Twin Oaks Fuel, Convenience Store and Car Wash Project

Biological Resources Assessment

prepared for

The Namou Group
450 West El Norte Parkway
Escondido, California 92026

prepared by

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1 Introduction

The Namou Group retained Rincon Consultants, Inc. (Rincon) on behalf of the City of San Marcos (City) to conduct a biological resources study in support of an Initial Study for the Twin Oaks Fuel, Convenience Store, and Car Wash Project (project), in the city of San Marcos, San Diego County, California. The project proposes to develop the vacant 2.04-acre site located at the southeast corner of Twin Oaks Valley Road and Borden Road by constructing an automotive fueling station. The station would consist of a 5,462-square foot fuel pump canopy, a 3,790-square foot convenience store with 1,000 square feet of storage space, and a 2,134-square foot automated car wash. Additionally, the project would include revegetation of the east portion of the project impact area near Twin Oaks Valley Creek with a native riparian hydroseed mix. This revegetation area would be subject to periodic maintenance by the City. This report has been prepared in accordance with the California Environmental Quality Act (CEQA) guidelines for examining biological resources.

1.1 Project Location

The 2.04-acre project site is located at the southeast corner of Twin Oaks Valley Road and Borden Road, in the central portion of San Marcos, approximately 0.9-mile north of State Route 78 (Figure 1). The project site is identified as Assessor's Parcel Number 220-050-0900, and is depicted on Township 12S, Range 03W, Section 11 of the United States Geological Survey *San Marcos* CA 7.5-minute quadrangle (Figure 2).

The project site is undeveloped and consists of sparse patches of exposed soils with dense cover of disturbed, ruderal species and riparian vegetation. Twin Oaks Valley Creek trends northeast to southwest through the eastern half of the project site. Surrounding land uses include residential development to the east and commercial developments to the north, south, and west.

1.2 Local Policies

1.2.1 SANDAG MHCP

The San Diego Association of Governments (SANDAG) Multiple Habitat Conservation Program (MHCP) is a comprehensive, multi-jurisdictional planning program designed to create, manage, and monitor an ecosystem preserve in northwestern San Diego County intended to protect viable populations of native plant and animal species and their habitat while accommodating economic development and quality of life for San Diego residents. The MHCP encompasses the cities of Carlsbad, Encinitas, Escondido, Oceanside, San Marcos, Solana Beach, and Vista. Its goal is to conserve approximately 19,000 acres of habitat, of which roughly 8,800 acres (46%) are already in public ownership, and contribute toward the habitat preserve system for the protection of more than 80 rare, threatened, or endangered species.

1.2.2 City of San Marcos Subarea Plan

The City of San Marcos began preparing a draft of the City Subarea Plan of the MHCP in December 1999 and although the Subarea Plan has not yet been approved by the United States Fish and Wildlife Service (USFWS) and California Department of Fish and Wildlife (CDFW), the plan is a component of the adopted MHCP, and is currently being used as a guide for open space design and

Figure 1 Regional Project Location

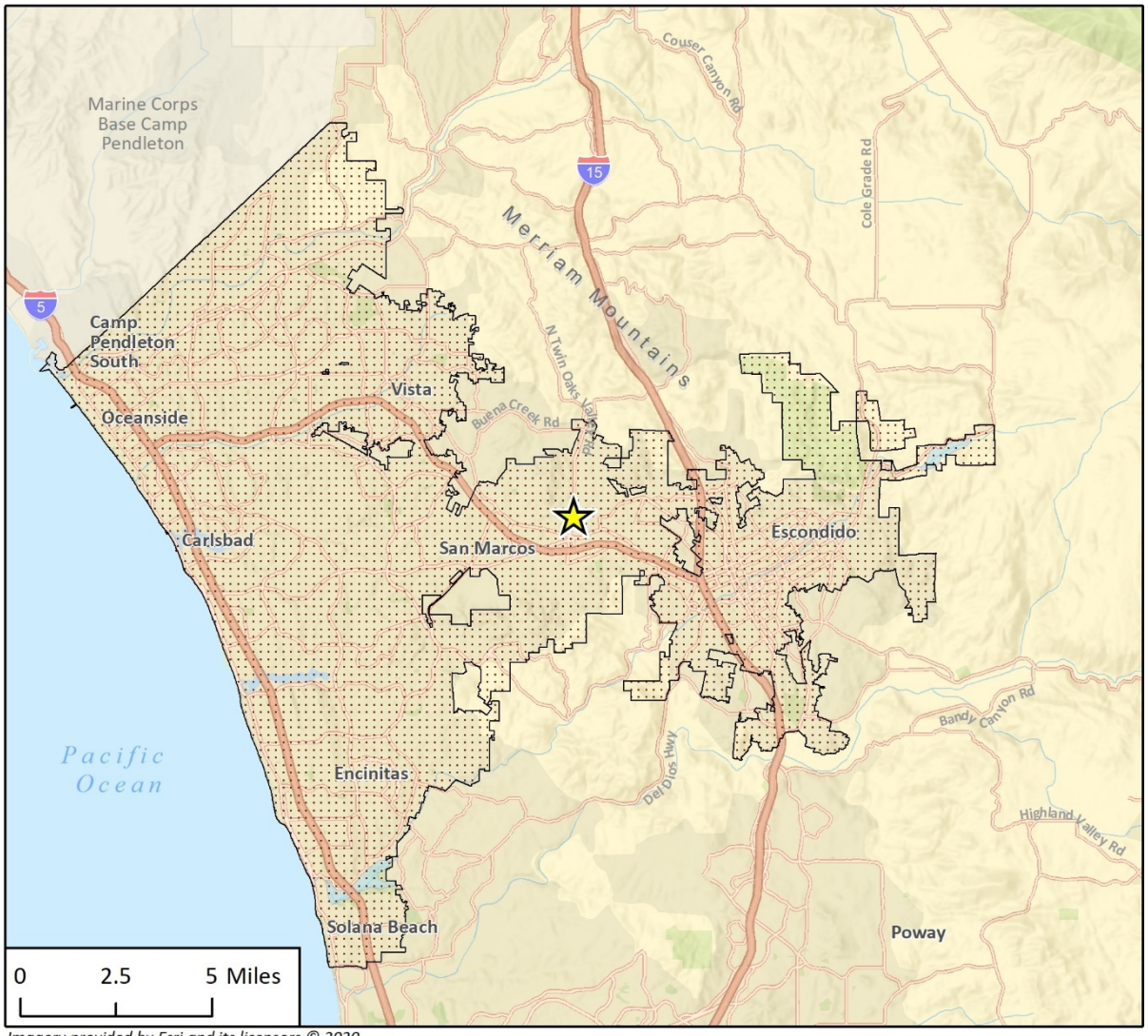
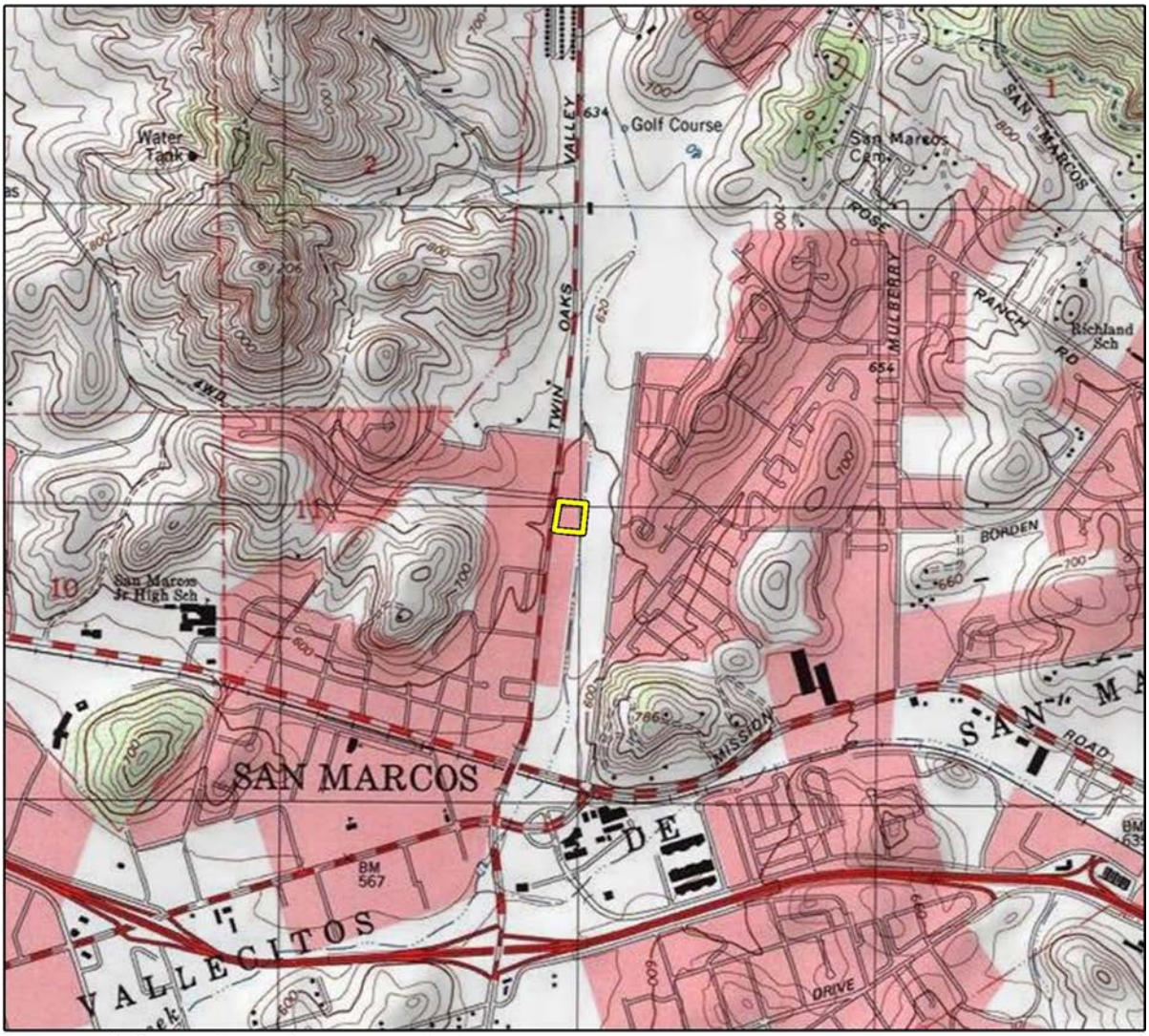


Figure 2 Project Location Map



Imagery provided by National Geographic Society, Esri and its licensors © 2020. San Marcos Quadrangle. T12S R03W S11. The topographic representation depicted in this map may not portray all of the features currently found in the vicinity today and/or features depicted in this map may havechanged since the original topographic map was assembled.

Project Location

0 1,000 2,000 Feet

N

preservation within the City. Volume I of the Final MHCP provides a framework for city subarea plans. Though the San Marcos Subarea Plan is currently in draft form, the MHCP is used as a reference for conservation planning purposes. The Plan has identified certain areas, known as focused planning areas (FPAs), which have parcel-level preserve goals which would contribute to achieving local and regional conservation. The FPAs are represented by a combination of "hardline" preserves, indicating lands that will be conserved and managed for biological resources, and "softline" planning areas, within which preserve areas will ultimately be delineated based on further data and planning. The project site does not fall within a "hardline" or "softline" area but is directly adjacent to and west of a hardline area covering Twin Oaks Valley Creek (Figure 3). The City designates the General Plan land use for the project site as Commercial (C).

Figure 3 Project Site Overview

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Additiona data provided by SANDAG 2018; USGS 2019.

2 Methodology

Biological conditions within the project site were evaluated by confirming applicable biological regulations, policies, and standards; reviewing biological literature and querying available databases pertinent to the project site and vicinity; and conducting a reconnaissance-level biological survey of the project site. The methods employed are described in detail below. The findings and opinions conveyed in this report are based on this methodology; therefore, all quantitative impact assumptions are estimates.

2.1 Guidelines for Determining CEQA Significance

The following threshold criteria, as defined by the CEQA Guidelines Appendix G Initial Study Checklist, were used to evaluate potential environmental effects. Based on these criteria, the proposed project would have a significant effect on biological resources if it would:

a) Have substantial adverse effects, 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 California Department of Fish and Wildlife or U.S. Fish and Wildlife Service.

b) 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 California Department of Fish and Wildlife or US Fish and Wildlife Service.

c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.

d) 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.

e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.

f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional or state habitat conservation plan.

2.2 Background Research

Prior to the field survey, Rincon conducted background research to better characterize the nature and extent of biological resources on and adjacent to the project site. The research included the following:

- Current and historic topographic maps of *San Marcos, California* USGS 7.5-minute topographic quadrangle (USGS 2019, Nationwide Environmental Title Research 2019);
- Natural Resources Conservation Service's (NRCS) *Web Soil Survey* for soils mapped in the region (NRCS 2019).
- National Wetlands Inventory (NWI) wetlands mapper (USFWS 2019a);
- National Hydrography Dataset (USGS 2019b);
- United States Fish and Wildlife Service (USFWS) Critical Habitat Portal (USFWS 2019b);

- California Department of Fish and Wildlife's (CDFW's) *California Natural Diversity Data Base* (CNDDB) was queried for special status plant and wildlife species recorded within a one (1)-mile radius of the project site;
- California Native Plant Society's (CNPS) *Inventory of Rare and Endangered Plants of California* (online edition) was queried for special status plant species in the project region, defined as the *San Marcos, California* USGS 7.5-minute topographic quadrangle (CNPS 2019);
- Calflora's *What Grows Here* online application was queried for plant species that have been collected or observed in the project vicinity (Calflora 2019);
- CDFW's Special Vascular Plants, Bryophytes, and Lichens List (CDFW 2019b) and Special Animal List (CDFW 2019c) were reviewed.
- Final Multiple Habitat Conservation Program (MHCP) for the Cities of Carlsbad, Encinitas, Escondido, Oceanside, San Marcos, Solana Beach, and Vista Volume I and II (SANDAG, 2003);
- San Diego Association of Governments (SANDAG) *Parcel Lookup Tool* was reviewed to determine sites designated in the Multiple Habitat Conservation Program (MHCP) Subsite Plan (SANDAG 2019);
- SanGIS geographic information system data regarding biological resources was reviewed (SanGIS 2019);
- Natural Community Conservation Plan for the City of San Marcos (City of San Marcos 2001);
- The City of San Marcos General Plan (City of San Marcos 2019)

2.3 Reconnaissance Survey

Rincon Senior Biologist Megan Minter conducted a field survey on September 24, 2019 to document the existing conditions of the project site. The study area for the survey consisted of the project site plus a 500-foot buffer for vegetation communities and special status species. All accessible portions of the study area were covered on foot. Inaccessible areas (i.e., areas with dense vegetation, private and developed properties, and paved vehicular roads) within the study area were surveyed using binoculars. The inaccessibility of these areas did not affect the biologist's ability to complete a thorough survey. Additionally, the biologist completed a formal jurisdictional waters field survey within the project site and 100-foot buffer due to access restrictions. A formal aquatic resources delineation report, however, was not prepared. Vegetation communities were mapped, and the wildlife and plants observed were noted.

