myrsinaceae	*Anagallis arvensis**	scarlet pimpernel	DCSS
Myrtaceae	*Eucalyptus* sp.*	eucalyptus	NNR, DCSS, EUCW, MFS
	*Eucalyptus camaldulensis**	red gum eucalyptus	EUCW
Nyctaginaceae	*Bougainvillea sp.**	bougainvillea	NNV
Oleaceae	*Fraxinus uhdei**	shamel ash	NNR, SWS
	*Olea europaea**	olive	DCSS, NNV
Onagraceae	*Clarkia purpurea*	purple clarkia	NNG
Oxalidaceae	*Oxalis pes-caprae**	Bermuda buttercup	NNG
Phrymaceae	*Mimulus aurantiacus*	bush monkeyflower	DCSS
Plantaginaceae	*Plantago erecta*	dwarf plantain	DCSS
Plumbaginaceae	*Limonium perezii**	Perez's sea lavender	DH
Poaceae	*Arundo donax**	giant reed	SWS, AR
	*Bromus diandrus**	ripgut brome	DCSS, NNG
	Bromus madritensis ssp. r*ubens**	red brome	DH, NNR, NNG, DCSS
	Carex spissa	San Diego sedge	CAM
	*Cortaderia sp.**	pampas grass	DCSS, DW, SWS
	Distichlis spicata	salt grass	SWS, DCSS
	*Festuca myuros**	rat-tail fescue	DCSS
	*Pennisetum setaceum**	fountain grass	DH, NNG, NNV

Appendix A (cont.)
PLANT SPECIES OBSERVED
SWEETWATER VISTAS

FAMILY	SCIENTIFIC NAME	COMMON NAME	HABITAT**
Poaceae (cont.)	*Phalaris paradoxa**	hood canarygrass	DCSS
	*Schismus barbatus**	Mediterranean schismus	DCSS
	*Stipa miliacea**	smilo grass	NNR
	Stipa pulchra	purple needlegrass	DCSS, NNG
Polemoniaceae	*Navarretia hamata*	hooked navarettia	DCSS
Polygonaceae	*Eriogonum fasciculatum*	flat-top buckwheat	DCSS
	Pterostegia drymarioides	California thread-stem	DCSS
Portulaceae	*Calandrinia ciliata*	fringed redmaids	DCSS
Ranunculaceae	*Clematis ligusticifolia*	virgin's bower	NNR
Rhamnaceae	*Rhamnus crocea*	spiny redberry	DCSS
Rosaceae	*Heteromeles arbutifolia*	toyon	DCSS
	Rosa californica	California rose	NNR, SWS
Rubiaceae	*Gallium aparine**	common bedstraw	DCSS
Salicaceae	*Salix gooddingii*	black willow	NNR, SWS
	Salix laevigata	red willow	SWS
	Salix lasiolepis	arroyo willow	NNR, SWS, AR
Saururaceae	*Anemopsis californica*	yerba mansa	CAM, NNR, SWS
Scrophulariaceae	*Myoporum acuminatum**	strychnine bush	DH, EUCW
	*Myoporum parvifolium**	creeping myoporum	DEV
	Antirrhinum nuttallianum	Nuttall's snapdragon	DCSS
Selaginellaceae	*Selaginella cinerascens*†*	ashy spike moss	DCSS
Simaroubaceae	*Ailanthus altissima**	tree of heaven	NNR
Solanaceae	*Datura wrightii*	Jimson weed	DCSS
	*Nicotiana glauca**	tree tobacco	DH, EUCW
Tamaricaceae	*Tamarix ramosissima**	tamarisk	NNR, SWS, AR, CAM, TS, MFS
Themidaceae	*Dichelostemma capitatum*	blue dicks	NNG
Typhaceae	*Typha* sp.	cat-tail	SWS, NNR
Urticaceae	*Parietaria hespera*	pellitory	DCSS
	*Urtica urens**	dwarf nettle	DEV, DH

*Non-native Species
**CAM=cismontane alkali marsh, DW=disturbed wetland, MFS=mule fat scrub; SWS= southern willow scrub, AR=arundo-dominated riparian, NNR=non-native riparian, TS=tamarisk scrub, DCSS=Diegan coastal sage scrub; NNG=non-native grassland; EUCW=eucalyptus woodland; NNV=non-native vegetation; DH=disturbed habitat, DEV=developed

†Special Status Species

Appendix B

SENSITIVE PLANT SPECIES WITH POTENTIAL TO OCCUR

Appendix B
SENSITIVE PLANT SPECIES WITH POTENTIAL TO OCCUR – SWEETWATER VISTAS

Common Name	Species Name	Status	Habitat Associations	Potential to Occur
Blue streamwort	*Stemodia durantifolia*	--/-- CNPS 2B.1 County List B	Small herb. Occurs in wet sandy areas along small creeks and is an obligate wetland plant. Elevation range 150-915 meters. Flowering period Jan – Dec.	**Not expected.** Species believe to be extant from project location. Suitable habitat on site is marginal.
Brewer's calandrinia	*Calandrinia breweri*	--/-- CNPS 4.2 County List D	Annual herb. Occurs in chaparral and coastal scrub; burned areas. Elevation 10-1220 meters. Flowering period Mar – Jun.	**Low.** Marginal habitat on site. Species not observed during surveys.
Campo clarkia	*Clarkia delicata*	--/-- CNPS 1B.2 County List A	Annual herb. Occurs in areas or the periphery of oak woodlands and cismontane chaparral. Elevation 235-1000 meters. Flowering period Apr – Jun.	**Not Expected.** No suitable habitat on site. The site occurs outside of this species range.
Coast barrel cactus	*Ferocactus viridescens*	--/-- CNPS 2B.1 County List B	Optimal habitat for this cactus appears to be Diegan coastal sage scrub hillsides, often at the crest of slopes and growing among cobbles. Flowering period May – Jun.	**None.** Species would have been observed is present.

