BIOLOGICAL RESOURCES REPORT
UNIVERSITY COMMUNITY PLAN UPDATE
CITY OF SAN DIEGO, SAN DIEGO COUNTY, CALIFORNIA

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ACRONYMS AND ABBREVIATIONS

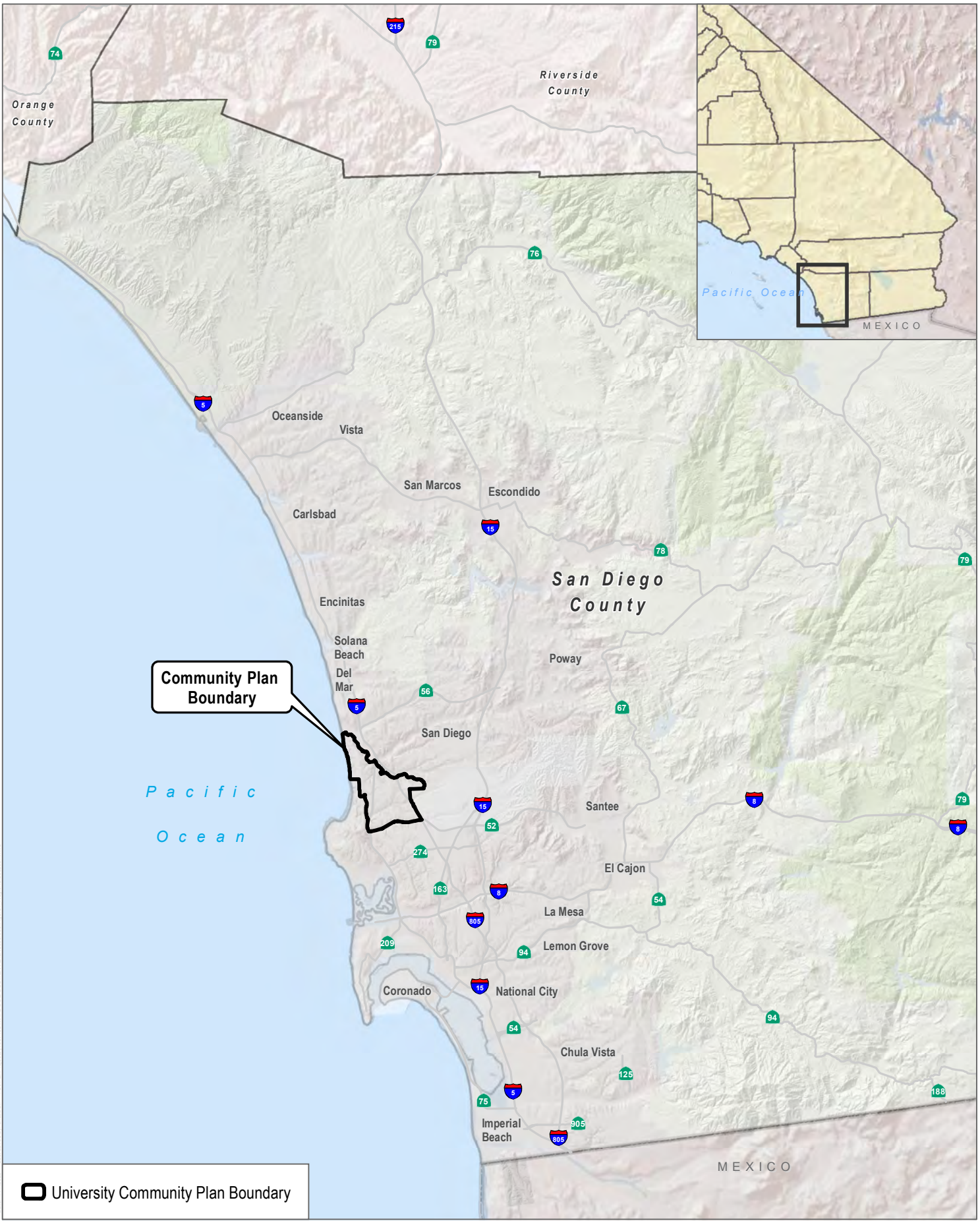
Acronym	Definition
CCA	California Coastal Act of 1972
CCC	California Coastal Commission
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFGC	California Fish and Game Code
City	City of San Diego
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CRPR	California Rare Plant Ranks
CWA	Clean Water Act
CZMA	Coastal Zone Management Act of 1972
CZMP	Coastal Zone Management Program
ESHA	Environmentally Sensitive Habitat Area
ESL	Environmentally Sensitive Land
FESA	Federal Endangered Species Act
HU	Hydrologic Unit
I	Interstate
LCP	Local Coastal Program
MBTA	Migratory Bird Treaty Act
MCAS	Marine Corps Air Station
MHPA	Multi-Habitat Planning Area
MSCP	Multiple Species Conservation Plan
NRCS	Natural Resources Conservation Service
NRMP	Natural Resource Management Plan
RWQCB	Regional Water Quality Control Board
TNW	traditional navigable water
UCP	University Community Plan
UCPU	University Community Plan update
UCSD	University of California, San Diego
USACE	U.S. Army Corps of Engineers
USFWS	U.S. Fish and Wildlife Service
VPHCP	Vernal Pool Habitat Conservation Plan