2.3.1 Vegetation Communities

Vegetation classification was based on the classification systems provided in the *Draft Vegetation Communities of San Diego County* (Oberbauer et al. 2008) to provide consistency with the MHCP; and modified as appropriate to reflect the existing site conditions. Where applicable, vegetation communities were further classified using *A Manual of California Vegetation, Second Edition* (Sawyer et al. 2009) to better identify the species composition and provide consistency with CDFW's preference. Sensitive vegetation community ranking is based on MHCP habitat groups (SANDAG, 2003). In addition, special-status vegetation communities are ranked globally (G) and sub-nationally (S) 1 through 5 (NatureServe's 2010).

2.3.2 Flora

All plant species observed in the study area were noted, and plants that could not be identified in the field were identified later using taxonomic keys (Baldwin et al. 2012). While a focused rare plant survey was not conducted, the biologist searched for special-status plants that would have been identifiable at the time of the survey (refer to Table C-1 for special-status plant species identifiable at the time of the survey).

2.3.3 Fauna

Animal species observed directly or detected from calls, tracks, scat, nests, or other sign were documented. Zoological nomenclature for birds is in accordance with the California Birds Records Committee (CBRC) *Official California Checklist* (CBRC 2019); for mammals using *Mammals of California* (Wilson and Reeder 2005); and for amphibians and reptiles using Society for the Study of Amphibians and Reptiles' (SSAR) *Checklist of the Standard English & Scientific Names of Amphibians & Reptiles* (SSAR 2017). A coastal California gnatcatcher (*Polioptila californica*; CAGN) habitat assessment was conducted on August 27, 2020 by KMEA within the study area (Appendix D). Additionally, least Bell's vireo (*Vireo bellii pusillus*; LBVI) surveys were conducted within suitable habitat in the study area in 2020 by Rincon.

2.3.4 Survey Limitations

The survey was conducted outside of the typical blooming period for most of the common and special-status plant species that have potential to occur within the study area. Additionally, the biological survey was conducted during the end of summer/beginning of fall; therefore, potentially occurring overwintering species, spring migrants and certain breeding birds may not have been observed. As the survey was performed during the day, identification of nocturnal animals was limited to sign if present on site. The potential presence of special-status species is based on a literature review, existing site conditions and a general biological field survey to assess habitat suitability.

2.4 Special Status Biological Resources Assessments

Local, state, and federal agencies regulate special status species and other sensitive biological resources and may require an assessment of their presence or potential presence to be conducted prior to the approval of proposed development on a property. This section discusses sensitive biological resources observed on the project site and evaluates the potential for the project site to support additional sensitive biological resources. Assessments for the potential occurrence of special status species are based upon known ranges, habitat preferences for the species, species occurrence records from the CNDDB, species occurrence records from other sites in the vicinity of the survey site, previous reports for the project site, and the results of surveys of the project site. The potential for each special status species to occur in the project site was evaluated according to the following criteria:

- **No Potential.** Habitat on and adjacent to the project site is clearly unsuitable for the species requirements (foraging, breeding, cover, substrate, elevation, hydrology, plant community, project site history, disturbance regime); for plants, the species has no recorded occurrences within 10 miles of the project site indicating that the project site may be outside of the range of the species (e.g. the species is known from coastal sage scrub, but only along the coastal

margin); or, the species is conspicuous and would have certainly been identified on site if present (e.g., oak trees). The reconnaissance survey did not detect the species.

- **Low Potential.** The species is not likely to be found on the project site. Few of the habitat components meeting the species requirements are present, and/or the majority of habitat on and adjacent to the project site is unsuitable or of very poor quality, and/or there are no recent records of the species within five miles of the project.
- **Moderate Potential**. Some of the habitat components meeting the species requirements are present, and/or only some of the habitat on or adjacent to the project site is unsuitable. The species has a moderate probability of being found on the project site.
- **High Potential.** All of the habitat components meeting the species requirements are present and/or most of the habitat on or adjacent to the project site is highly suitable. The species has a high probability of being found on the project site.
- **Present.** Species is observed on the project site or has been recorded (e.g., CNDDB, other reports) on the project site recently (within the last 5 years).

For the purpose of this report, special-status species are those plants and animals listed, proposed for listing, or candidates for listing as Threatened or Endangered by the USFWS under the ESA; those listed as Threatened, Endangered, or Rare by the CDFW under CESA or the Native Plant Protection Act; those designated as Fully Protected species by the State; those recognized as Species of Special Concern (SSC) by the CDFW; Covered Species identified in the MHCP; and regulations and plants occurring on lists 1 and 2 of the CNPS California Rare Plant Rank (CRPR) system per the following definitions:

- **CRPR 1A** = Plants presumed extirpated in California and either rare or extinct elsewhere;
- **CRPR 1B** = Plants rare, threatened, or endangered in California and elsewhere;
- **CRPR 2A** = Plants presumed extirpated in California but common elsewhere; and
- **CRPR 2B** = Plants rare, threatened, or endangered in California but more common elsewhere.

Additionally, CNPS assigns the following threat codes:

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

In addition, special-status species and vegetation communities are ranked globally (G) and sub-nationally (S) 1 through 5 based on NatureServe's (2010) methodologies:

- **G1 or S1:** Critically Imperiled Globally or Subnationally (state)
- **G2 or S2:** Imperiled Globally or Subnationally (state)
- **G3 or S3:** Vulnerable to extirpation or extinction Globally or Subnationally (state)
- **G5 or S5:** Secure Globally or Subnationally (state)
- **?:** Inexact Numeric Rank
- **T:** Infraspecific Taxon (subspecies, varieties, and other designations below the level of species)
- **Q:** Questionable taxonomy that may reduce conservation priority

3 Existing Conditions and Results

3.1 Topography and Soils

The project site is within a developed area in which Twin Oaks Valley Creek conveys through the east portion of the project site. The project site is relatively flat with elevation ranging from 580 to 600 feet above mean sea level. Two soil types have been identified on the project site, as shown mapped in Figure 4: Huerhuero Loam, 2 to 9 percent slopes, and Placentia sandy loam, 2 to 9 percent slopes. Placentia sandy loam comprises most of the project site, while Huerhuero loam is limited to the west edge of the project site. The following are the official soils series descriptions for each soil series (NRCS 2020b).

3.1.1 Huerhuero Series

These soils generally lay on marine terraces and consist of calcareous alluvium derived from sedimentary rock. A typical profile of Huerhuero Series soils features loam from 0 to 12 inches, stratified sand to sandy loam from 12 to 55 inches, and clay loam to clay from 55 to 72 inches. These soils are moderately well to somewhat poorly drained, exhibit slow to medium runoff and very slow permeability. These soils are often used for production of annual pasture and agriculture. Vegetation in untilled areas is generally annual grasses, forbs and weeds with scattered oaks (*Quercus* spp.). Huerhuero Loam, 2 to 9 percent slopes has been classified as a hydric soil (NRCS 2020c).

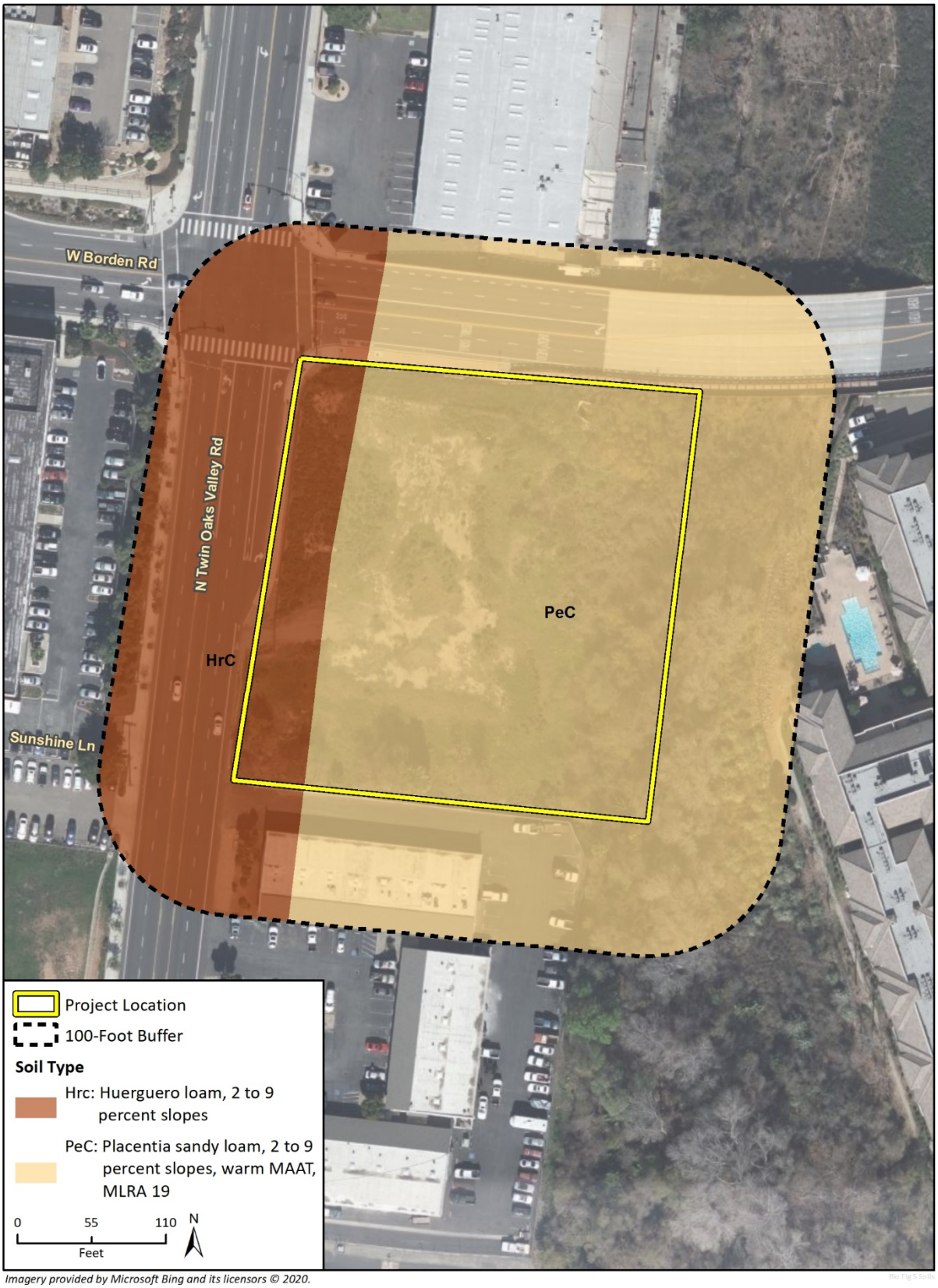
3.1.2 Placentia Series

Placentia sandy loam, 2 to 9 percent slopes, is found on the majority of the project site. The Placentia series are found on nearly level to moderately sloping sites and are on fans and terraces. The soils formed in alluvium from granite and other rocks of similar composition and texture. Placentia series soils are well or moderately well drained, with slow to rapid runoff and very slow permeability. Placentia sandy loam, 2 to 9 percent slopes, has been classified as a hydric soil (NRCS 2012c).

3.2 Vegetation Communities and Land Cover Types

Three vegetation communities and one land cover type (Table 1 and Figure 5) were identified on the project site. The majority of the project site is disturbed, ruderal landcover. The Twin Oaks Valley Creek corridor along the eastern edge of the project site contains Southern Cottonwood Willow Riparian Forest. The northern and western edges of the project site contain Diegan Sage Scrub (including disturbed). Other vegetation communities and land cover types observed within the study area but not on the project site include non-native grassland and developed areas. These two vegetation communities and land cover types are not discussed in this report as they are located outside of the project site.

Figure 4 Soils



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Additional data provided by SSURGO, 2019.

Figure 5 Vegetation Communities and Land Cover Types

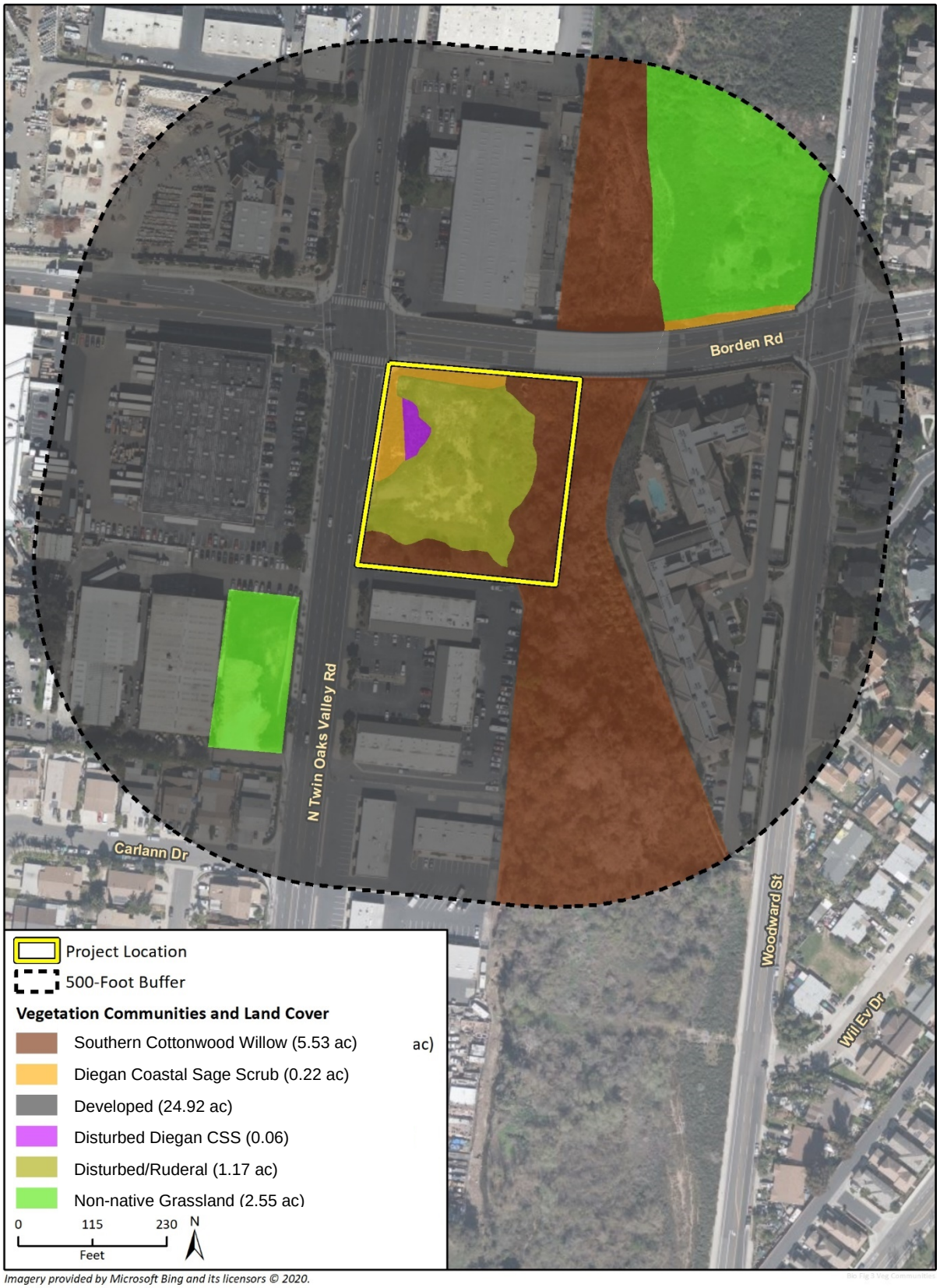

Table 1 Vegetation Community/Land Cover Type On Site

MHCP Habitat Group	Vegetation Community/Land Cover Type (Holland Code)	Sensitive	Acres on Site
Group C	Diegan Coastal Sage Scrub (32500)	Yes	0.20
Group C	Disturbed Diegan Coastal Sage Scrub (32500)	Yes	0.06
Group A	Southern Cottonwood-Willow Riparian Forest (61330)	Yes	0.69
Group F	Disturbed Habitat/Ruderal	No	1.09