Appendix B (cont.)
SENSITIVE PLANT SPECIES WITH POTENTIAL TO OCCUR – SWEETWATER VISTAS

Common Name	Species Name	Status	Habitat Associations	Potential to Occur
Cooper's rein orchid	*Piperia cooperi*	--/-- CNPS 4.2 County List D	Small herb. Occurs in vernally moist areas and in shallow soils adjacent to water courses. Elevation range 0-915 meters. Flowering period Mar – Jun.	**Low.** Potential habitat on site is highly disturbed due to the presence of homeless encampments.
Davidson's saltscale	*Atriplex serenana var. davidsonii*	--/-- CNPS 1B.2 County List A	Annual herb. Occurs in coastal bluffs and coastal scrub on alkaline soil. Elevation range 3-250 meters. Flowering period Apr – Oct.	**None.** Project site is not within the range of this species.
Gairdner's yampah	*Perideridia gairdneri gairdneri*	--/-- CNPS 4.2 County List D	Perennial herb. Endemic to California. Usually occurs in wetlands, but occasionally found in non wetlands. Elevation range 0 – 610 meters. Flowering period Jun – Oct.	**None.** Project site is not within the range of this species.
Graceful tarplant	*Holocarpha virgata* ssp. *elongata*	--/-- CNPS 4.2 County List D	Medium herb. Occurs in grasslands on coastal mesas and in the foothills. Elevation range 0-915 meters. Flowering period May – Nov.	**Species Present.** Approximately 40 individuals observed on site during 2015 surveys.
Large leaf fillary	*California macrophylla* (*Erodium macrophyllum* var. *macrophyllum*)	--/-- CNPS 1B.1 County List B	Annual herb. Found in cismontane woodland, valley, and foothill grassland on clay soils. Elevation range 15-1200 m. Flowering period Mar to May.	**Not Expected.** The closest observation for this species is more than 12 km away from the project site.

Appendix B (cont.)
SENSITIVE PLANT SPECIES WITH POTENTIAL TO OCCUR – SWEETWATER VISTAS

Common Name	Species Name	Status	Habitat Associations	Potential to Occur
Lewis sun cup	*Camissonia lewisii*	--/-- CNPS 3 County List C	Annual herb. Occurs in very sandy substrates near the beach, typically on beach bluffs. Elevation 0-300 meters. Flowering period Mar – Jun.	**Not Expected.** Suitable habitat does not occur on site.
Ashy spike-moss	*Selaginella cinerascens*	--/-- CNPS 4.1 County List D	Prostrate herb. Occurs in rocky, open areas in sage scrub and chaparral. Elevation range 0-305 meters. No flowering period, as it is not a flowering plant. Above-ground all year.	**Species Present.** Species observed during 2015 surveys.
Mud nama	*Nama stenocarpum*	--/-- CNPS 2B.2 County List B	Annual or perennial herb. Found in freshwater wetlands, riparian, lake margins, and stream banks and edges. Occasionally found in non wetlands. Elevation range 5 to 500 meters. Flowering period Jan to Jul.	**None.** Project is outside of the range of this species.
Munz sage	*Salvia munzii*	--/-- CNPS 2B.2 County List B	Shrub. Occurs in chaparral and Diegan coastal sage scrub. Elevation 120-1065 meters. Flowering period Feb – Apr.	**Species Present.** Ten individuals observed on site during 2015 surveys.
Orcutt's brodiaea	*Brodiaea orcuttii*	--/-- CNPS 1B.1 County List A	Small herb. Occurs only on clay soils in vernally moist environments, usually near vernal pools but occasionally near streams. Elevation range 0-1525 meters. Flowering period May – Jul.	**Presumed Absent.** Marginal habitat on site. Species not observed during 2015 surveys.

Appendix B (cont.)
SENSITIVE PLANT SPECIES WITH POTENTIAL TO OCCUR – SWEETWATER VISTAS

Common Name	Species Name	Status	Habitat Associations	Potential to Occur
Otay tarplant	*Deinandra (Hemizonia) conjugens*	FT/CE CNPS 1B.1 County List A MSCP NE	Annual herb. Occurs in fractured clay soils in grasslands or lightly vegetated coastal sage scrub. Elevation 25-300 meters. Flowering period May – Jun.	**Presumed Absent.** Marginal habitat on site. Species not observed during 2015 surveys.
Palmer's sage	*Artemisia palmeri*	--/-- CNPS 4.2 County List D	Medium shrub. Occurs along streams in coastal sage scrub and chaparral. Elevation range 0-3000 ft. Flowering period May – Sep, but identifiable year-round by leaves.	**Presumed Absent.** Suitable habitat occurs on site however species was not observed during surveys.
Prostrate spineflower	*Chorizanthe procumbens*	--/-- CNPS unlisted County unlisted	Annual herb. Grows in chaparral, valley grassland, pinyon-juniper woodland, and coastal sage scrub. Elevation range 10-1300 meters. Flowering period Apr. –Jul.	**Not Expected.** Preferred habitat not present on site.
Robinson's peppergrass	*Lepidium virginicum* var. *robinsonii*	--/-- CNPS 4.3 County List A	Medium herb. Occurs in openings in chaparral and coastal sage scrub. Typically observed in relatively dry, exposed locales rather than beneath a shrub canopy or along creeks. Elevation range 0-1525 meters. Flowering period Jan – Jul.	**Presumed Absent.** Suitable habitat present on site however species was not observed during surveys.
Rush-like bristleweed	*Xanthisma junceum (Machaeranthera juncea)*	--/-- CNPS 4.3 County List D	Medium herb. Occurs in xeric chaparral and coastal sage scrub, on exposed, rocky substrates. Elevation range 150-1220 meters. Flowering period Jun – Jan.	**Not Expected.** Exposed rocky substrates not present on site.

Appendix B (cont.)
SENSITIVE PLANT SPECIES WITH POTENTIAL TO OCCUR – SWEETWATER VISTAS

Common Name	Species Name	Status	Habitat Associations	Potential to Occur
San Diego adolphia	*Adolphia californica*	--/-- CNPS 2B.1 County List B	Shrub. Occurs on clay soils in dry canyons and washes in coastal sage scrub and chaparral. Elevation range less than 400 meters. Flowering period Dec – May.	**Presumed Absent.** Shrub would have been observed if present.
San Diego ambrosia	*Ambrosia pumila*	FE/-- CNPS 1B.1 County List A	Small herb. Generally found along creeks or seasonal drainages along the periphery of willow riparian areas. Elevation range 200-610 meters. Flowering period Apr – Oct.	**Presumed Absent.** Marginal habitat on site. Species not observed during 2015 surveys
San Diego goldenstar	*Bloomeria* (*Muilla*) *clevelandii*	--/-- CNPS 1B.1 County List A	Small herb. Occurs on clay soils in grasslands and coastal sage scrub. Elevation range 0-610 meters. Flowering period Apr – May.	**Presumed Absent.** Marginal habitat is present on site has however species was not observed during surveys.
San Diego marsh-elder	*Iva hayesiana*	--/-- CNPS 2B.2 County List B	Perennial herb. Occurs along stream courses. Shrub identifiable all year. Elevation range less than 300 meters. Flowering period Apr – Oct.	**Species Present.** Species observed in abundance in eastern portion of site during 2015 survey.
San Diego needle grass	*Stipa diegoensis* (*Achnatherum diegoense*)	--/-- CNPS 4.2 County List D	Tall bunchgrass. Occurs in chaparral – sage scrub ecotone, usually in fine, silty loam soil. Elevation range 0-915 meters. Flowering period Feb – Jun.	**Not Expected.** Fine, silty loam soils are not present on project site. Species not observed during 2015 surveys.