SECTION 1.0 – INTRODUCTION

The City of San Diego (City) University Community Plan (UCP) was first adopted by City Council in July 1987 and has been amended multiple times since, with the most recent amendments added in July 2019. To inform the UCP update (UCPU), this biological resources report provides a summary of the existing biological resources within the UCP area and assesses potential impacts to these biological resources that may occur through implementation of the updated UCP.

The UCP area includes approximately 8,676 acres. It is located in the north-central portion of the City, about 10 miles north of downtown San Diego (Figure 1, Regional Location). The UCP area is bounded to the north by Los Peñasquitos Lagoon and the bottom of the east-facing slopes of Sorrento Valley; to the east by the railroad track, U.S. Marine Corps Air Station (MCAS) Miramar, and Interstate (I) 805; to the south by State Route 52, and to the west by I-5, Gilman Drive, North Torrey Pines Road, La Jolla Farms, and the Pacific Ocean (Figure 2, USGS Topography, and Figure 3, Aerial Photograph). The UCP area is located in U.S. Geological Survey Del Mar, Del Mar Over Edge West, La Jolla, and La Jolla Over Edge West 7.5-minute quadrangles (Figure 2) (USGS 2020a–d).

The UCP includes the following 12 elements – Urban Design Element, Transportation Element, Development Intensity Element, Housing/Residential Element, Commercial Element, Industrial Element, Public Facilities Element, Open Space and Recreation Element, Noise Element, Safety Element, Resource Management Element, and General Plan Consistency Element. The UCP elements are updated routinely to reflect current conditions, to support City-wide goals and maintain consistency with the City's General Plan, and to provide community-specific goals to direct long-term development within the community. Each of these 12 elements is described in detail in the current UCP and will be updated as part of the UCPU process.