3.2.1 Diegan Coastal Sage Scrub (32500)

Diegan Coastal Sage Scrub is found on the western and northern portions of the project site. The community is dominated by low, soft-woody subshrubs that are most active in winter and early spring. Many taxa are facultatively drought-deciduous. Diegan Coastal Sage Scrub is typically on low moisture-availability sites. Dominant plant species include California sagebrush (*Artemisia californica*), flat-top buckwheat (*Eriogonum fasciculatum*), and California encelia (*Encelia californica*).

Aerial photos indicate the Diegan Coastal Sage Scrub on site was planted after the completion of the adjacent Borden Road Bridge Project in 2013 (USACE File No. SPL2008-01050-MLM and Dudek 2017). The planted area supports narrow strips approximately 15-20 feet wide of Diegan Coastal Sage Scrub and is situated along Borden Road to the north and along Twin Oaks Valley Road to the west of the project site. As detailed in Appendix D, developed areas and disturbed habitat surround this habitat within the study area eliminating the possibility of habitat continuity for special status species such as CAGN. The study area therefore does not comprise suitable habitat for CAGN.

Diegan Coastal Sage Scrub is considered a sensitive community by the City of San Marcos and the MHCP, falling under the Habitat Group C. Diegan Coastal Sage Scrub comprises approximately 0.81 percent of the study area.

3.2.2 Disturbed Diegan Coastal Sage Scrub (32500)

A small patch of disturbed Diegan Coastal Sage Scrub is near the center of the project site. This vegetation community is dominated by San Diego goldenbush (*Isocoma menziesii*), black mustard (*Brassica nigra*), and Bermuda grass (*Cynodon dactylon*). The extent of black mustard and Bermuda grass as well as previous disturbance activities led to the classification of this habitat type as disturbed Diegan Coastal Sage Scrub. Disturbed Diegan Coastal Sage Scrub comprises approximately 0.17 percent of the study area.

3.2.3 Southern Cottonwood-Willow Riparian Forest (61330)

Southern Cottonwood-Willow Riparian Forest, as described by Holland (1986), is characterized by tall, open, broad-leafed winter-deciduous riparian forests dominated by western cottonwood (*Populus fremontii*) and several willow species (*Salix* spp.). The understory is generally composed of shrubby willows. Plant species associated with this habitat include western sycamore *(Platanus racemosa*), Goodding's black willow (*Salix gooddingii)*, arroyo willow (*Salix lasiolepis*), red willow (*Salix laevigata*), and Douglas mugwort (*Artemisia douglasiana)*. Plant species detected on-site included arroyo willow, western cottonwood, Douglas mugwort, great marsh evening-primrose (*Oenothera elata spp. hookeri*), red willow, Goodding's black willow, and mule-fat (*Baccharis salicifolia*).

Southern Cottonwood Willow Riparian Forest is considered a sensitive community by the City of San Marcos and the MHCP, falling under the Habitat Group A.

3.2.4 Ruderal

The center of the project site is dominated by disturbed habitat/ruderal landcover. This landcover type contains bare ground and ruderal species such as stinkwort (*Dittrichia graveolens*), Bermuda grass, fennel (*Foeniculum vulgare*), black mustard, castor bean (*Ricinus communis*), tree tobacco (*Nicotiana glauca*) and other invasive plant species. Monotypic stands of western ragweed (*Ambrosia psilostachya*), which occur in disturbed habitat, was observed within the study area's disturbed portions.

3.3 Common Wildlife

Common species observed during field surveys include Bewick's wren (*Thryomanes bewickii*), bushtit (*Psaltriparus minimus*), house finch (*Haemorhous mexicanus*), Anna's hummingbird (*Calypte anna*), western kingbird (*Tyrannus verticalis*), red-tailed hawk (*Buteo jamaicensis*), spotted towhee (*Pipilo maculatus*), and mourning dove (*Zenaida macroura*). One common reptile, western fence lizard (*Sceloporus occidentalis*) and two common mammals, California ground squirrel (*Otospermophilus beecheyi*) and desert cottontail (*Sylvilagus audubonii*), were observed within the project site.

4 Special Status Biological Resources

The project site contains special-status biological resources, including sensitive vegetation communities and suitable habitat for nesting birds. This section discusses special-status biological resources observed within the project site and evaluates the potential for the project site to support other sensitive resources. Appendix C provides the complete list of all special-status resources with records in the CNDDB and CNPS within a one-mile radius of the project site and a one USGS topographic quadrangle query for the project site.

4.1 Sensitive Plant Communities

The Diegan Coastal Sage Scrub mapped in the project site falls within the City's "Coastal Sage Scrub" habitat group and type (City of San Marcos 2001), which is considered Group C habitat per the MHCP (SANDAG 2003). The Southern Cottonwood-Willow Riparian Forest mapped on the project site falls with the City's "Riparian" habitat group which is considered Group A habitat by the MHCP. As such, the MHCP dictates minimum mitigation ratios for each of these habitat types in or outside of an FPA. The study area is not within the FPA hardline or softline areas.

4.2 Special-status Plant Species

No special-status plant species were observed in the study area during the survey. Many of the species with recorded occurrences in the study area vicinity are associated with habitats not found in the study area, including species associated with vernal pools, which are not present on site (refer to Appendix C). San Diego ambrosia (*Ambrosia pumila*), a federally-listed endangered species, has a low potential to occur in the study area due to presence of marginally suitable habitat, and there are several recent records from within 10 miles of the project site. The reconnaissance survey was conducted at the end of the blooming period for this species (April – October). No other special-status plant species found during desktop research would be expected to occur in the study area due to lack of suitable habitat.

4.3 Special-status Wildlife Species

4.3.1 Coastal California Gnatcatcher

KMEA conducted a habitat assessment for CAGN due to the presence of Diegan Coastal Sage Scrub and disturbed Diegan Coastal Sage Scrub in the study area (refer to Appendix D). Developed areas and disturbed habitat surround Diegan Coastal Sage Scrub within the study area, which prevents habitat continuity. Due to the small size of Diegan Coastal Sage Scrub on site and its isolated nature, the study area does not support habitat that is suitable for CAGN.

4.3.2 Least Bell's Vireo

LBVI is restricted to willow mulefat-dominated riparian woodlands in southern California. This species prefers semi-open riparian woodlands with dense shrub understory (SANDAG 2003). LBVI specifically prefers dense upper canopy in riparian forests for foraging and dense understory in riparian forests required for nesting. Twin Oaks Valley Creek contains suitable habitat for LBVI within

the Southern Cottonwood-Willow Riparian Forest habitat. Two LBVI territories were observed within the study area during protocol surveys conducted by a Rincon biologist in 2020 (Figure 6). These territories were located within dense stands of riparian vegetation. One territory was observed on the east side of Twin Oaks Valley Creek directly adjacent to the project site and a second territory was observed southeast of the project site. Both of these territories contained a lone male each. No LBVI nests were observed.

4.3.3 Other Protected Species

Under the provisions of the Migratory Bird Treaty Act of 1918 (MBTA), it is unlawful "by any means or manner to pursue, hunt, take, capture (or) kill" any migratory birds except as permitted by regulations issued by the USFWS. The term "take" is defined by the USFWS regulation to mean to "pursue, hunt, shoot, wound, kill, trap, capture or collect" any migratory bird or any part, nest, or egg of any migratory bird covered by the conventions, or to attempt those activities. It is anticipated that the project will comply with the provisions of the MBTA.

The California Fish and Game Code (CFGC) provides similar protection to that afforded by the federal MBTA (Sections 3503 and 3513) and extends additional protection to any birds in the orders Falconiformes and Strigiformes (raptors or birds-of-prey) (CFGC Section 3503.5). It is anticipated that the project will comply with these CFGC sections.

Habitat is present within the study area that has the potential to support protected nesting birds.

4.4 Jurisdictional Waters and Wetlands

Twin Oaks Valley Creek is located along the eastern boundary of the project site (Figure 7). Twin Oaks Valley Creek originates in the foothills of the Merriam Mountains (Figure 1) and flows from north to south as it crosses through the study area. It continues flowing to the southwest before draining into San Marcos Creek, then the Batiquitos Lagoon and then to the Pacific Ocean. Within the study area, Twin Oaks Valley Creek is a perennial drainage with dense riparian vegetation present along the streambanks. A forested wetland is located in the southern portion of the project site adjacent to Twin Oaks Valley Creek that has been created by urban stormwater runoff from Twin Oaks Valley Road. This wetland does not directly connect to Twin Oaks Valley Creek.

Although a formal aquatic resources delineation report was not prepared, potentially jurisdictional areas were mapped. Within the study area, Twin Oaks Valley Creek contains 0.45 acre of non-wetland waters of the U.S./State and 0.23 acre of wetland waters of the U.S./State under the jurisdiction of the United States Army Corps of Engineers (USACE) and San Diego Regional Water Quality Control Board (RWQCB), respectively. Twin Oaks Valley Creek also contains 1.82 of streambed and riparian vegetation under the jurisdiction of CDFW. Jurisdictional areas are outlined in Table 2 and shown in Figure 7. As indicated in Table 2, waters of the U.S./State was calculated to the Ordinary High Water Mark (OHWM) and the CDFW jurisdictional area was calculated to the outer edge of the riparian vegetation.

Figure 6 Least Bell's Vireo Territories

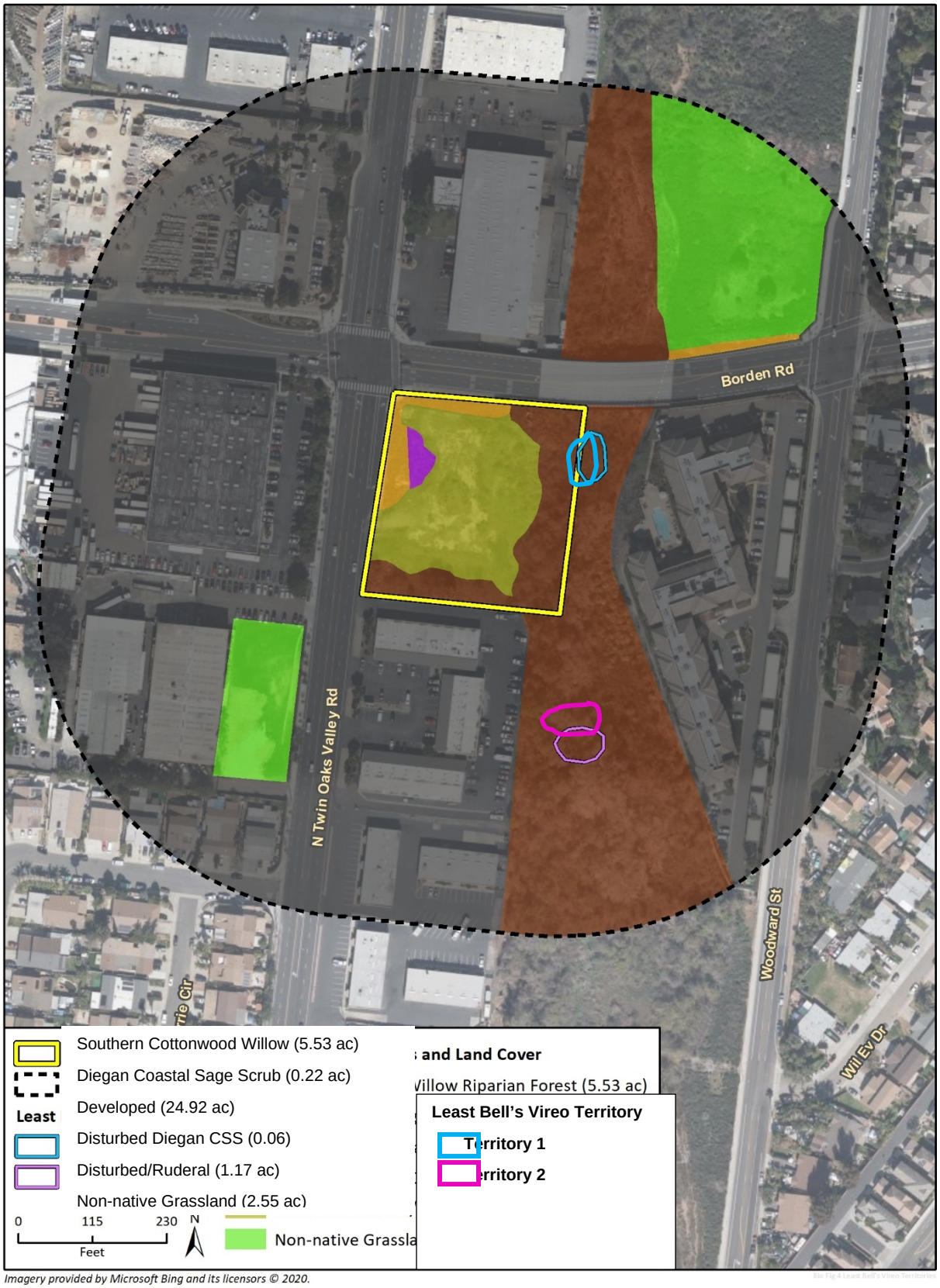

Figure 7 Jurisdictional Delineation Results

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Table 2 Jurisdictional Waters within the Study Area

Feature	Waters of the U.S.[1]		Waters of the State[1]		CDFW Streambed and Riparian Vegetation[2] (acres)
	Non-wetland Waters of the U.S. (acres)	Wetland Waters of the U.S. (acres)	Non-wetland Waters of the State (acres)	Wetland Waters of the State (acres/linear feet)	
Twin Oaks Valley Creek	0.46	0.23	0.46	0.23	1.82

[1] Calculated to OHWM

[2] Calculated to edge of riparian

4.5 Wildlife Corridors

Wildlife movement corridors, or habitat linkages, are generally defined as connections between habitat patches that allow for physical and genetic exchange between otherwise isolated animal populations. Such linkages may serve a local purpose, such as providing a linkage between foraging and denning areas, or they may be regional in nature. Some habitat linkages may serve as migration corridors, wherein animals periodically move away from an area and then subsequently return. Others may be important as dispersal corridors for young animals. A group of habitat linkages in an area can form a wildlife corridor network.