Appendix B (cont.)
SENSITIVE PLANT SPECIES WITH POTENTIAL TO OCCUR – SWEETWATER VISTAS

Common Name	Species Name	Status	Habitat Associations	Potential to Occur
San Diego sunflower	*Bahiopsis* (*Viguiera*) *laciniata*	--/-- CNPS 4.2 County List D	Medium shrub. Occurs in coastal sage scrub, often at high density. Elevation range 0-915 meters. Flowering period Feb – Aug. but identifiable year-round by leaves.	**Species Present.** Species was observed in abundance throughout the site during 2015 surveys.
San Diego thorn-mint	*Acanthomintha ilicifolia*	FT/SE CNPS 1B.1 County List A	Small herb. Occurs on clay soils near vernal pools and in grassy openings in coastal sage scrub and chaparral. Elevation range 0-915 meters. Flowering period Apr – Jun.	**None.** No vernal pool habitat is present on site.
Rayless ragwort	*Senecio aphanactis*	--/-- CNPS 2.2 County List B	Annual herb. Found in chaparral, cismontane woodland, coastal scrub, and drying alkaline flats. Elevation range 15 - 800 meters. Flowering period Jan – Apr.	**Presumed Absent.** Marginal habitat is present on site however this species was not observed during 2015 surveys.
Slender-pod jewelflower	*Caulanthus heterophyllus* (*Caulanthus stenocarpus*)	--/-- CNPS unlisted County unlisted	Annual herb. Grows in dry open scrub, usually after disturbance or fire. Elevation less than 1400 meters. Flowering period Mar-May.	**Presumed Absent.** Suitable habitat is present on site however species was not observed during surveys.
Small flowered microseris	*Microseris douglasii* spp. *platycarpha*	--/-- CNPS 4.2 County List D	Annual herb. Occurs in clay soils in perennial grasslands, on vernal pools periphery, or in broad openings in sage scrub. Elevation 15-1070 meters. Flowering period Mar – May.	**Not Expected.** No suitable habitat on site.

Appendix B (cont.) **SENSITIVE PLANT SPECIES WITH POTENTIAL TO OCCUR – SWEETWATER VISTAS**				
Common Name	**Species Name**	**Status**	**Habitat Associations**	**Potential to Occur**
Small flowered morning glory	*Convolvulus simulans*	--/-- CNPS 4.2 County List D	Annual herb. Occurs in coastal clay areas in openings of chaparral, sage scrub, and grasslands. Elevation range 30-700 meters. Flowering period Mar – Jul.	**Presumed Absent.** Suitable habitat occurs on site however species was not observed during surveys.
Summer holly	*Comarostaphylis diversifolia* ssp. *diversifolia*	--/-- CNPS 1B.2 County List A	Occurs in chaparral. Large shrub visible all year. Elevation range 100 to 550 meters. Flowering period Apr – Jun.	**None.** Would have been observed if present.
Southwestern spiny rush	*Juncus acutus* ssp. *leopoldii*	--/-- CNPS 4.2 County List D	Large clump-forming graminoid. Occurs in moist, saline or alkaline soils in coastal salt marshes and riparian alkaline marshes. Elevation range 0-915 meters. Flowering period May – Jun. but identifiable year-round by leaves and growth habit.	**Species Present.** Species observed at scattered locations through the site during 2015 surveys.
Variegated dudleya	*Dudleya variegata*	--/-- CNPS 1B.2 County List A	Small herb. Occurs on clay soils near vernal pools, and on metavolcanic rocky soils in open coastal sage scrub, chaparral, and grasslands. Elevation range 0-1070 meters. Flowering period Apr – Jun.	**None.** No vernal pools or metavolcanic rocky soils on site.

Appendix B (cont.)
SENSITIVE PLANT SPECIES WITH POTENTIAL TO OCCUR – SWEETWATER VISTAS

Common Name	Species Name	Status	Habitat Associations	Potential to Occur
Western dichondra	*Dichondra occidentalis*	--/-- CNPS 4.2 County List D	Mat-forming herb. Occurs on sandy banks in coastal sage scrub, chaparral, and oak woodland, often after fire. Elevation range 0-610 meters. Flowering period Mar – Jul.	**Presumed Absent.** Potential habitat occurs on site however it was not observed during surveys.
Willowy monardella	*Monardella linoides viminea*	FE/CE CNPS 1B.1 County List A MSCP NE	Perennial herb. Occurs in riparian scrub, usually at sandy locales in seasonally dry washes. Elevation 50-225 meters. Flowering period Jun – Aug.	**None.** Suitable habitat not present on site.

[1] Listing is as follows: F = Federal; S = State of California; E = Endangered; T = Threatened; R = Rare

[2] CNPS = California Native Plant Society Rare Plant Rank: 1A – presumed extirpated in California and either 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 – more information needed; 4 – watch list for species of limited distribution. Extension codes: .1 – seriously endangered; .2 – moderately endangered; .3 – not very endangered.

[3] County of San Diego Sensitive Plant Lists: A – rare, threatened, or endangered in California and elsewhere; B – rare, threatened, or endangered in California but more common elsewhere; C – may be quite rare but need more information; D – limited distribution and may be uncommon, but not presently endangered.

Potential to Occur is assessed as follows. **None**: Species is either sessile (*e.g.*, plants) or so limited to a particular habitat that it cannot disperse on its own (*e.g.*, fairy shrimp), and habitat suitable for its survival does not occur on the project site; **Not Expected**: Species moves freely and might disperse through or across the project site, but suitable habitat for residence or breeding does not occur on the project site; **Low**: Suitable habitat is present on the project site but is of low quality and no sign of the species was observed during surveys, however the species cannot be excluded with certainty; **High**: Suitable habitat occurs on the project site and the species has been recorded recently on or near the project site, but was not observed during surveys for the current project; **Species Present**: The species was observed during biological surveys for the current project and is assumed to occupy the project site. **Presumed Absent:** Valid protocol surveys for the species were negative and the species is assumed to not occupy the site.