SOURCE: Esri 2014; SanGIS 2017

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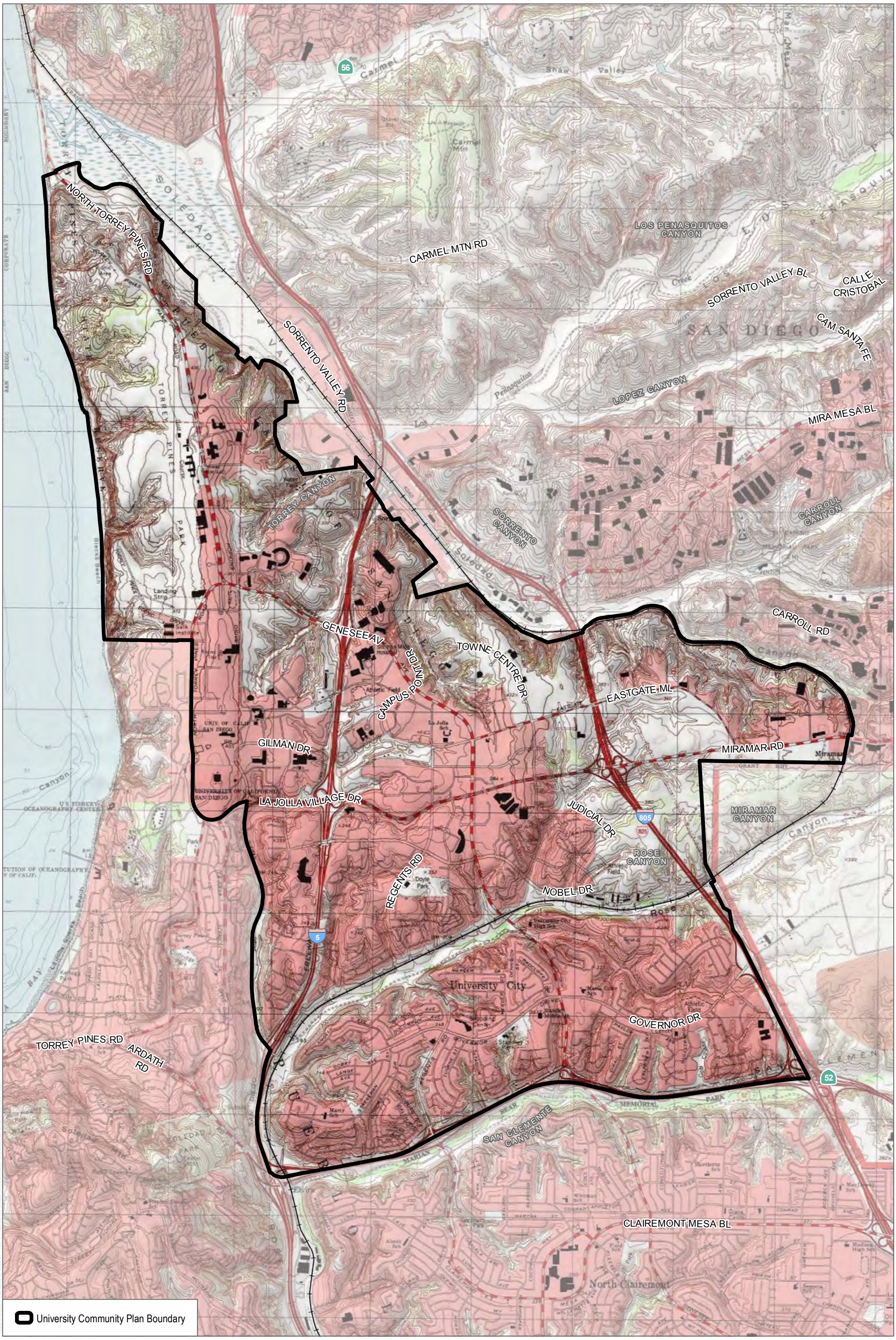
FIGURE 1

Regional Location

University Community Plan Update



SOURCE: USGS 7.5-Minute Series Del Mar, Del Mar OE W, La Jolla, and La Jolla OE West Quadrangles