Figure 4-2 of the City of San Marcos General Plan (City of San Marcos 2012) labels a wildlife corridor associated with Twin Oaks Valley Creek through the study area, including a portion of the eastern half of the project site. Further, the study area is directly adjacent to Twin Oaks Valley Creek which was identified as having a “Very High” conservation value as per Figure 2-3 of the MHCP. This area is considered a riparian corridor that supports wildlife movement between undeveloped areas.

5 Project Impact Analysis and Recommended Mitigation Measures

Most of the project site will be disturbed during site preparation and grading activities. Three vegetation communities and one land cover type (Table 1 and Figure 5) were identified on the project site. Project implementation would remove 1.17 acres of Disturbed Habitat/Ruderal landcover (Figure 8) and no mitigation is considered necessary for this land cover type. Project implementation would also remove 0.22 acre of Diegan Coastal Sage Scrub, 0.06 acre of disturbed Diegan Coastal Sage Scrub, and 0.59 acre of Southern Cottonwood-Willow Riparian Forest (Figure 8). One special-status plant, San Diego ambrosia, has a low potential to occur on the project site. Sections 5.1 and 5.2 detail recommended measures to reduce impacts to special status vegetation communities to less than significant levels.

The riparian vegetation community is occupied by LBVI and this species will be directly impacted through the removal of habitat. Section 5.1 details recommended mitigation measures to reduce impacts to LBVI to less than significant levels.

The project site contains Twin Oaks Valley Creek and associated wetland potentially under the jurisdiction of USACE, RWQCB, and CDFW. Section 401 and Section 404 Permits and a Section 1600 Lake or Streambed Alteration Agreement (LSAA) will need to be obtained prior to the commencement of construction activities that could impact the creek or associated wetland. Section 5.4 details the recommended mitigation to ensure less than significant impacts to jurisdictional waters and wetlands.

The project site is adjacent to a wildlife corridor within Twin Oaks Valley Creek. While a small portion of riparian habitat will be removed as part of project implementation, the majority of habitat along Twin Oaks Valley Creek will remain and continue to function. Section 5.5 details this conclusion.

CEQA requires that impacts of a proposed project be analyzed for significance. Impacts of the project on biological resources are described below. Where warranted, recommended mitigation measures are provided. The proposed project would directly impact special-status vegetation communities and could potentially directly impact special-status plant and wildlife species.

5.1 Special Status Species

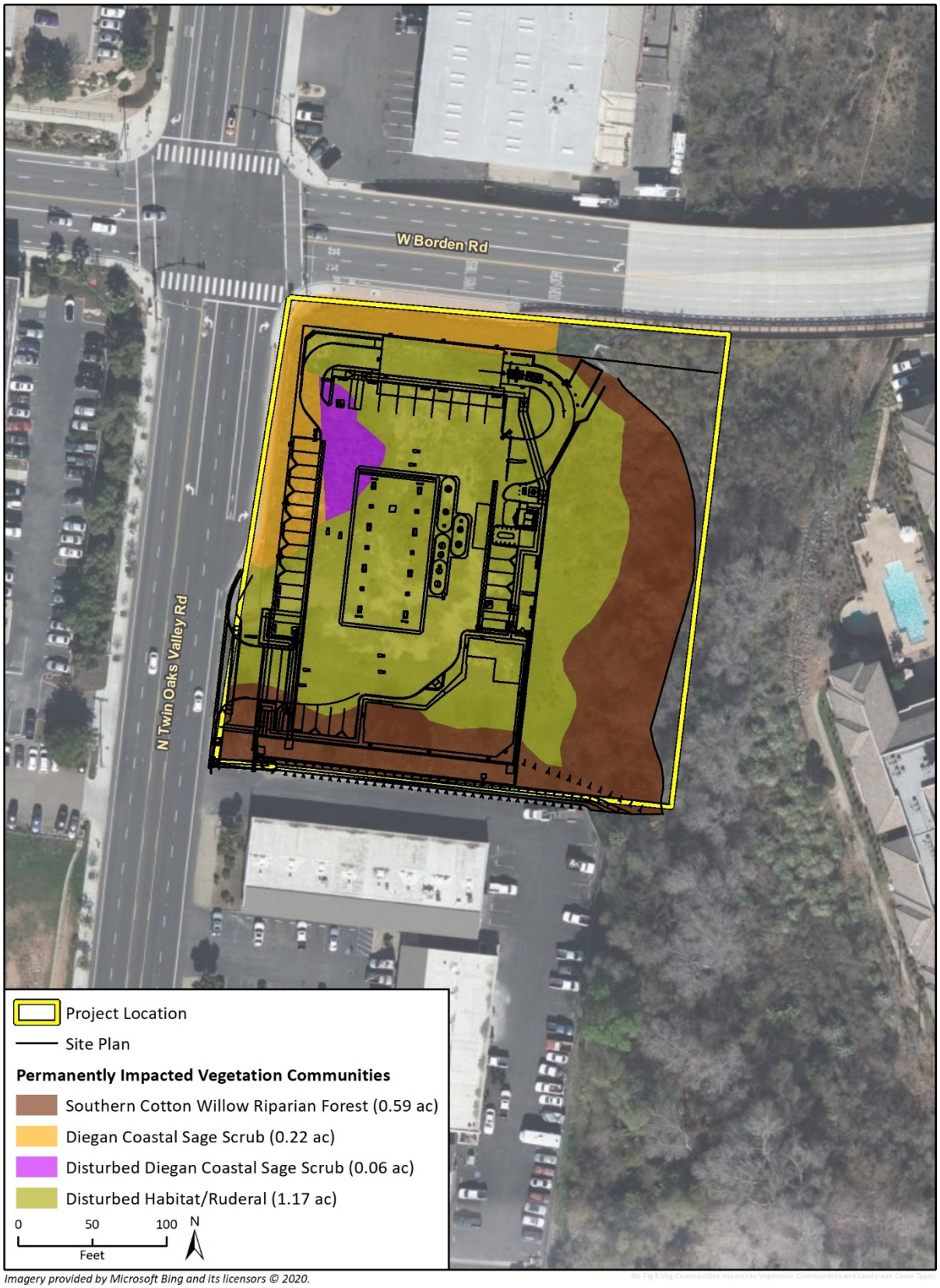
The proposed project would have a significant effect on biological resources if it would:

a) *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 California Department of Fish and Wildlife or U.S. Fish and Wildlife Service.*

5.1.1 Special Status Plants

One special-status plant species, San Diego ambrosia, has a low potential to occur on the project site due to the presence of marginally suitable habitat and recent records from within 10 miles of the project site. This species is an easily identifiable herb. However, this species was not detected

Figure 8 Impacts to Vegetation Communities and Land Cover Types



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during the reconnaissance survey and subsequent site visits. Impacts to San Diego ambrosia are therefore not anticipated and no mitigation is required.

5.1.2 Special Status Wildlife

Least Bell's Vireo

Project implementation would directly remove 0.59 acre of Southern Cottonwood-Willow Riparian Forest (Figure 8). This vegetation community is occupied by LBVI and this species will be directly impacted through the removal of habitat.

LBVI that is present both on-site and in adjacent areas would also be potentially affected by indirect impacts associated with the project, such as dust, noise, human presence, nighttime lighting, increase in predators, and spread of non-native species into occupied habitat. These indirect impacts could result in nest failures or individual mortality of LBVI.

Impacts to LBVI would be considered significant without mitigation. Implementation of Mitigation Measures (MM)-1, 3, 4, 5, and 6, described below, would reduce project impacts to LBVI to less than significant.

Nesting Birds and Raptors

The project could adversely affect raptors and other nesting birds if construction occurs while they are present on or adjacent to the project site through direct mortality. The loss of a nest due to construction activities is prohibited by law and would be considered significant without mitigation. Implementation of MM-2, 3, 4, and 5, described below, would reduce project impacts to nesting birds and raptors to less than significant.

MM-1 through MM-6 would be implemented by the project to reduce impacts to special status wildlife species. MM-1 requires construction activities be implemented outside of the LBVI nesting season (March 1-September 1) and that protocol LBVI surveys be conducted by a qualified biologist. MM-2 requires a nesting bird survey be conducted to determine the presence of nesting birds and the establishment of the appropriate buffer for any nests that are found to prevent construction activities from causing nest failure. MM-3 requires a Workers' Environmental Awareness Program (WEAP) be implemented for the project, and as part of that WEAP would be the discussion of nesting birds and "no work" buffers required by MM-2 that would be established for any active nests that are within or near the project site. MM-4 would require delineation of the work limits to avoid encroachment of construction equipment into habitat occupied by LBVI or other nesting birds outside of work limits. MM-5 would require a Biological Monitor be present during initial clearing, grading, and construction in sensitive habitat areas to avoid impacts to LBVI and nesting birds and raptors. MM-6 would require that project impacts to Southern Cottonwood-Willow Riparian Forest be mitigated at a 3:1 mitigation to impact ratio, resulting in the preservation of 1.77 acres of Southern Cottonwood-Willow Riparian Forest. Implementation of MM-6 would contribute to the regional availability of LBVI habitat. With the implementation of these mitigation measures, the project would avoid impacts to special-status species such as LBVI and violations of the MBTA and CFGC.

MM-1 Least Bell's Vireo Surveys

To avoid and minimize direct and indirect impacts to LBVI, construction activities shall occur outside of the LBVI nesting season (March 1– September 1). Protocol LBVI surveys shall be conducted by a

qualified biologist prior to implementation of construction activities. If surveys are negative for LBVI, then no further mitigation is required. If surveys are positive, then implementation of MMs 3, 4, and 5 shall be required.

MM-2 Nesting Birds and Raptors

If site clearing activities are conducted between February 1 and August 31, a qualified biologist shall conduct a nesting bird survey no more than three days prior to the start of such activities to identify nesting birds within the project site and a 250-foot buffer around the project site. If any nests are found, their locations shall be flagged and an appropriate avoidance buffer, ranging in size from 25 to 50 feet for passerines, and up to 500 feet for raptors depending upon the species and the proposed work activity, shall be determined and demarcated by a qualified biologist with bright orange construction fencing or other suitable flagging. Active nests shall be monitored at a minimum of once per week until it has been determined that the nest is no longer being used by either the young or adults. No disturbance shall occur within this buffer until the qualified biologist confirms that breeding/nesting is completed, and all the young have fledged. If project activities must occur within the buffer, activities shall be conducted at the discretion of the qualified biologist and with monitoring and management to ensure that nesting birds and the nests are not disturbed. If no nesting birds are observed during the survey or during other monitoring activities, then no further actions shall be necessary. A follow-up survey will be needed if site clearing does not occur within three days after the initial survey.

MM-3 Worker Environmental Awareness Program

The project proponent is required to provide a WEAP for the construction crew that will be developed and implemented by a qualified biologist. Each employee (including temporary, contractors, and subcontractors) will receive the WEAP on the first day of working on the proposed project. They will be advised of the potential impact to the listed species and the potential penalties for taking such species. At a minimum, the WEAP will include the following topics: occurrence of the listed and sensitive species in the area, their general ecology, sensitivity of the species to human activities, legal protection afforded these species, penalties for violations of Federal and State laws, reporting requirements, and project features designed to reduce direct and indirect impacts to these species and promote continued successful occupation of the project area environs.

MM-4 Work Limit Delineation

Construction work areas shall be delineated and marked clearly, by flagging or temporary orange construction fencing, in the field prior to habitat removal, and the marked boundaries will be maintained and clearly visible to personnel on foot and by heavy equipment operators. Fencing shall be placed on the impact side to reduce the potential for additional vegetation loss within open space. Fencing shall be put in place by a qualified biologist or the project proponent. All temporary fencing shall be removed only after the conclusion of all grading, clearing, and construction. Employees shall strictly limit their activities and vehicles to the proposed project areas, staging areas, and routes of travel. The biological monitor shall verify that the limits of construction have been properly staked and are readily identifiable. Intrusion by unauthorized vehicles outside of construction limits shall be prohibited, with control exercised by an on-site foreman. Access routes to the construction area outside of work hours shall be blocked with physical barriers, such as concrete blocks or large equipment.

MM-5 Biological Monitor

If complete avoidance of the LBVI nesting season is not feasible, a City-approved biological monitor shall be present during all construction activities within 500 feet of suitable LBVI habitat to ensure that avoidance measures are implemented such that noise levels do not exceed an average of 60 dB over an hour period. If nesting LBVI are found on site, a 500 ft buffer will be established around the nest. No work will occur within the 500-ft buffer unless under the supervision of the biological monitor and appropriate noise attenuation measures have been implemented that ensure that noise levels do not exceed 60 dB near the nest location. The biological monitor shall have the authority to halt construction to prevent or avoid take of LBVI and/or to ensure compliance with all avoidance, minimization, and mitigation measures. Any unauthorized impacts or actions in non-compliance with the permits and construction documents shall be immediately brought to the attention of the USFWS.

MM-6 Mitigation for Impacts to Southern Cottonwood-Willow Riparian Forest

The project proponent shall mitigate project impacts to 0.59 acre of Southern Cottonwood-Willow Riparian Forest at a mitigation to impact ratio of 3:1. The project proponent shall therefore preserve 1.77 acres of Southern Cottonwood-Willow Riparian Forest through on-site preservation, off-site acquisition, in lieu fees, and purchase of credits from an approved mitigation bank, or a combination thereof, compliant with the MHCP and as approved by the City of San Marcos Planning Manager.

5.2 Riparian Habitat and Sensitive Vegetation Communities

The proposed project would have a significant effect on biological resources if it would:

b) Have a substantial adverse impact on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or US Fish and Wildlife Service.