Appendix C

ANIMAL SPECIES OBSERVED OR DETECTED

Appendix C
ANIMAL SPECIES OBSERVED OR DETECTED
SWEETWATER VISTAS

FAMILY	SCIENTIFIC NAME	COMMON NAME
Invertebrates		
Apidae	*Apis* sp.	honey bee
Astacidae	*Procambarus clarkii*	crayfish
Pompilidae	*Pepsis* sp.	tarantula hawk
Coccinellidae	*Hippodamia convergens*	convergent ladybug beetle
Acrididae	*Trimeroptropis pallidipennis*	pallid-winged grasshopper
Hesperiidae	*Erynnis funeralis*	funereal duskywing
	Hylephila phyleus	fiery skipper
Lycaenidae	*Euphilotes bernardino*	San Bernardino blue
	Icaricia acmon acmon	acmon blue butterfly
	Leptotes marina	marine blue butterfly
Nymphalidae	*Danaus gilippus*	queen butterfly
	Danaus plexippus†	monarch butterfly
	Nymphalis antiopa	mourning cloak butterfly
	Vanessa atalanta	red admiral butterfly
	Vanessa cardui	painted lady butterfly
Papilioninae	*Papilio zelicaon*	anise swallowtail butterfly
Pieridae	*Anthocharis sara sara*	Pacific Sara orangetip butterfly
	Pieris rapae	cabbage white butterfly
	Pontia protodice	checkered white butterfly
Riodinidae	*Apodemia mormo virgulti*	Behr's metalmark butterfly
Reptiles		
Phrynosomatidae	*Sceloporus occidentalis*	western fence lizard
	Uta stansburiana	side blotched lizard
Viperidae	*Crotalus oreganus*	western rattlesnake
Birds		
Accipitridae	*Accipiter cooperii*†	Cooper's hawk
	Buteo jamaicensis	red-tailed hawk
	Buteo lineatus†	red-shouldered hawk
	Circus cyaneus†	northern harrier

Appendix C (cont.)
ANIMAL SPECIES OBSERVED OR DETECTED
SWEETWATER VISTAS

FAMILY	SCIENTIFIC NAME	COMMON NAME
Birds (cont.)		
Aegithalidae	*Psaltriparus minimus*	bushtit
Anatidae	*Anas platyrhynchos*	mallard
Ardeidae	*Ardea alba*	great egret
Caprimulgidae	*Chordeiles acutipennis*	lesser nighthawk
Cardinalidae	*Passerina caerulea*	blue grosbeak
	Pheucticus melanocephalus	black-headed grosbeak
Cathartidae	*Cathartes aura*†	turkey vulture
Charadriiformes	*Charadrius vociferous*	killdeer
Columbidae	*Zenaida macroura*	mourning dove
Corvidae	*Aphelocoma californica*	western scrub-jay
	Corvus brachyrhynchos	American crow
	Corvus corax	common raven
Cuculidae	*Geococcyx californianus*	greater road runner
Emberizidae	*Melospiza melodia*	song sparrow
	Melozone crissalis	California towhee
	Pipilo maculatus	spotted towhee
	Zonotrichia leucophrys	white-crowned sparrow
Estrildidae	*Lonchura punctulata*	nutmeg mannikin
Falconidae	*Falco sparverius*	American kestrel
Fringillidae	*Haemorhous mexicanus*	house finch
	Spinus psaltria	lesser goldfinch
Hirundinidae	*Petrochelidon pyrrhonota*	cliff swallow
	Stelgidopteryx serripennis	northern rough-winged swallow
Icteridae	*Icterus cucullatus*	hooded oriole
Laridae	*Larus sp.*	gull
Mimidae	*Mimus polyglottos*	northern mockingbird
	Toxostoma redivivum	California thrasher
Odontophoridae	*Callipepla californica*	California quail
Parulidae	*Cardellina pusilla*	Wilson's warbler
	Geothlypis trichas	common yellowthroat
	Oreothlypis celata	orange-crowned warbler
	Setophaga coronata	yellow-rumped warbler
	Setophaga petechia†	yellow warbler

Appendix C (cont.)
ANIMAL SPECIES OBSERVED OR DETECTED
SWEETWATER VISTAS

FAMILY	SCIENTIFIC NAME	COMMON NAME
Birds (cont.)		
Passeridae	*Passer domesticus*	house sparrow
Picidae	*Picoides nuttallii*	Nuttall's woodpecker
Polioptilidae	*Polioptila californica californica*†	coastal California gnatcatcher
Regulidae	*Regulus calendula*	ruby-crowned kinglet
Sylviidae	*Chamaea fasciata*	wrentit
Trochilidae	*Archilochus alexandri*	black-chinned hummingbird
	Calypte anna	Anna's hummingbird
	Calypte costae	Costa's hummingbird
Troglodytidae	*Thryomanes bewickii*	Bewick's wren
	Troglodytes aedon	house wren
Tyrannidae	*Empidonax difficilis*	Pacific-slope flycatcher
	Myiarchus cinerascens	ash-throated flycatcher
	Sayornis nigricans	black phoebe
	Sayornis saya	Say's phoebe
	Tyrannus verticalis	western kingbird
	Tyrannus vociferans	Cassin's kingbird
Vireonidae	*Vireo bellii pusillus*†	least Bell's vireo
Mammals		
Canidae	*Canis latrans*	coyote
Geomyidae	*Thomomys bottae*	Botta's pocket gopher
Leporidae	*Sylvilagus audubonii*	desert cottontail
Muridae	*Neotoma* sp.	woodrat
Sciuridae	*Spermophilus beecheyi*	California ground squirrel

†Special Status Species

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Appendix D

SENSITIVE ANIMAL SPECIES WITH POTENTIAL TO OCCUR

Appendix D
SENSITIVE ANIMAL SPECIES WITH POTENTIAL TO OCCUR – SWEETWATER VISTAS

Common Name	Species Name	Status	Habitat Associations	Potential to Occur
Insects				
Dun skipper	*Euphys vestries harbisoni*	--/-- County Group 1	Riparian habitats and chaparral with narrow canyons or drainages, where perennial sources of water provide adequate habitat for the larval foodplant: San Diego sedge (*Carex spissa*).	**High.** Host plant was observed on portions of the site east of Jamacha. Occurrences reported nearby.
Hermes copper	*Lycaena hermes*	FC/-- County Group 1	Southern mixed chaparral and coastal sage scrub at western edge of Laguna mountains. Requires host plant spiny redberry (*Rhamnus crocea*) in close proximity to California buckwheat (*Eriogonum fasciculatum*) or other nectar sources.	**Not Expected.** A few isolated spiny redberry were observed on site; however, they were not observed in association with California buckwheat.
Monarch butterfly	*Danaus plexippus*	--/-- County Group 2	Winter roost sites extend along the coast from northern Mendocino to Baja California, Mexico. Roosts located in wind-protected tree groves (eucalyptus, Monterey pine, cypress), with nectar and water sources nearby. Larval host plants consist of milkweeds (*Asclepias* spp.).	**Species Present (Foraging).** Species observed on site during 2015 surveys. The species is not likely to roost on site.