Project implementation would potentially impact 0.22 acre of Diegan Coastal Sage Scrub, 0.06 acre of disturbed Diegan Coastal Sage Scrub (0.28 acre of total impacts to a Group C habitat group), and 0.59 acre of Southern Cottonwood-Willow Riparian Forest, which are sensitive vegetation communities. The mitigation ratios required by the MHCP based on the project site's location are summarized in Table 3. Impacts to Diegan Coastal Sage Scrub, disturbed Diegan Coastal Sage Scrub, and Southern Cottonwood-Willow Riparian Forest would be considered significant without mitigation.

Riparian Habitat and Sensitive Vegetation Communities

MM-3, 4, 6, and 7 would be implemented by the project to reduce impacts to riparian habitat and other sensitive vegetation communities. MM-3 requires a WEAP be implemented for the project, and as part of that WEAP would be the discussion of minimizing project impacts to riparian habitat and other sensitive vegetation communities within the project site. MM-4 would require delineation of the work limits to avoid encroachment of construction equipment into riparian habitat and other sensitive vegetation communities outside of work limits. MM-6 would require that project impacts to Southern Cottonwood-Willow Riparian Forest be mitigated at a 3:1 mitigation to impact ratio, resulting in the preservation of 1.77 acres of Southern Cottonwood-Willow Riparian Forest. MM-7 would require that project impacts to Diegan Coastal Sage Scrub and disturbed Diegan Coastal Sage

Scrub be mitigated at a 2:1 mitigation to impact ratio, resulting in the preservation of 0.56 acre of Diegan Coastal Sage Scrub.

Table 3 Vegetation Community/Land Cover Type On Site and Associated Mitigation Ratios

MHCP Habitat Group	Sensitive	Vegetation Community/Land Cover Type (Holland Code)	Mitigation Ratio
Group C	Yes	Diegan Coastal Sage Scrub (32500)	2:1
Group C	Yes	Disturbed Diegan Coastal Sage Scrub (32500)	2:1
Group A	Yes	Southern Cottonwood-Willow Riparian Forest (61330)	3:1
Group F	No	Ruderal	None

MM-7 Mitigation for Impacts to Diegan Coastal Sage Scrub and Disturbed Diegan Coastal Sage Scrub

The project proponent shall mitigate project impacts to 0.22 acre of Diegan Coastal Sage Scrub and 0.06 acre disturbed Diegan Coastal Sage Scrub (0.28 acre total) at a mitigation to impact ratio of 2:1. The project proponent shall therefore preserve 0.56 acre of Diegan Coastal Sage Scrub through on-site preservation, off-site acquisition, in lieu fees, a purchase of credits from an approved mitigation bank, or a combination thereof, compliant with the MHCP and as approved by the City of San Marcos Planning Manager.

With the implementation of MMs 3, 4, 6, and 7, impacts to sensitive vegetation communities would be less than significant.

5.3 Jurisdictional Waters and Wetlands

The proposed project would have a significant effect on biological resources if it would:

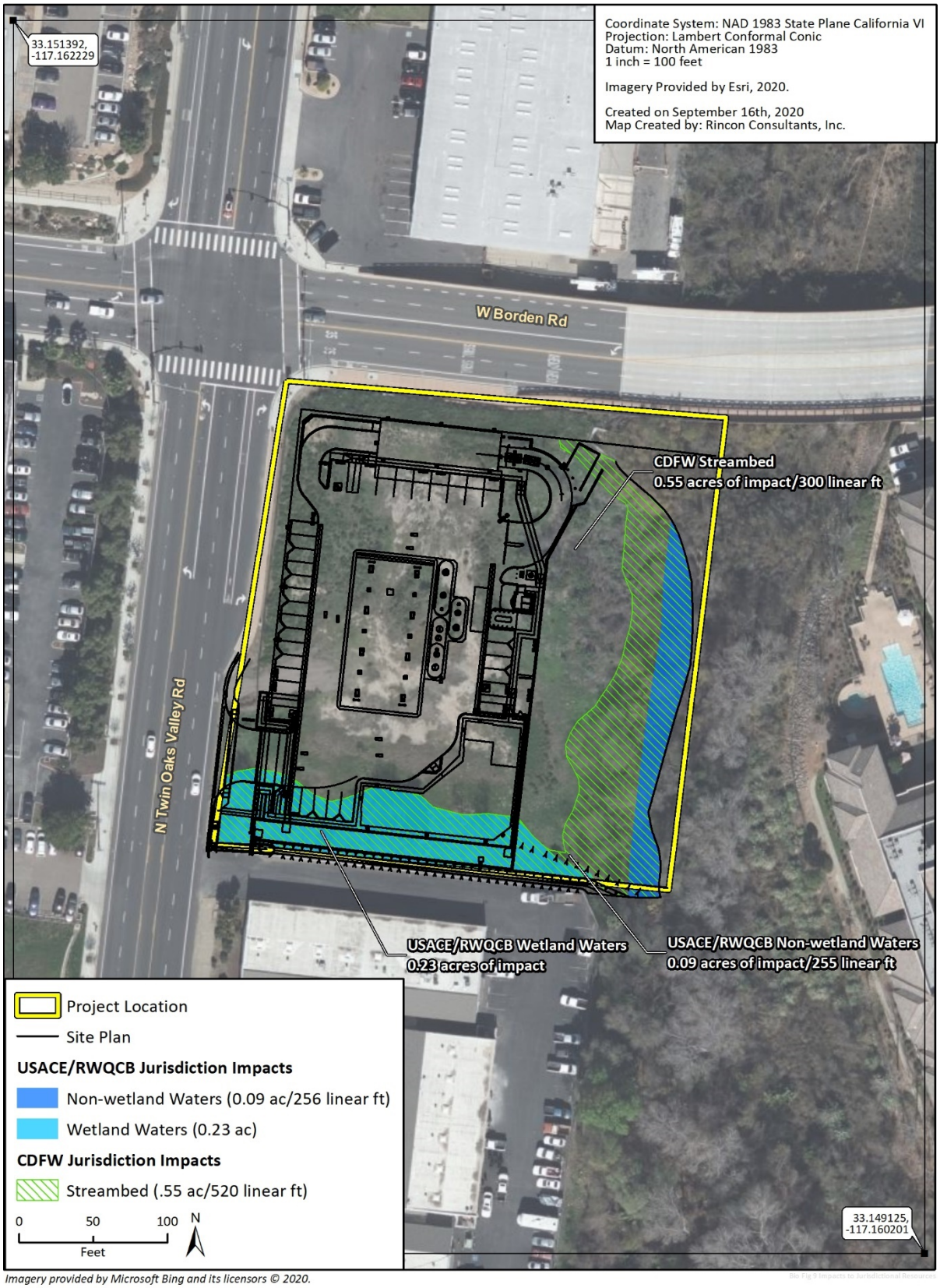
c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means

The project site contains Twin Oaks Valley Creek and associated wetland potentially under the jurisdiction of USACE, RWQCB, and CDFW. Project implementation would impact 0.09 acre and 256 linear feet of non-wetland waters of the United States (U.S.)/State and 0.23 acre of wetland waters of the U.S./State under the jurisdiction of USACE and RWQCB, and 0.55 acre and 520 linear feet of streambed under the jurisdiction of CDFW (Figure 9). A CWA Section 404 Permit would be required from the USACE for impacts to jurisdictional waters of the U.S. In addition to a Section 404 Permit, the USACE's authorization of the project would require issuance of a Section 401 Water Quality Certification by the San Diego RWQCB. The CDFW issues an LSAA when project activities have the potential to impact intermittent and perennial streams, rivers, or lakes. Based on the nature of the project, it is likely an LSAA would be required. These impacts would be considered significant without mitigation.

Jurisdictional Waters and Wetlands

MM-8 and 9 would be implemented by the project to reduce impacts to jurisdictional waters and wetlands. MM-8 requires preparation of a formal aquatic resources delineation report and obtainment of agency permits. MM-9 would require that project impacts to jurisdictional waters

Figure 9 Impacts to Jurisdictional Resources



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and wetland be mitigated at a 3:1 mitigation to impact ratio, resulting in the restoration of 0.27 acre of non-wetland waters of the U.S., 0.69 acre of wetland waters, and 1.65 acres of streambeds.

Implementation of MMs 8 and 9, described below, would reduce impacts to jurisdictional waters and wetlands to less than significant.

MM- 8 Prepare an Aquatic Resources Delineation Report and Obtain Agency Permits

The project proponent shall retain a qualified biologist to prepare and submit an Aquatic Resources Delineation Report to provide official quantification of the impacts to wetlands/waters of the U.S./Waters of the State and for use in permitting. The project proponent shall also obtain a Clean Water Act Section 404 Permit from the USACE for impacts to jurisdictional waters of the U.S., a CWA Section 401 Water Quality Certification from the RWQCB, and a Lake or Streambed Alteration Agreement from CDFW.

MM-9 Mitigation for Jurisdictional Waters

Permanent impacts to jurisdictional waters and wetlands shall be mitigated as required by the MHCP and shall be no less than what is required by the permitting agencies. To mitigate temporary impacts to jurisdictional waters and wetlands, the project proponent shall restore temporarily disturbed jurisdictional areas at a 1:1 ratio. To mitigate permanent impacts to 0.09 acre of non-wetland waters of the U.S., 0.23 acre of wetland waters, and 0.55 acre of streambeds, the project proponent shall restore in-kind habitat on site at a 3:1 ratio, as approved by USACE, CDFW, and RWQCB. The project proponent shall therefore restore a total of 0.27 acre of non-wetland waters of the U.S., 0.69 acre of wetland waters, and 1.65 acres of streambeds. If on-site restoration is infeasible, mitigation may be completed by providing adequate funding to either a third-party organization, conservation bank or in-lieu fee program for the in-kind creation or restoration at a 3:1 ratio. If mitigation is implemented off site, mitigation lands should be in the same County as the project site. Mitigation shall be implemented prior to issuance of the grading permit.

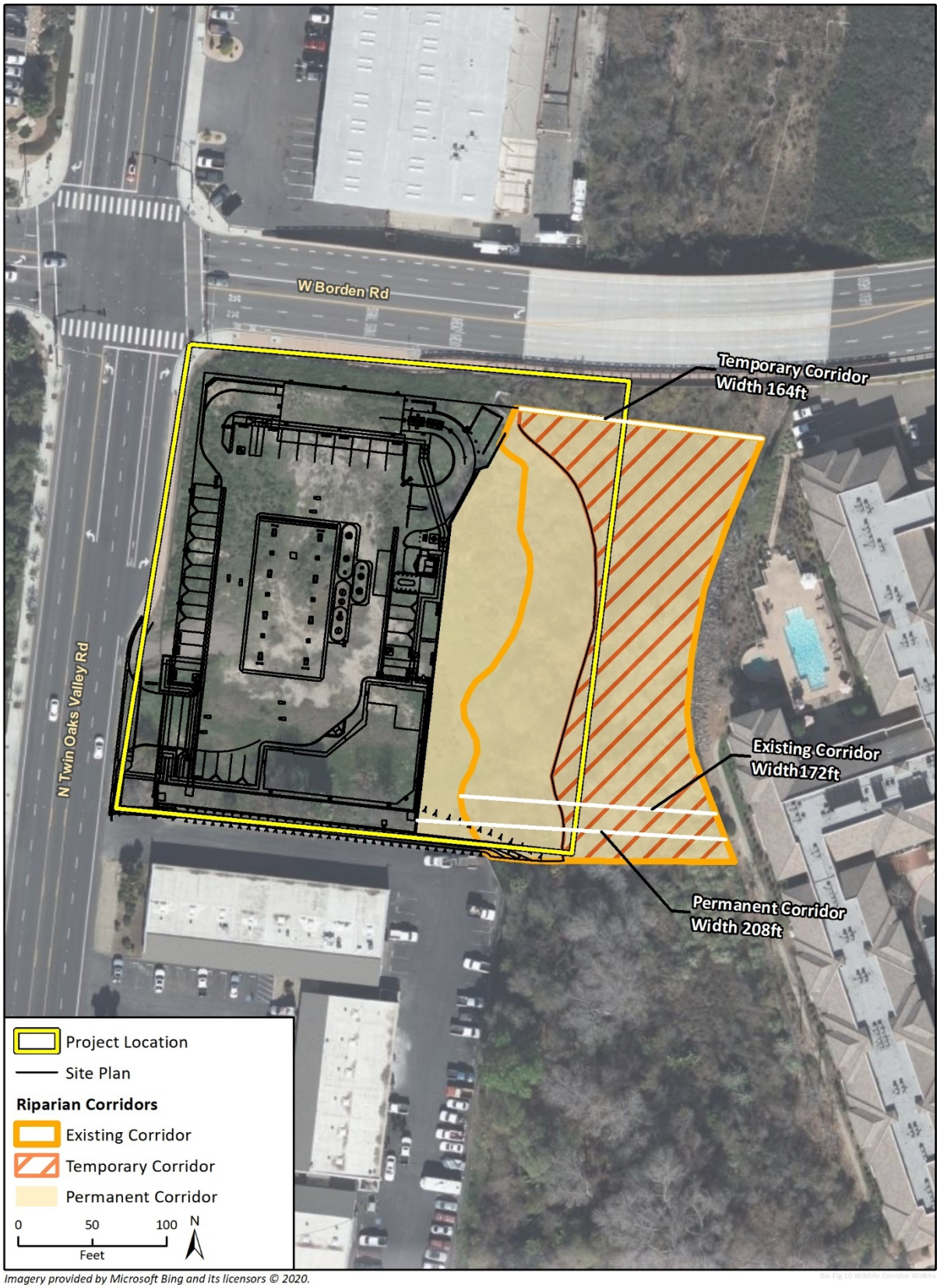
5.4 Wildlife Corridors

The proposed project would have a significant effect on biological resources if it would:

d) Interfere substantially with the movement of any resident or migratory fish or wildlife species or with established resident or migratory wildlife corridors, or impede the use of wildlife nursery sites.

The east edge of the project site contains a wildlife corridor associated with Twin Oaks Valley Creek. A total of 0.59 acre of riparian habitat consisting of Southern Cottonwood-Willow Riparian Forest will be removed as part of project implementation. These impacts to Southern Cottonwood-Willow Riparian Forest will temporarily narrow this riparian corridor, restricting the use of this area as a movement corridor. As described in Section 1.0, a project design feature is to revegetate the east portion of the project development area near Twin Oaks Valley Creek with a native riparian hydroseed mix. This revegetation area will be subject to periodic maintenance by the City. Once the riparian vegetation from the seed mix becomes established, it is anticipated that wildlife will be able to use this graded area for movement (Figure 10).