Appendix D (cont.)
SENSITIVE ANIMAL SPECIES WITH POTENTIAL TO OCCUR – SWEETWATER VISTAS

Common Name	Species Name	Status	Habitat Associations	Potential to Occur
Insects (cont.)				
Quino checkerspot butterfly	*Euphydryas editha quino*	FE/-- County Group 1	Sunny openings within chaparral and coastal sage shrublands. Host plants include *Plantago erecta, Cordylanthus rigidus*, *Collinsia* spp., *Plantago patagonica*, *Antirrhinum coulterianum*, and *Castilleja exserta.*	**Presumed Absent.** Protocol-level surveys conducted for species were negative. The potential for the species to occur in subsequent years is very low. Only two small host plant patches were found on the site.
Reptiles and Amphibians				
Coast patch-nosed snake	*Salvadora hexalepis virgultea*	--/SSC County Group 2	Inhabits semi-arid brushy areas and chaparral in canyons, rocky hillsides, and plains.	**Low.** Suitable habitat on site. Species was not observed during surveys.
Coastal rosy boa	*Charina trivirgata roseofusca*	--/-- County Group 2	Occurs among rocky outcrops in coastal sage scrub, chaparral, and desert scrub.	**Low.** Suitable habitat on site. Species was not observed during surveys.
Coastal western whiptail	*Cnemidophorus tigris multiscutatus*	--/-- County Group 2	Found in deserts and semiarid areas with sparse vegetation and open areas and in woodland and riparian areas. Substrate may be firm soil, sandy, or rocky at surface.	**Low.** Marginal habitat occurs on the site. Species was observed during surveys.
Coronado skink	*Plestiodon skiltonianus interparietalis*	--/SSC County Group 2	Occurs in grasslands, coastal sage scrub, and open chaparral where there is abundant leaf litter or low herbaceous growth.	**Low.** Suitable habitat on site. Species was not observed during surveys.

Appendix D (cont.)
SENSITIVE ANIMAL SPECIES WITH POTENTIAL TO OCCUR – SWEETWATER VISTAS

Common Name	Species Name	Status	Habitat Associations	Potential to Occur
Reptiles and Amphibians (cont.)				
Northern red diamond rattlesnake	*Crotalus ruber ruber*	--/SSC County Group 2	Occurs from coastal San Diego County to the eastern slopes of the mountains and in desert habitats. Occurs from sea level to 900 meters in chaparral, woodland, and arid desert habitats in rocky areas and dense vegetation.	**Low.** Suitable habitat present on site. Species was not observed during surveys.
Orange-throated whiptail	*Aspidoscelis hyperythra*	--/SSC County Group 2	Coastal sage scrub, chaparral, edges of riparian woodlands, and washes. Also found in weedy, disturbed areas adjacent to these habitats. Important habitat requirements include open, sunny areas, shaded areas, and abundant insect prey base, particularly termites (*Reticulitermes* sp.).	**High.** Suitable habitat occurs on site. Species was not observed during surveys.
San Diego banded gecko	*Coleonyx variegatus abbottii*	--/-- County Group 1	Chaparral and coastal sage scrub in areas with rock outcrops.	**Not Expected.** No large rock outcrops on site.
San Diego horned lizard	*Phrynosoma coronatum blainvillei*	--/SSC County Group 2	Inhabits coastal sage scrub and chaparral in arid and semiarid climate conditions.	**Low.** Marginal habitat occurs. No sign of this species was observed on the site during surveys. Existing disturbance and proximity to developments strongly preclude the potential for this species to occur.

Appendix D (cont.)
SENSITIVE ANIMAL SPECIES WITH POTENTIAL TO OCCUR – SWEETWATER VISTAS

Common Name	Species Name	Status	Habitat Associations	Potential to Occur
Reptiles and Amphibians (cont.)				
San Diego ringneck snake	*Diadophis punctatus similis*	--/-- County Group 2	Generally occurs in moist habitats such as oak woodlands and canyon bottoms, but is also sometimes encountered in grassland, chaparral, and coastal sage scrub; generally restricted to leaf litter and rarely crosses open areas.	**Not Expected.** Marginal habitat present on site. Species was not observed during surveys.
Silvery legless lizard	*Anniella pulchra pulchra*	--/SSC County Group 2	Areas with loose soil, particularly in sand dunes and or otherwise sandy soil. Generally found in leaf litter, under rocks, logs, or driftwood in oak woodland, chaparral, and desert scrub.	**Not Expected.** Soils on site are highly disturbed.
South coast garter snake	*Thamnophis sirtalis novum*	--/SSC	Utilizes a wide variety of habitats - forests, mixed woodlands, grassland, chaparral, farmlands, often near ponds, marshes, or streams.	**Low.** Suitable habitat occurs. This species is more likely to occur further to the south of the site near Sweetwater Reservoir.
Southwestern pond turtle	*Clemmys marmorata pallida*	--/SSC County Group 1	Thoroughly aquatic turtle of ponds, marshes, rivers, streams and irrigation ditches, usually with aquatic vegetation. Requires basking sites and suitable upland habitat (sandy banks or grassy open fields) up to 0.5 km from water for laying eggs.	**Low.** Stream runs though site however basking sites and suitable upland habitat for egg laying is not present.

Appendix D (cont.)
SENSITIVE ANIMAL SPECIES WITH POTENTIAL TO OCCUR – SWEETWATER VISTAS

Common Name	Species Name	Status	Habitat Associations	Potential to Occur
Reptiles and Amphibians (cont.)				
Two-striped garter snake	*Thamnophis hammondii*	---/SSC County Group 1	Typical habitat is along permanent and intermittent streams bounded by dense riparian vegetation; also found associated with vernal pools and stock ponds.	**Low.** Appropriate habitat on site. Species was not observed during surveys.
Western spadefoot	*Spea hammondii*	--/SSC County Group 2	Occurs in open coastal sage scrub, chaparral, and grassland, along sandy or gravelly washes, floodplains, alluvial fans, or playas; requires temporary pools for breeding and friable soils for burrowing; generally excluded from areas with bullfrogs (*Rana catesbiana*) or crayfish (*Procambarus* sp.).	**None.** No suitable habitat on site.
Birds				
Barn owl	*Tyto alba*	--/--County Group 2	Require large areas of open land over which to hunt. Marsh, grasslands, or mixed agricultural fields. For nesting and roosting they need cavities in trees or man-made structures such as barns or silos.	**Low.** Marginal habitat present on site. No suitable nesting or roosting habitat observed. This species could forage over the site.
Bell's sage sparrow	*Amphispiza belli belli*	BCC/WL County Group 1	Occurs in sunny, dry stands of coastal sage scrub or chaparral.	**Low.** Despite suitable habitat on site species was not observed during surveys.