Figure 10 Wildlife Corridor Widths



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As shown on Figure 10, the existing corridor width associated with Twin Oaks Valley Creek at its widest point is approximately 172 feet. The temporary corridor width at its widest point immediately following the completion of project grading would be reduced to 164 feet. The permanent corridor width at its widest point subsequent to full project development and revegetation of the graded slope would be increased to 208 feet. Project implementation would therefore result in a net increase in the width of the wildlife corridor associated with Twin Oaks Valley Creek. The project is therefore not anticipated to substantially impact wildlife movement.

5.5 Local Policies and Ordinances

The proposed project would have a significant effect on biological resources if it would:

e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.

The Conservation and Open Space Element of the City's General Plan includes policies related to the protection of biological resources. The applicable policies, as well as the project's consistency with these policies, are presented below:

Policy COS-1.1: Support the protection of biological resources through the establishment, restoration, and conservation of high-quality habitat areas.

With the exception of on-site Southern Cotton-Willow Riparian Forest, Diegan Coastal Sage Scrub, and disturbed Diegan Coastal Sage Scrub, a large portion of the project site (1.17 acres) would not be characterized as a high-quality habitat area. Mitigation for impacts to Southern Cottonwood-Willow Riparian Forest, Diegan Coastal Sage Scrub, and Disturbed Diegan Coastal Sage Scrub is identified in MM-6 and 7, which requires a total of 2.33 acres of these vegetation communities be preserved. MM-9 requires impacts to 0.09 acre of non-wetland waters of the U.S., 0.23 acre of wetland waters, and 0.55 acre of streambeds be mitigated at a 3:1 ratio. This can be accomplished through either on-site preservation and restoration, off-site acquisition, in lieu fees, a purchase of credits from an approved mitigation bank, or a combination thereof as approved by the City Planning Manager, USACE, CDFW and RWQCB. Additionally, the City designates the General Plan land use for the project site as Commercial (C). The current project proposes development of only a portion of the project site. Therefore, implementation of the project does not conflict with this policy.

Policy COS-1.2: Ensure that new development, including Capital Improvement Projects, maintain the biotic habitat value of riparian areas, oak woodlands, habitat linkages, and other sensitive habitats.

The project site supports riparian areas and a habitat linkage. On site Southern Cottonwood-Willow Riparian Forest, Diegan Coastal Sage Scrub, and disturbed Diegan Coastal Sage Scrub is considered sensitive; however, mitigation for impacts to habitat is identified in MM-6 and MM-7, which would require a total of 2.33 acres of these vegetation communities be preserved. MM-9 requires impacts to 0.09 acre of non-wetland waters of the U.S., 0.23 acre of wetland waters, and 0.55 acre of streambeds be mitigated at a 3:1 ratio. This can be accomplished through either on-site preservation and restoration, off-site acquisition, in lieu fees, a purchase of credits from an approved mitigation bank, or a combination thereof as approved by the City Planning Manager, USACE, CDFW, and RWQCB. The project would avoid most of Twin Oaks Valley Creek and would mostly avoid the City-identified wildlife corridor in the eastern portion of the project site. The

proposed project would therefore maintain most of the biotic habitat value of the on-site riparian area and that of the wildlife corridor on site. Additionally, the City designates the General Plan land use for the project site as Commercial (C). The current project proposes development of only a portion of the project site. Therefore, the project does not conflict with this policy.

Policy COS-2.1: Provide and protect open space areas throughout the City for its recreational, agricultural, safety, and environmental value.

The project site has a history of disturbance. The City designates the General Plan land use for the project site as Commercial (C). The project proposes development of only a portion of the project site. Therefore, implementation of the project does not conflict with this policy.

Policy COS-2.2: Limit, to the extent feasible, the conversion of open space to urban uses and place a high priority on acquiring and preserving open space lands for recreation, habitat protection and enhancement, flood hazard management, water and agricultural resources protection, and overall community benefit.

The project site has a history of disturbance. The City designates the General Plan land use for the project site as Commercial (C). The project proposes development of only a portion of the project site. Most of the riparian habitat associated with Twin Oaks Valley Creek within the study area would be avoided. Mitigation for habitat impacts can be accomplished through either on-site preservation and restoration, off-site acquisition, in lieu fees, a purchase of credits from an approved mitigation bank, or a combination thereof as approved by the City Planning Manager, USACE, CDFW and RWQCB. Therefore, implementation of the project does not conflict with this policy.

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

A number of mature Fremont cottonwoods, western sycamores, and willow trees are located along Twin Oaks Valley Creek near the east property boundary and along the wetland near the south property boundary. Project implementation would remove several of these trees, as they are located inside of the project development footprint. These tree removals would be replaced at a ratio of 1:1 either on-site or at an off-site location. Therefore, implementation of the project does not conflict with this policy.

5.6 Habitat Conservation Plans

The proposed project would have a significant effect on biological resources if it would:

f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Conservation Community Plan, or other approved local, regional, or state habitat conservation plan.

The study area is located within the MHCP, which identifies a series of FPAs within which some lands will be dedicated for preservation of native habitats. The project site is not located within an FPA, as illustrated in Figure 2-1 of the Final MHCP Plan (SANDAG 2003). The project area is not within a Biological Core and Linkage Area, as illustrated in Figure 2-3 of the Final MHCP Plan (SANDAG 2003). Descriptions of how impacts would be reduced to less than significant are presented in the MMs above. With the implementation of these mitigation measures, the project would not conflict with the MHCP provisions. Even though the City's Subarea Plan is not yet approved, the project has been designed to comply with the plan's goals and policies.

6 Limitations, Assumptions, and Use Reliance

This Biological Resources Assessment has been performed in accordance with professionally accepted biological investigation practices conducted at this time and in this geographic site. The biological investigation is limited by the scope of work performed. The biological survey is limited also by the environmental conditions present at the time of the survey. In addition, general biological (or protocol) surveys do not guarantee that the organisms are not present and will not be discovered in the future within the site. In particular, mobile wildlife species could occupy the site on a transient basis, or re-establish populations in the future. Our field studies were based on current industry practices, which change over time and may not be applicable in the future. No other guarantees or warranties, expressed or implied, are provided. The findings and opinions conveyed in this report are based on findings derived from site reconnaissance, jurisdictional sites, review of CNDDB RareFind5, and specified historical and literature sources. Standard data sources relied upon during the completion of this report, such as the CNDDB, may vary with regard to accuracy and completeness. In particular, the CNDDB is compiled from research and observations reported to CDFW that may or may not have been the result of comprehensive or site-specific field surveys. Although Rincon believes the data sources are reasonably reliable, Rincon cannot and does not guarantee the authenticity or reliability of the data sources it has used. Additionally, pursuant to our contract, the data sources reviewed included only those that are practically reviewable without the need for extraordinary research and analysis.

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Appendix A

Site Photographs

Photograph 1. Overview of disturbed habitat/ ruderal in the foreground and riparian habitat along Twin Oaks Valley Creek in the background.

Photograph 2. Representative disturbed habitat/ruderal landcover in the center of the project site.

Photograph 3. Representative photo of dense riparian vegetation along Twin Oaks Valley Creek.

Photograph 4. Representative photo of the dense Southern Cottonwood-Willow Riparian Scrub along Twin Oaks Valley Creek.

Photograph 5. Representative photo of disturbed Diegan Coastal Sage Scrub on site.

Photograph 6. Representative photo of Diegan Coastal Sage Scrub along the northern boundary of the site.

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Appendix B

Floral and Faunal Compendium

Plant Species Observed within the Project Site During the Surveys for the Project

Scientific Name	Common Name	Status	Native or Introduced
Asteraceae: Sunflower Family			
Ambrosia psilostachya	western ragweed	None	Native
Artemisia californica	California sagebrush	None	Native
Artemisia douglasiana	Douglas mugwort	None	Native
Baccharis pilularis	coyote brush	None	Native
Baccharis salicifolia	mule fat	None	Native
Centaurea melitensis	star thistle	None	Introduced
Dittrichia graveolens	stinkwort	None	Introduced
Encelia californica	California encelia	None	Native
Erigeron canadensis	horseweed	None	Native
Eriophyllum confertiflorum	golden-yarrow	None	Native
Isocoma menziesii	San Diego goldenbush	None	Native
Hazardia squarrosa	saw-toothed goldenbush	None	Native
Brassicaceae: Mustard Family			
Brassica nigra	black mustard	None	Introduced
Hirschfeldia incana	shortpod mustard	None	Introduced
Boraginacea: Borage Family			
Phacelia ramosissima	branching phacelia	None	Native
Euphorbiaceae: Spurge Family			
Ricinus communis	castor bean	None	Introduced
Myrsinaceae: Myrsine Family			
Lysimachia arvensis	scarlet pimpernel	None	Introduced
Myrtaceae: Myrtle Family			
Eucalyptus sp.	blue gum	None	Introduced
Onagraceae: Evening Primrose Family			
Oenothera elata spp. Hookeri	Hooker's evening primrose	None	Native
Poaceae: Grass Family			
Bromus diandrus	ripgut brome	None	Introduced
Bromus madritensis spp. *rubens*	red brome	None	Introduced
Cynodon dactylon	Bermuda grass	None	Introduced
Pennisetum setaceum	fountain grass	None	Introduced
Polygonaceae: Knotweed Family			
Eriogonum fasciculatum	flat-top buckwheat	None	Native
Salicaceae: Willow Family			
Salix gooddingii	Goodding's black willow	None	Native
Salix lasiolepis	arroyo willow	None	Native
Salix laevigata	red willow	None	Native
Solanaceae: Nightshade Family			
Nicotiana glauca	tree tobacco	None	Introduced
Solanum americanum	white nightshade	None	Native

Wildlife Species Observed within the Project Site During the Surveys for the Project

Scientific Name	Common Name	Status	Native or Introduced
Birds			
Buteo jamaicensis	red-tailed hawk	None	Native
Zenaida macroura	mourning dove	None	Native
Calypte anna	Anna's hummingbird	None	Native
Tyrannus verticalis	western kingbird	None	Native
Aphelocoma californica	California scrub-jay	None	Native
Corvus brachyrhynchos	American crow	None	Native
Psaltriparus minimus	bushtit	None	Native
Mimus polyglottos	northern mockingbird	None	Native
Picoides nuttallii	Nuttall's woodpecker	None	Native
Pipilo maculatus	spotted towhee	None	Native
Melozone crissalis	California towhee	None	Native
Melospiza melodia	song sparrow	None	Native
Artemisiospiza nevadensis	sage sparrow	None	Native
Haemorhous mexicanus	house finch	None	Native
Spinus psaltria	lesser goldfinch	None	Native
Vireo bellii pusillus	least Bell's vireo	Federally Endangered	Native
Reptiles			
Sceloporus occidentalis	western fence lizard	None	Native
Mammals			
Otospermophilus beecheyi	California ground squirrel	None	Native
Sylvilagus audubonii	desert cottontail	None	Native

Appendix C

Special Status Species Evaluation Tables

Special Status Plant Species in the Regional Vicinity of the Project Site

Scientific Name Common Name	Status	Habitat Requirements	Potential to Occur in Project Site	Habitat Suitability/ Observations
Plants and Lichens				
Acanthomintha ilicifolia San Diego thorn-mint	Threatened/ Endangered G1/S1 1B.1 MHCP NE	Chaparral, coastal scrub, valley and foothill grassland, vernal pools. Endemic to active vertisol clay soils of mesas & valleys. Usually on clay lenses within grassland or chaparral communities. 25-945 m. annual herb. Blooms Apr-Jun	No Potential	The species' associated soils are not present in the project site.
Adolphia californica California adolphia	None/None G3/S2 2B.1	Chaparral, coastal sage scrub, valley and foothill grassland. From sandy/gravelly to clay soils within grassland, coastal sage scrub, or chaparral; various exposures. 5-335 m. perennial deciduous shrub. Blooms Dec-May	No Potential	Coastal sage scrub on the project site was planted and is not suitable to support this species. This conspicuous shrub species was not observed during the survey.
Ambrosia pumila San Diego ambrosia	Endangered/ None G1/S1 1B.1 MHCP NE	Chaparral, coastal scrub, valley and foothill grassland. Sandy loam or clay soil; sometimes alkaline. In valleys; persists where disturbance has been superficial. Sometimes on margins or near vernal pools. 3-580 m. perennial rhizomatous herb. Blooms Apr-Oct	Low Potential	Marginal habitat for the species is present and there are several recent records from within 10 miles of the project site.
Arctostaphylos glandulosa ssp. crassifolia Del Mar manzanita	Endangered/ None G5T2/S2 1B.1 MHCP NE	Chaparral. Sandy coastal mesas and ocean bluffs; in chaparral or Torrey pine forest. 30-365 m. perennial evergreen shrub. Blooms Dec-Jun	No Potential	This conspicuous shrub species was not observed during any of the surveys.
Artemisia palmeri San Diego sagewort	None/None G3?/S3? 4.2	Coastal scrub, chaparral, riparian forest, riparian woodland, riparian scrub. In drainages and riparian sites in sandy soil within chaparral and other habitats. 15-915 m. perennial deciduous shrub. Blooms (Feb)May-Sep	No Potential	The species' associated soils are not present in the project site.
Asplenium vespertinum western spleenwort	None/None G4/S4 4.2	Chaparral, cismontane woodland, coastal scrub. Rocky sites. 180-1000 m. perennial rhizomatous herb. Blooms Feb-Jun	No Potential	The species' associated soils are not present in the project site.
Baccharis vanessae Encinitas baccharis	Threatened/ Endangered G1/S1 1B.1 MHCP NE	Chaparral, cismontane woodland. On sandstone soils in steep, open, rocky sites with chaparral associates. 60-900 m. perennial deciduous shrub. Blooms Aug,Oct,Nov	No Potential	Suitable habitat is not present within the project site. This conspicuous shrub species was not observed during the survey.