Appendix D (cont.)
SENSITIVE ANIMAL SPECIES WITH POTENTIAL TO OCCUR – SWEETWATER VISTAS

Common Name	Species Name	Status	Habitat Associations	Potential to Occur
Birds (cont.)				
White-tailed kite	*Elanus caeruleus*	--/FP County Group 1	Rolling foothills and valley margins with scattered oaks and river bottomlands or marshes next to deciduous woodland. Open grasslands, meadows, or marshes for foraging close to isolated, dense-topped trees for nesting and perching.	**High.** Suitable nesting habitat occurs. This species was not observed or otherwise detected during surveys.
Burrowing owl	*Athene cunicularia*	BCC/SSC County Group 1	Typical habitat is grasslands, open scrublands, agricultural fields, and other areas where there are ground squirrel burrows or other areas in which to burrow. All records of burrowing owl in northwestern San Diego County are prior to 1997 (Unitt 2004).	**Not expected.** No suitable habitat present on site.
California gull	*Larus californicus*	--/WL County Group 2	Breeds on islands in lakes or rivers. Forages along lakes, bogs, farm fields, lawns, pastures, sagebrush, garbage dumps, feedlots, parking lots, ocean beaches, and open ocean.	**Not expected.** No suitable breeding habitat on site. Species could forage on site.

Appendix D (cont.)
SENSITIVE ANIMAL SPECIES WITH POTENTIAL TO OCCUR – SWEETWATER VISTAS

Common Name	Species Name	Status	Habitat Associations	Potential to Occur
Birds (cont.)				
Coastal California gnatcatcher	*Polioptila californica californica*	FT/SSC County Group 1	Occurs in coastal sage scrub with California sagebrush (*Artemisia californica*) as a dominated or co-dominant below 2,500 feet.	**Species Present (Breeding).** Protocol-level surveys confirmed a breeding pair in the northwestern portion of the site. An additional pair was confirmed to the immediate east of the site.
Cooper's hawk	*Accipiter cooperi*	--/WL County Group 1	Tends to inhabit lowland riparian areas and oak woodlands in proximity to suitable foraging areas such as scrublands or fields.	**Species Present (Breeding).** This species was observed on several occasions during surveys and is presumed to use the site for breeding.
Grasshopper sparrow	*Ammodramus savannarum*	--/SSC County Group 1	Typical habitat is dense grasslands that have little or no shrub cover.	**None**. No suitable habitat on site.
Great blue heron	*Ardea herodias*	--/-- County Group 2	Wetland habitats, but can be observed foraging away from water.	**Low.** Suitable habitat on site however species was not observed during surveys.
Green heron	*Butorides virescens*	--/-- County Group 2	Found around wooded ponds, marshes, rivers, reservoirs, and estuaries.	**Low.** Suitable habitat present on site however species was not observed during surveys.
Horned lark	*Eremophila alpestris actis*	--/SSC County Group 2	Expansive open areas with barren or sparsely vegetated ground such as beaches, plowed fields, etc.	**Not Expected.** Suitable habitat does not occur on the site.

Appendix D (cont.)
SENSITIVE ANIMAL SPECIES WITH POTENTIAL TO OCCUR – SWEETWATER VISTAS

Common Name	Species Name	Status	Habitat Associations	Potential to Occur
Birds (cont.)				
Least Bell's vireo	*Vireo bellii pusillus*	FE/ CE County Group 1	Summer resident of Southern California. Inhabits riparian woodland and is most frequent in areas that combine an understory of dense, young willows or mule fat with a canopy of tall willows.	**Species Present (Breeding).** Protocol-level surveys confirmed this species at several locations within suitable habitat that occurs on and in the immediate vicinity of the site.
Loggerhead shrike	*Lanius ludovicianus*	BCC/SSC County Group 1	Typical habitat includes open habitats including grasslands, shrublands, and ruderal areas with adequate perching locations.	**Not Expected.** Marginal habitat occurs on site.
Long-eared owl	*Asio otus*	--/SSC County Group 1	In San Diego County is a rare resident in shady oak woodlands and broad riparian forests. Ideal habitat includes a closed canopy near open habitats for foraging and a supply of abandoned raptor or corvid nests or debris platforms for nesting (Unitt 2004).	**Not expected.** No appropriate habitat on site.
Northern harrier	*Circus cyaneus*	--/SSC County Group 1	Within San Diego County, distribution is primarily scattered throughout lowlands but can also be observed in foothills, mountains, and desert. Nests on ground in shrubby vegetation, usually at marsh edge; nest built of a large mound of sticks in wet areas. Typical habitat consists of open grassland and marsh.	**Species Present (Foraging).** This species was observed on foraging on site during 2015 surveys.

Appendix D (cont.)
SENSITIVE ANIMAL SPECIES WITH POTENTIAL TO OCCUR – SWEETWATER VISTAS

Common Name	Species Name	Status	Habitat Associations	Potential to Occur
Birds (cont.)				
Prairie falcon	*Falco mexicanus*	BCC/WL County Group 1	Inhabits dry, open terrain, either level or hilly. Nests on cliffs or bluffs and forages over open desert scrub or grassland.	**Low.** No suitable nesting habitat occurs. This species has a low potential to forage over the site.
Red-shouldered hawk	*Buteo lineatus*	--/-- County Group 1	Riparian woodland, oak woodland, orchards, eucalyptus groves, or other areas with tall trees.	**Species Present (Foraging).** This species was observed during 2015 surveys.
Rufous-crowned sparrow	*Aimophila ruficeps cenescens*	--/SSC County Group 1	Found in coastal sage scrub and sparse mixed chaparral.	**Low.** Suitable habitat occurs. This species was not observed or otherwise detected during surveys.
San Diego cactus wren	*Campylorhynchus brunnicapillus couesi*	--/SSC	Coastal sage scrub with tall *Opuntia* cactus for nesting and roosting.	**None.** Suitable nesting habitat does not occur on the site.
Sharp-shinned hawk	*Accipiter striatus*	--/WL County Group 1	Usually observed in areas with tall trees or other vegetative cover but can be observed in a variety of habitats. In San Diego County occurs in small numbers and only in winter.	**Low.** Species could forage over site during winter.

Appendix D (cont.)
SENSITIVE ANIMAL SPECIES WITH POTENTIAL TO OCCUR – SWEETWATER VISTAS

Common Name	Species Name	Status	Habitat Associations	Potential to Occur
Birds (cont.)				
Southwestern willow flycatcher	*Empidonax trailii extimus*	FE/SE County Group 1	Breeds within thickets of willows or other riparian understory usually along streams, ponds, lakes, or canyons. One of the most important characteristics of the habitat appears to be the presence of dense vegetation, usually throughout all vegetation layers present. Almost all breeding habitats are within close proximity of water or very saturated soil.	**Presumed Absent.** Marginal habitat occurs for this species. This species was not observed or otherwise detected during least Bell's vireo surveys.
Tricolored blackbird	*Agelaius tricolor*	--/SSC County Group 1	Requires open water, protected nesting substrate, and foraging area with available insect prey.	**Low.** Suitable breeding habitat is absent from the site. This species could potentially forage over the site.
Turkey vulture	*Cathartes aura*	--/-- County Group 2	Species occurs throughout much of San Diego County with the exception of extreme coastal San Diego where development is heaviest. Foraging habitat includes most open habitats with breeding occurring in crevices among boulders.	**Species Present (Flyover).** Species was observed during 2015 surveys.
Vermilion flycatcher	*Pyrocephalus rubinus*	--/SSC County Group 1	Occasionally present in coastal regions as a migrant. Breeds in inland deserts.	**Not Expected.** No suitable habitat occurs. This species could potentially migrate through the general area.