Scientific Name Common Name	Status	Habitat Requirements	Potential to Occur in Project Site	Habitat Suitability/ Observations
Brodiaea filifolia thread-leaved brodiaea	Threatened/ Endangered G2/S2 1B.1 MHCP NE	Chaparral (openings), cismontane woodland, coastal scrub, playas, valley and foothill grassland, vernal pools. Usually associated with annual grassland and vernal pools; often surrounded by shrubland habitats. Occurs in openings on clay soils. 15-1030 m. perennial bulbiferous herb. Blooms Mar-Jun	No Potential	The species' associated soils are not present in the project site.
Brodiaea orcuttii Orcutt's brodiaea	None/None G2/S2 1B.1	Vernal pools, valley and foothill grassland, closed-cone coniferous forest, cismontane woodland, chaparral, meadows and seeps. Mesic, clay habitats; usually in vernal pools and small drainages. 30-1615 m. perennial bulbiferous herb. Blooms May-Jul	No Potential	The species' associated soils are not present in the project site.
Ceanothus verrucosus wart-stemmed ceanothus	None/None G2/S2? 2B.2	Chaparral. 25-470 m. perennial evergreen shrub. Blooms Dec-May	No Potential	This conspicuous shrub species was not observed during the survey.
Centromadia parryi **ssp**. *australis* southern tarplant	None/None G3T2/S2 1B.1	Marshes and swamps (margins), valley and foothill grassland, vernal pools. Often in disturbed sites near the coast at marsh edges; also in alkaline soils sometimes with saltgrass. Sometimes on vernal pool margins. 0-975 m. annual herb. Blooms May-Nov	No Potential	The species' associated habitat is not present in the project site.
Chamaebatia australis southern mountain misery	None/None G4/S4 4.2	Chaparral. Gabbro or metavolcanic soils. 300-1020 m. perennial evergreen shrub. Blooms Nov-May	No Potential	The species' associated habitat and soils are not present in the project site.
Comarostaphylis diversifolia **ssp**. *diversifolia* summer holly	None/None G3T2/S2 1B.2	Chaparral, cismontane woodland. Often in mixed chaparral in California, sometimes post-burn. 30-945 m. perennial evergreen shrub. Blooms Apr-Jun	No Potential	This conspicuous shrub species was not observed during the survey.
Convolvulus simulans small-flowered morning-glory	None/None G4/S4 4.2	Chaparral, coastal scrub, valley and foothill grassland. Wet clay, serpentine ridges. 30-700 m. annual herb. Blooms Mar-Jul	No Potential	The species' associated soils are not present in the project site.
Deinandra paniculata paniculate tarplant	None/None G4/S4 4.2	Coastal scrub, valley and foothill grassland, vernal pools. Usually in vernally mesic sites. Sometimes in vernal pools or on mima mounds near them. 25-940 m. annual herb. Blooms (Mar)Apr-Nov	No Potential	Vernal pools are not present in the project site.

Scientific Name Common Name	Status	Habitat Requirements	Potential to Occur in Project Site	Habitat Suitability/ Observations
Dichondra occidentalis western dichondra	None/None G3G4/S3S4 4.2	Chaparral, cismontane woodland, coastal scrub, valley and foothill grassland. On sandy loam, clay, and rocky soils. 50-500 m. perennial rhizomatous herb. Blooms (Jan)Mar-Jul	No Potential	The species' associated soils are not present in the project site.
Eryngium aristulatum var. parishii San Diego button-celery	Endangered/ Endangered G5T1/S1 1B.1	Vernal pools, coastal scrub, valley and foothill grassland. San Diego mesa hardpan & claypan vernal pools & southern interior basalt flow vernal pools; usually surrounded by scrub. 15-880 m. annual/perennial herb. Blooms Apr-Jun	No Potential	Vernal pools are not present in the project site.
Harpagonella palmeri Palmer's grapplinghook	None/None G4/S3 4.2	Chaparral, coastal scrub, valley and foothill grassland. Clay soils; open grassy sites within shrubland. 20-955 m. annual herb. Blooms Mar-May	No Potential	The species' associated soils are not present in the project site.
Holocarpha virgata **ssp**. *elongata* curving tarplant	None/None G5T3/S3 4.2	Chaparral, coastal scrub, valley and foothill grassland, cismontane woodland. 60-1100 m. annual herb. Blooms May-Nov	No Potential	The species' associated habitat is not present in the project site.
Hordeum intercedens vernal barley	None/None G3G4/S3S4 3.2	Valley and foothill grassland, vernal pools, coastal dunes, coastal scrub. Vernal pools, dry, saline streambeds, alkaline flats. 5-1000 m. annual herb. Blooms Mar-Jun	No Potential	The species' associated soils are not present in the project site.
Horkelia truncata Ramona horkelia	None/None G3/S3 1B.3	Chaparral, cismontane woodland. Habitats in California include: mixed chaparral, vernal streams, and disturbed sites near roads. Clay soil; at least sometimes on gabbro. 380-1190 m. perennial herb. Blooms May-Jun	No Potential	The species' associated soils are not present in the project site.
Isocoma menziesii var. decumbens decumbent goldenbush	None/None G3G5T2T3/S2 1B.2	Coastal scrub, chaparral. Sandy soils; often in disturbed sites. 1-915 m. perennial shrub. Blooms Apr-Nov	No Potential	The species' associated soils are not present in the project site.
Juncus acutus ssp. leopoldii southwestern spiny rush	None/None G5T5/S4 4.2	Salt marshes, alkaline seeps, coastal dunes (mesic sites). Moist saline places. 3-900 m. perennial rhizomatous herb. Blooms (Mar)May-Jun	No Potential	The species' associated soils are not present in the project site.
Lepidium virginicum var. robinsonii Robinson's pepper-grass	None/None G5T3/S3 4.3	Chaparral, coastal scrub. Dry soils, shrubland. 4-1435 m. annual herb. Blooms Jan-Jul	No Potential	The species' associated habitat is not present in the project site.

Scientific Name Common Name	Status	Habitat Requirements	Potential to Occur in Project Site	Habitat Suitability/ Observations
Monardella hypoleuca ssp. lanata felt-leaved monardella	None/None G4T3/S3 1B.2	Chaparral, cismontane woodland. Occurs in understory in mixed chaparral, chamise chaparral, and southern oak woodland; sandy soil. 425-1585 m. perennial rhizomatous herb. Blooms Jun-Aug	No Potential	The species' associated habitat is not present in the project site.
Navarretia fossalis spreading navarretia	Threatened/ None G2/S2 1B.1 MHCP NE	Vernal pools, chenopod scrub, marshes and swamps, playas. San Diego hardpan & San Diego claypan vernal pools; in swales & vernal pools, often surrounded by other habitat types. 15-850 m. annual herb. Blooms Apr-Jun	No Potential	The species' associated habitat is not present in the project site.
Psilocarphus brevissimus var. multiflorus Delta woolly-marbles	None/None G4T3/S3 4.2	Vernal pools. Also on flats. 10-500 m. annual herb. Blooms May-Jun	No Potential	The species' associated soils are not present in the project site.
Quercus dumosa Nuttall's scrub oak	None/None G3/S3 1B.1	Closed-cone coniferous forest, chaparral, coastal scrub. Generally on sandy soils near the coast; sometimes on clay loam. 15-640 m. perennial evergreen shrub. Blooms Feb-Apr(May-Aug)	No Potential	This conspicuous tree species was not observed during the survey.
Quercus engelmannii Engelmann oak	None/None G3/S3 4.2	Cismontane woodland, chaparral, riparian woodland, valley and foothill grassland. 50-1300 m. perennial deciduous tree. Blooms Mar-Jun	No Potential	This conspicuous tree species was not observed during the survey.
Tetracoccus dioicus Parry's tetracoccus	None/None G2G3/S2 1B.2	Chaparral, coastal scrub. Stony, decomposed gabbro soil. 135-705 m. perennial deciduous shrub. Blooms Apr-May	No Potential	This conspicuous shrub species was not observed during any of the surveys.
Invertebrates				
Branchinecta sandiegonensis San Diego fairy shrimp	Endangered/ None G2/S2	Endemic to San Diego and Orange County mesas. Vernal pools.	No Potential	The species' associated habitat is not present in the project site.
Birds				
Polioptila californica californica coastal California gnatcatcher	Threatened/ None G4G5T2Q/S2 SSC	Obligate, permanent resident of coastal sage scrub below 2500 ft in Southern California. Low, coastal sage scrub in arid washes, on mesas and slopes. Not all sites classified as coastal sage scrub are occupied.	No Potential	Very low quality and small patch of coastal sage scrub present on the project site. This habitat is isolated and not suitable for CAGN per the KMEA habitat assessment.

Scientific Name Common Name	Status	Habitat Requirements	Potential to Occur in Project Site	Habitat Suitability/ Observations
Vireo bellii pusillus least Bell's vireo	Endangered/ Endangered G5T2/S2	Summer resident of Southern California in low riparian in vicinity of water or in dry river bottoms; below 2000 ft. Nests placed along margins of bushes or on twigs projecting into pathways, usually willow, *Baccharis*, mesquite.	Present	Species was observed in the survey area.
Mammals				
Corynorhinus townsendii Townsend's big-eared bat	None/None G3G4/S2 SSC	Throughout California in a wide variety of habitats. Most common in mesic sites. Roosts in the open, hanging from walls and ceilings. Roosting sites limiting. Extremely sensitive to human disturbance.	No Potential	The species associated roosting habitat is not present in the project site.
Lasiurus cinereus hoary bat	None/None G5/S4	Prefers open habitats or habitat mosaics, with access to trees for cover and open sites or habitat edges for feeding. Roosts in dense foliage of medium to large trees. Feeds primarily on moths. Requires water.	Low Potential	Individuals of the species could potentially use the trees in the project for night roosts, but winter and maternal roosting by the species is not expected.
Neotoma lepida intermedia San Diego desert woodrat	None/None G5T3T4/S3S4 SSC	Coastal scrub of Southern California from San Diego County to San Luis Obispo County. Moderate to dense canopies preferred. They are particularly abundant in rock outcrops, rocky cliffs, and slopes.	No Potential	The species' associated habitat is not present in the project site.
Taxidea taxus American badger	None/None G5/S3 SSC	Most abundant in drier open stages of most shrub, forest, and herbaceous habitats, with friable soils. Needs sufficient food, friable soils and open, uncultivated ground. Preys on burrowing rodents. Digs burrows.	No Potential	No diagnostic sign of the species (e.g., burrows or digs) were identified in the project site.
Sensitive Natural Communities				
San Diego Mesa Claypan Vernal Pool San Diego Mesa Claypan Vernal Pool	None/None GNR/SNR		No Potential	The community's plant species were not identified in the project site.
Southern Cottonwood Willow Riparian Forest Southern Cottonwood Willow Riparian Forest	None/None G3/S3.2		Present	This community is present on the project site.

Regional Vicinity refers to within a 9-quad search radius of site.

Status (Federal/State)

FE = Federal Endangered
FT = Federal Threatened
FPE = Federal Proposed Endangered
FPT = Federal Proposed Threatened
FD = Federal Delisted
FC = Federal Candidate
SE = State Endangered
ST = State Threatened
SCE = State Candidate Endangered
SCT = State Candidate Threatened
SR = State Rare
SD = State Delisted
SSC = CDFW Species of Special Concern
FP = CDFW Fully Protected
WL = CDFW Watch List

CRPR (CNPS California Rare Plant Rank)

1A = Presumed extirpated in California, and rare or extinct elsewhere
1B = Rare, Threatened, or Endangered in California and elsewhere
2A = Presumed extirpated in California, but common elsewhere
2B= Rare, Threatened, or Endangered in California, but more common elsewhere
3 = Need more information (Review List)
4 = Limited Distribution (Watch List)

CRPR Threat Code Extension

.1 = Seriously endangered in California (>80% of occurrences threatened/ high degree and immediacy of threat)
.2 = Moderately threatened in California (20-80% of occurrences threatened/ moderate degree and immediacy of threat)
.3 = Not very endangered in California (<20% of occurrences threatened/ low degree and immediacy of threat)

Other Statuses

G1 or S1 Critically Imperiled Globally or Subnationally (state)
G2 or S2 Imperiled Globally or Subnationally (state)
G3 or S3 Vulnerable to extirpation or extinction Globally or Subnationally (state)
G4/5 or S4/5 Apparently secure, common and abundant
GH or SH Possibly Extirpated – missing; known from only historical occurrences but still some hope of rediscovery

Additional notations may be provided as follows

T – Intraspecific Taxon (subspecies, varieties, and other designations below the level of species)
Q – Questionable taxonomy that may reduce conservation priority
? – Inexact numeric rank

Appendix D

2020 Coastal California Gnatcatcher (*Polioptila californica californica*) Habitat Assessment for the Twin Oaks Fuel, Convenience Store and Car Wash Project, San Marcos, California

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www.kmea.net

September 15, 2020

Megan Minter
Rincon Consultants
2215 Faraday Ave., Suite A
Carlsbad, California 92008

Subject: 2020 Coastal California Gnatcatcher (*Polioptila californica californica*) Habitat Assessment for the Borden Road Gas Station Project, San Marcos, California

Dear Ms. Minter,

This report documents the results of a coastal California gnatcatcher (gnatcatcher) habitat assessment, conducted in San Marcos, California (Figure 1). The habitat assessment was conducted on August 27, 2020 by Monica Alfaro (TE-051242) and Todd Easley in support of the Borden Road Gas Station (Project). Under the proposed Project, a gas station would be constructed on an undeveloped lot. The project area consists of 2.04-acres of undeveloped lands supporting coastal sage scrub and other vegetation communities. Diegan coastal sage scrub occurring within the project area in addition to habitat located within 500 feet of the project boundary were assessed for gnatcatcher suitability.

Project Area Location

The Project Area is located in the City of San Marcos, at the southeastern corner of the Borden Road and N. Twin Oaks Valley Road intersection. Specifically, the survey area is in Township 12 South and Range 3 West of the San Marcos U.S. Geological Survey 7.5 Quadrangle Map (Figure 2). The Project Area was accessed from N. Twin Oaks Valley Road and unofficial paths. Elevation is approximately 590 feet (ft) above mean sea level (AMSL). San Marcos Creek (Creek) flows adjacent to the Project Area outside of the eastern boundary.

Methods

A habitat assessment was conducted on August 27, 2020 by Monica Alfaro (TE-051242) and Todd Easley. The assessment consisted of a site visit and an evaluation of habitat up to 500 feet from the Project area. Habitat was assessed for gnatcatcher suitability. A portion of the survey area north of Borden Road and east of the Creek is fenced. This area was evaluated from the sidewalk with the use of binoculars. Habitat types and gnatcatcher suitability were assessed based on plant species composition, continuity with similar habitat and surrounding land use. Older aerial imagery from Google Earth was viewed as part of the assessment. Wildlife observations were also recorded.

Coastal California Gnatcatcher Biology

The coastal California gnatcatcher is a small, grey, non-migratory songbird that generally occurs in sage scrub habitats throughout southern California and northern Baja California, Mexico. This insectivorous bird preys on small insects on the ground and in shrubs. In addition to coastal sage

scrub, the coastal California gnatcatcher can be found in other habitats that are similar in structure to coastal sage scrub such as coastal sage-chaparral scrub, chamise chaparral, and southern maritime chaparral (Campbell et al. 1998, Bontrager 1991). The coastal California gnatcatcher was afforded federal protection in 1993 when the U.S. Fish and Wildlife Service (USFWS) listed this species as threatened. It is considered a California Department of Fish and Wildlife Species of Special Concern. Critical habitat was designated for this species in 2000 and revised in 2007 (USFWS 2000, USFWS 2007).

The historical range of coastal California gnatcatchers extends from southern Ventura County southward through Los Angeles, Orange, Riverside, San Bernardino, and San Diego counties, and into Baja California, Mexico, to approximately 30 degrees north latitude near El Rosario (Atwood 1990). Habitat loss, fragmentation and urban encroachment have led to this species' decline (USFWS 1993). Parasitism by brown-headed cowbird (*Molothrus ater*) also poses a threat to this species (Unitt 2004). In 2003, the Cedar Fire destroyed almost 28% of the remaining habitat that the USFWS believed to be suitable for the coastal California gnatcatcher (Bond and Bradley 2003). In October 2007, several fires burned approximately 369,000 acres in San Diego County.

Results

Project Area

Currently the Project Area supports coastal sage scrub, disturbed coastal sage scrub, southern willow scrub and ruderal habitat, (Figure 3). Coastal sage scrub was planted along the edges of Borden Road and N. Twin Oaks Valley Road (eastern side only) after the completion of the Bridge project (Figures 3 and 4). This habitat is dominated by California sagebrush (*Artemisia californica*), flat-top buckwheat (*Eriogonum fasciculatum*), and California encelia (*Encelia californica*). The project area supports approximately 0.22 acre of coastal sage scrub, that occurs as strips ranging from 10 to 25 feet in width. San Diego goldenbush (*Isocoma menziesii*) was the dominant coastal sage scrub component observed outside of the planted area in areas of disturbed coastal sage scrub (0.06 acre).

Southern willow scrub associated with the creek occurs along the eastern and southern boundaries of the Project Area. Southern willow scrub is dominated by willows (*Salix* sp.). Ruderal areas supported stinkwort (*Dittrichia graveolens*), Bermuda grass (*Cynodon dactylon*), fennel (*Foeniculum vulgare*), black mustard (*Brassica nigra*), castor bean (*Ricinus communis*), tree tobacco (*Nicotiana glauca*) and other invasive plant species. Monotypic stands of western ragweed (*Ambrosia psilostachia*) which are often associated with disturbed habitat also occur. Areas devoid of vegetation including a paved entrance were observed (Figure 4). The Project Area was cleared of all vegetation prior to 2014 during the construction of the Bridge Project. This was confirmed by viewing older aerial imagery of the Project Area on Google Earth.

Survey Area

The survey area which includes habitat up to 500-feet of the project area is bisected by Borden Road and N. Twin Oaks Valley Road (Figure 2). Most of the 500-foot buffer is comprised of developed areas and riparian habitat associated with San Marcos Creek (Creek). Vegetation communities observed within the Survey Area include ruderal habitat, southern willow scrub and coastal sage scrub. Coastal sage scrub in the survey area was planted after the completion of the Borden Road Bridge (Bridge) Project. The planted area supports narrow strips approximately 15-20 feet wide of Diegan coastal

sage scrub and is situated along Borden Road to the north and N. Twin Oaks Valley Road to the west. Additional patches of coastal sage scrub occur in a vacant lot north of Borden Road and east of the Creek. The vacant lot is fenced; thus, observations were made from the sidewalk with the use of binoculars. The vacant lot supported a combination of non-native plant species, coastal sage scrub, and riparian scrub plant species. It appeared that plant cover by native species decreased from west to east. More native plants were observed near the Creek and non-native plant species were more prevalent near Woodward Street. Based on older aerial imagery, it appears that this vacant lot was cleared in the past (Google Earth 2016).

Table 1. List of Wildlife Species Detected

Common Name	Scientific Name	Status
Birds		
Cooper's hawk	*Accipiter cooperii*	
Mourning dove	*Zenaida macroura*	
Anna's hummingbird	*Calypte anna*	
Nuttall's woodpecker	*Picoides nuttallii*	
Cassin's kingbird	*Tyrannus vociferans*	
American crow	*Corvus brachyrhynchos*	
House finch	*Haemorhous mexicanus*	
Lesser goldfinch	*Spinus psaltria*	
Mammals		
Coyote	*Canis latrans*	

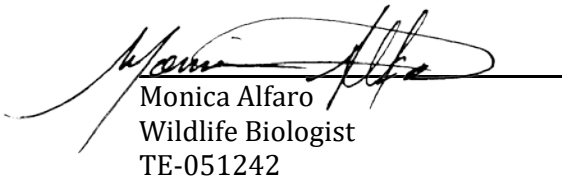
FT - Federally Threatened, CE - California Endangered, CSC - California Species of Special Concern

Discussion

Approximately 0.22-acre of coastal sage scrub and 0.06 acre of disturbed coastal sage scrub occur within the Project Area. Coastal sage scrub is confined to narrow strips of habitat situated along the northern and western boundaries of the Project Area immediately adjacent to Borden Road and N. Twin Oaks Valley Road. Disturbed habitat occurs throughout most of the Project Area. Developed areas and disturbed habitat surround coastal sage scrub within the Project Area eliminating the possibility of habitat continuity. Due to the small acreage of coastal sage scrub on site and it's isolated location the Project area does not support habitat that is suitable for gnatcatcher.

Certification

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



Monica Alfaro
Wildlife Biologist
TE-051242

September 15, 2020
Date

Attachments
Figure 1. Regional Location, Borden Road Gas Station Project, San Marcos
Figure 2. Project Vicinity Map, Borden Road Gas Station Project, San Marcos
Figure 3. Vegetation Communities, Borden Road Gas Station Project, San Marcos
Figure 4. Photo Log, Borden Road Gas Station Project, San Marcos

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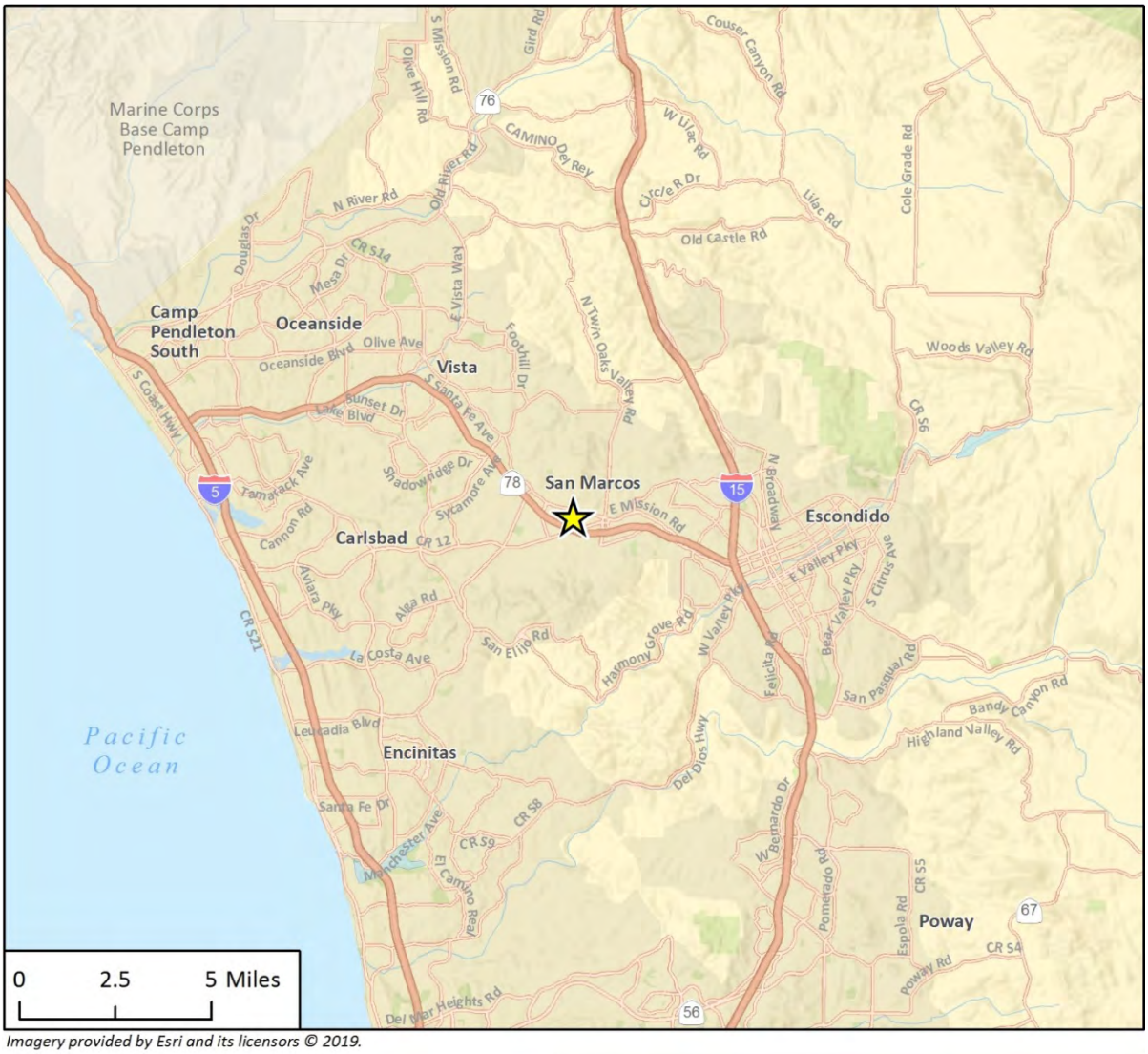
Figure 1 Regional Project Location



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Project Location

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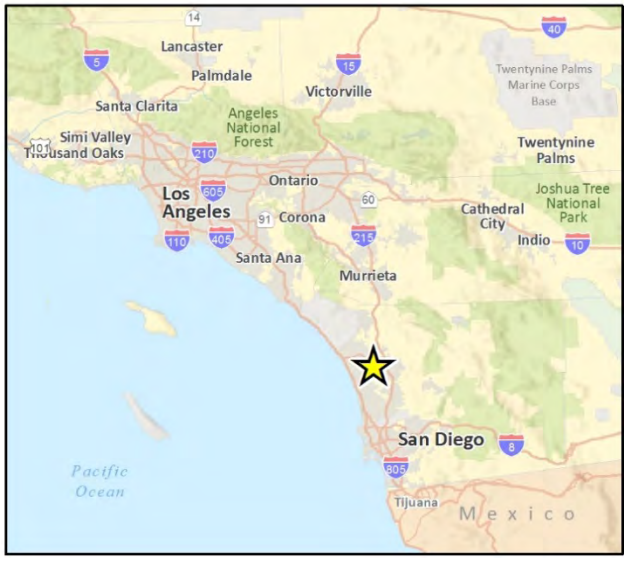

Figure 2 Project Vicinity Map

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Figure 3 Vegetation Communities and Land Cover

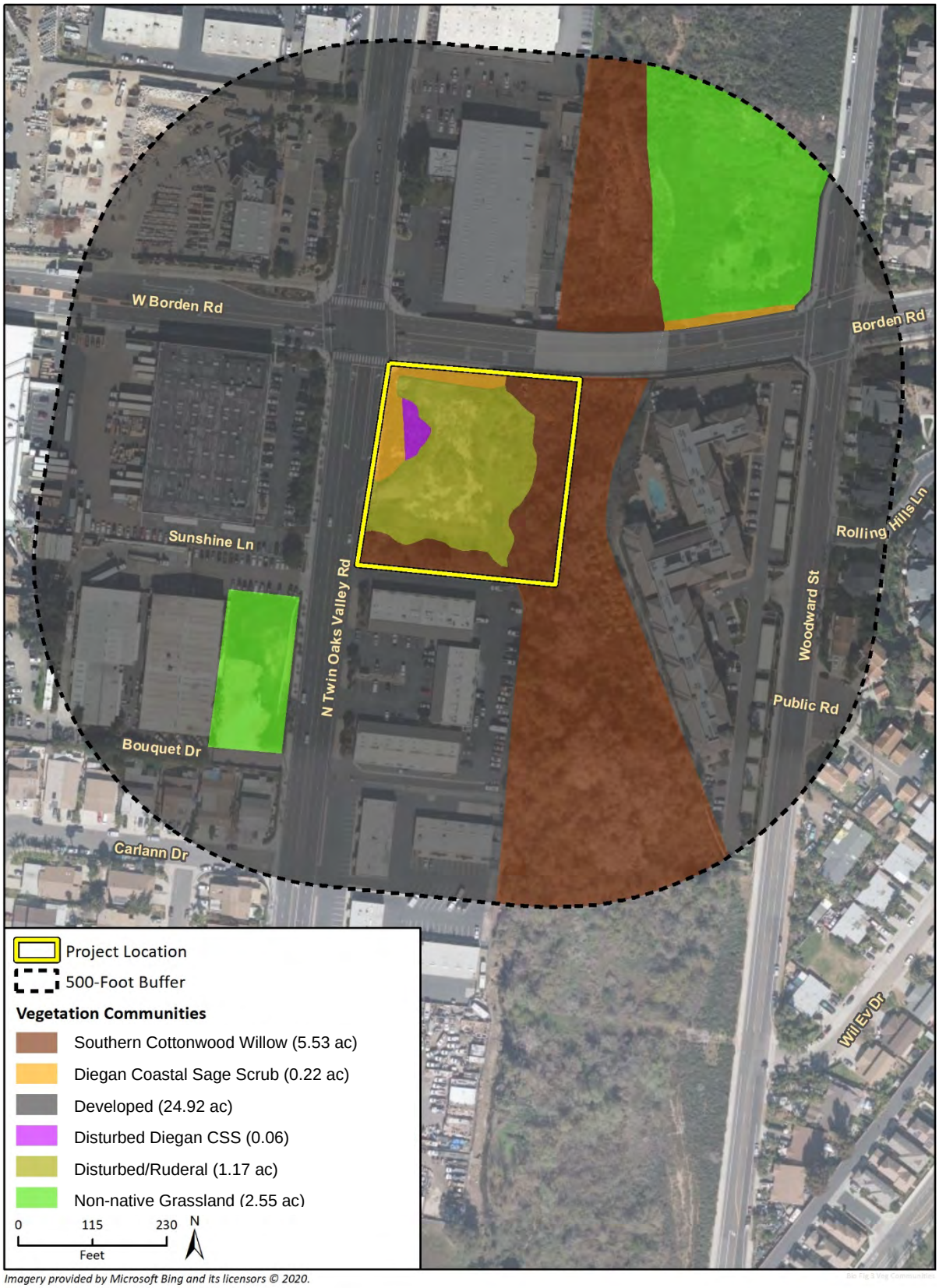

Figure 4. Borden Road Gas Station Project Photo Log

Photo 1. Coastal sage scrub at the northern boundary,
photo facing east

Photo 2. Coastal sage scrub at the western boundary,
photo facing northeast

Figure 4. Borden Road Gas Station Project Photo Log

Photo 3. Paved and unvegetated areas, Photo taken facing east

Photo 4. Disturbed habitat, Photo taken facing northeast