Appendix D (cont.)
SENSITIVE ANIMAL SPECIES WITH POTENTIAL TO OCCUR – SWEETWATER VISTAS

Common Name	Species Name	Status	Habitat Associations	Potential to Occur
Birds (cont.)				
Western bluebird	*Sialia mexicana*	--/-- County Group 2	Open coniferous and deciduous woodlands, wooded riparian areas, grasslands, farmlands, and edge of burned areas. Prefers open forest habitats. Nests in cavities in trees and snags, or between bark and trunk. Uses nest boxes.	**Low.** Marginal habitat present on site. Species not observed during surveys.
Western grebe	*Aechmophorus occidentalis*	--/-- County Group 1	Open water and vegetated lake fringe.	**None.** Suitable habitat is not present.
Yellow-breasted chat	*Ictera virens*	--/SSC County Group 1	Prefers mature riparian woodlands.	**High.** Suitable habitat occurs. This species was not observed or detected during surveys.
Yellow warbler	*Setophaga brewsteri*	--/SSC County Group 2	Found along riparian woodlands.	**Species Present (Breeding).** This species was observed at several locations within the site during surveys.
Mammals				
Big free-tailed bat	*Nyctinomops macrotis*	--/SSC County Group 2	A rare species in California (Zeiner et al. 1990). Prefers rugged, rocky canyons. Often forages over water. Roosts in crevices in high cliffs or rock outcrops.	**Not expected.** No high cliffs or large rock outcrops on site.
Dulzura California pocket mouse	*Chaetodipus californicus femoralis*	--/SSC County Group 2	Variety of habitats including coastal scrub, chaparral, and grasslands in San Diego County. Associated with grass-chaparral edges.	**Low.** Marginal habitat present on site.

Appendix D (cont.)
SENSITIVE ANIMAL SPECIES WITH POTENTIAL TO OCCUR – SWEETWATER VISTAS

Common Name	Species Name	Status	Habitat Associations	Potential to Occur
Mammals (cont.)				
Greater western mastiff bat	*Eumops perotis californicus*	--/SSC County Group 2	Found in the lower and upper Sonoran desert scrub near cliffs, preferring the rugged rocky canyons with abundant crevices. During winter months it goes into torpor every day, but arouses and leaves the roost to forage at night when temperatures at dusk are above 5° C. Prefer crowding into tight crevices.	**Not expected.** No high cliffs or large rock outcrops on site.
Long-legged myotis	*Myotis volans*	--/-- County Group 2	Feeds over water and over open habitats using denser woodland and forests for reproduction. Drinks regularly. Roosts in rock crevices, buildings, under tree bark, in snags, mines, and caves.	**Low.** May forage over site in summer, but would not be present during winter as there are no caves or mines on site for roosting.
Mexican long-tongued bat	*Choeronycteris mexicana*	--/SSC County Group 2	Occasionally found in San Diego County which is on the periphery of their range. Feeds on nectar and pollen of night-blooming succulents. Roosts in relatively well-lit caves and in and around buildings.	**Not expected.** No caves or buildings currently on site.

Appendix D (cont.)
SENSITIVE ANIMAL SPECIES WITH POTENTIAL TO OCCUR – SWEETWATER VISTAS

Common Name	Species Name	Status	Habitat Associations	Potential to Occur
Mammals (cont.)				
Mountain lion	*Felis concolor*	--/-- County Group 2	Requires extensive areas of riparian vegetation and brushy stages of various habitats with interspersed irregular terrain, rocky outcrops, and tree/brush edges. Main prey is mule deer.	**Low.** This species has a very low potential to range over the site.
Northwestern San Diego pocket mouse	*Chaetodipus fallax fallax*	--/SSC County Group 2	Occurs in open areas of coastal sage scrub and weedy growth, often on sandy substrates.	**Low.** Marginal habitat is present on site.
Pallid bat	*Antrozous pallidus*	--/SSC County Group 2	Locally common species of low elevations in California. Rocky, mountainous areas and near water; also found over more open, sparsely vegetated grasslands, and prefers foraging in the open. Uses three different roosts: 1) the day roost is in a warm, horizontal opening such as rock cracks; 2) the night roost is in the open, near foliage; and 3) the hibernation roost, which is in caves or cracks in rocks.	**Low.** Species may use this site for foraging.

Appendix D (cont.)
SENSITIVE ANIMAL SPECIES WITH POTENTIAL TO OCCUR – SWEETWATER VISTAS

Common Name	Species Name	Status	Habitat Associations	Potential to Occur
Mammals (cont.)				
Pocketed free-tailed bat	*Nyctinomops femorosaccus*	--/SSC County Group 2	Semiarid desert lands. Day-roosts in caves, crevices in cliffs, and under the roof tiles of buildings. Uses a variety of arid habitats in southern California: pine-juniper woodlands, desert scrub, palm oases, desert wash, desert riparian, etc. Prefers rocky areas with high cliffs.	**Not expected.** No high rocky cliffs on site for roosting.
Ringtail	*Bassariscus astutus*	--/-- County Group 2	Various riparian habitats and in brush stands of moist forest and shrub habitats at low to middle elevations. Less common in wooded areas with hollow trees, sometimes around buildings.	**None.** The site is likely too disturbed and urbanized to support this species.
San Diego black-tailed jackrabbit	*Lepus californicus bennettii*	--/SSC County Group 2	Found primarily in open habitats including coastal sage scrub, chaparral, grasslands, croplands, and open, disturbed areas if there is at least some shrub cover present.	**High.** Suitable habitat present on site.
San Diego desert woodrat	*Neotoma lepida intermedia*	--/SSC County Group 2	Open chaparral and coastal sage scrub, often building large, stick nests in rock outcrops or around clumps of cactus or yucca.	**High.** Woodrat middens were observed on site however species in residence was not determined.

Appendix D (cont.)
SENSITIVE ANIMAL SPECIES WITH POTENTIAL TO OCCUR – SWEETWATER VISTAS

Common Name	Species Name	Status	Habitat Associations	Potential to Occur
Mammals (cont.)				
Small-footed myotis	*Myotis ciliolabrum*	--/-- County Group 2	Occurs in arid, upland habitats near water. Prefers open stands in forests and woodlands as well as brushy habitats. Feeds over and drinks from streams, ponds, springs, and stock tanks.	**Low.** May forage over site in summer, but would not be present during winter as there are no caves or mines on site for roosting.
Southern grasshopper mouse	*Onychomys torridus ramona*	--/SSC County Group 2	Desert habitat is preferred, but it also occurs in coastal scrub and mixed chaparral. It is uncommon in valley foothill and montane riparian habitats.	**Not Expected.** This species has been extirpated from most of its historical range by development.
Southern mule deer	*Odocoileus hemionus*	--/-- County Group 2	Mule deer occupy to some extent almost all types of habitat within their range but, in general, they seem to prefer the more arid, open situations	**Low.** This species has a low potential to range over the site as it is highly fragmented from surrounding suitable habitat.
Spotted bat	*Euderma maculatum*	--/SSC County Group 2	Prefers sites with adequate roosting habitat (i.e., cliffs); feeds over water and along washes. Rare in California (Zeiner, et al. 1990).	**Not Expected.** No high rocky cliffs present on site.
Townsend's western big-eared bat	*Corynorhinus townsendii*	--/SSC County Group 2	Most abundant in mesic habitats. Considered uncommon in California (Zeiner, et al. 1990). Drinks water and requires caves, mines, tunnels, buildings, or other man-made structures for roosting.	**Low.** May forage over site in summer, but would not be present during winter as there are no caves or mines on site for roosting.

Appendix D (cont.)
SENSITIVE ANIMAL SPECIES WITH POTENTIAL TO OCCUR – SWEETWATER VISTAS

Common Name	Species Name	Status	Habitat Associations	Potential to Occur
Mammals (cont.)				
Western red bat	*Lasiurus blossevillii*	--/-- County Group 2	Riparian areas dominated by cottonwoods, oaks, sycamores, and walnuts.	**Low.** May forage over site however, suitable roosting habitat on site is extremely limited.
Yuma myotis	*Myotis yumanensis*	--/-- County Group 2	Open forests and woodland are optimal habitat. Closely tied to bodies of water for foraging and drinking. Roosts in buildings, mines, crevices, caves, and under bridges.	**Low.** May forage over project area but no suitable roost sites are present.

[1] Listing codes are as follows: FE = Federally Endangered; FT = Federally Threatened; FC= Federal Candidate species; BCC = Birds of Conservation Concern; SE = State of California Endangered; FP = State of California Fully Protected; WL = State of California Wait-Listed; SSC = State of California Species of Special Concern.

[2] County of San Diego Sensitive Animal List: Group 1 = Animals that have a very high level of sensitivity, either because they are listed as threatened or endangered or because they have very specific natural history requirements that must be met; Group 2 = Animals that are becoming less common, but are not yet so rare that extirpation or extinction is imminent without immediate action; these species tend to be prolific within their suitable habitat types.

[3] Potential to Occur is assessed as follows. **None**: Species is either sessile (e.g., plants) or so limited to a particular habitat that it cannot disperse on its own (e.g., fairy shrimp), and habitat suitable for its survival does not occur on the project site; **Not Expected**: Species moves freely and might disperse through or across the project site, but suitable habitat for residence or breeding does not occur on the project site; **Low**: Suitable habitat is present on the project site but is of low quality and no sign of the species was observed during surveys, however the species cannot be excluded with certainty; **High**: Suitable habitat occurs on the project site and the species has been recorded recently on or near the project site, but was not observed during surveys for the current project; **Species Present**: The species was observed during biological surveys for the current project and is assumed to occupy the project site. **Presumed Absent:** Valid protocol surveys for the species were negative and the species is assumed to not occupy the site.

Appendix E

EXPLANATION OF STATUS CODES FOR PLANT AND ANIMAL SPECIES

Appendix E
EXPLANATION OF STATUS CODES FOR PLANT AND ANIMAL SPECIES

FEDERAL, STATE, AND LOCAL CODES

U.S. Fish and Wildlife Service (USFWS)

FE	Federally listed endangered
FT	Federally listed threatened

California Department of Fish and Wildlife (CDFW)

SE	State listed endangered
ST	State listed threatened
SSC	State species of special concern
WL	Watch List

Fully Protected	Fully Protected species refer to all vertebrate and invertebrate taxa of concern to the Natural Diversity Data Base regardless of legal or protection status. These species may not be taken or possessed without a permit from the Fish and Game Commission and/or CDFW.

County of San Diego

Plant sensitivity:

List A	Plants rare, threatened, or endangered in California or elsewhere
List B	Plants rare, threatened, or endangered in California but more common elsewhere
List C	Plants that may be quite rare, but more information is needed to determine rarity status
List D	Plants of limited distribution and are uncommon, but not presently rare or endangered

Animal sensitivity:

Group 1	Animals that have a very high level of sensitivity, either because they are listed as threatened or endangered or because they have very specific natural history requirements that must be met.
Group 2	Animals that are becoming less common, but are not yet so rare that extirpation or extinction is imminent without immediate action. These species tend to be prolific within their suitable habitat types.

Multiple Species Conservation Program (MSCP) Covered

Multiple Species Conservation Program covered species for which the County has take authorization within the MSCP area.

MSCP Narrow Endemic (NE)

Narrow endemic species are native species that have "restricted geographic distributions, soil affinities, and/or habitats." The MSCP participants' subarea plans have specific conservation measures to ensure impacts to narrow endemics are avoided to the maximum extent practicable.

OTHER CODES AND ABBREVIATIONS

California Native Plant Society (CNPS) Codes

Lists

1A = Presumed extinct.

1B = Rare, threatened, or endangered in California and elsewhere. Eligible for state listing.

2 = Rare, threatened, or endangered in California but more common elsewhere. Eligible for state listing.

3 = Distribution, endangerment, ecology, and/or taxonomic information needed. Some eligible for state listing.

4 = A watch list for species of limited distribution. Needs monitoring for changes in population status. Few (if any) eligible for state listing.

List/Threat Code Extensions

.1 – Seriously endangered in California (over 80 percent of occurrences threatened/high degree and immediacy of threat)

.2 – Fairly endangered in California (20 to 80 percent occurrences threatened)

.3 – Not very endangered in California (less than 20 percent of occurrences threatened, or no current threats known)

A "CA Endemic" entry corresponds to those taxa that only occur in California.

All List 1A (presumed extinct in California) and some List 3 (need more information; a review list) plants lacking threat information receive no extension. Threat Code guidelines represent only a starting point in threat level assessment. Other factors, such as habitat vulnerability and specificity, distribution, and condition of occurrences, are considered in setting the Threat Code.