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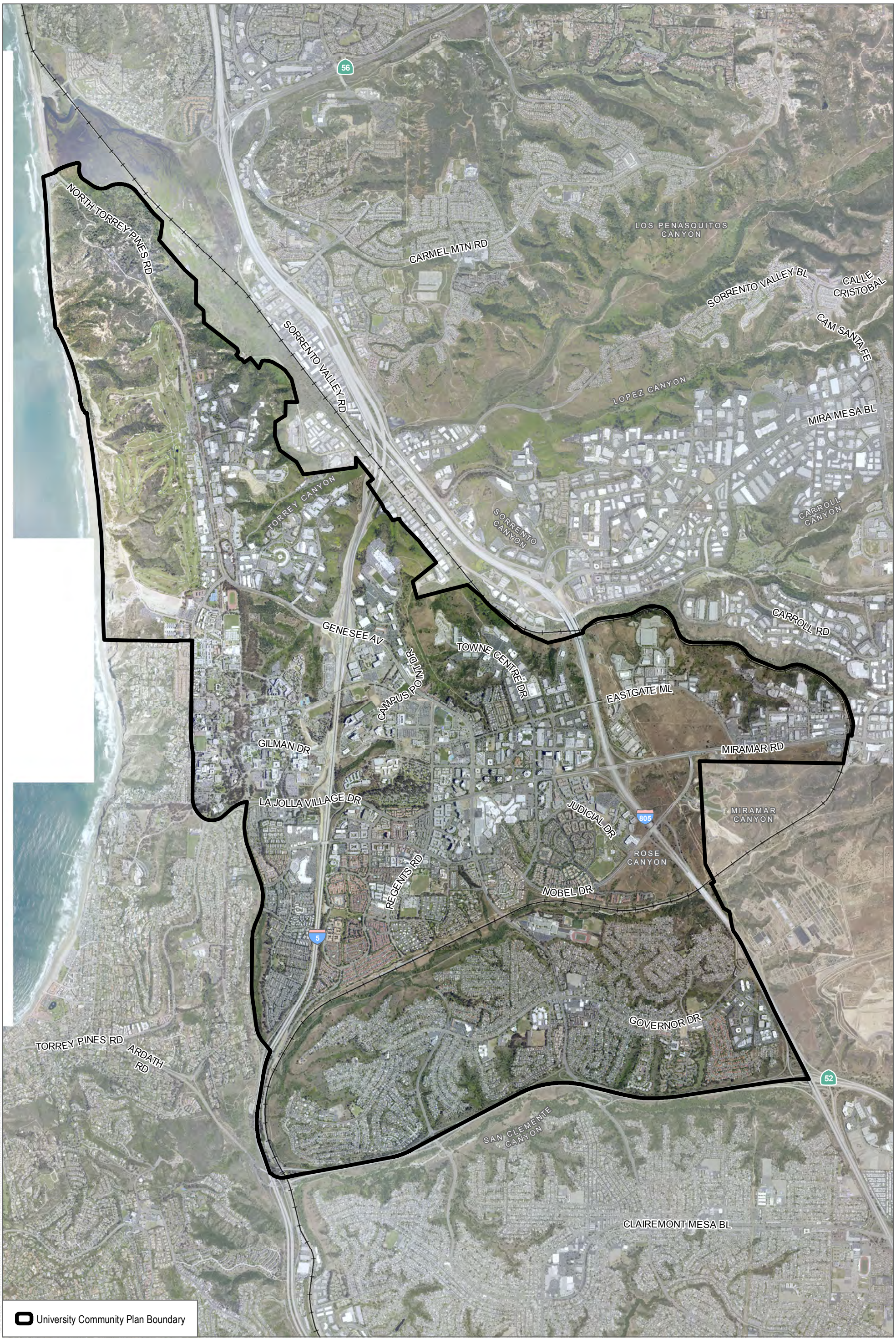
0 1,400 2,800 Feet

FIGURE 2

USGS Topography

University Community Plan Update



SOURCE: SANGIS 2017, 2019

DUDEK

0 1,400 2,800 Feet

FIGURE 3

Aerial Photograph

University Community Plan Update

SECTION 2.0 – REGULATORY FRAMEWORK

The following federal, state, and/or local regulations or policies apply to biological resources within the UCPU area.

2.1 APPLICABLE FEDERAL REGULATIONS

Applicable federal regulations that apply to the UCPU area are discussed in this section.

2.1.1 Federal Endangered Species Act

The Federal Endangered Species Act (FESA) is administered by U.S. Fish and Wildlife Service (USFWS). FESA provides the legal framework for the conservation and protection of species and their habitats that are identified as being endangered or threatened with extinction. Actions that jeopardize endangered or threatened species and the habitats upon which they rely are considered 'take' under FESA. Section 9(a) of FESA defines 'take' as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to engage in any such conduct." Federal regulations and case law have also expanded the terms "harm" and "harass" to include actions that adversely affect a federally listed species behavior patterns.

Sections 7 and 10(a) of FESA regulate actions that could jeopardize endangered or threatened species. Section 7 requires all federal agencies to work with USFWS to conserve endangered and threatened species and to ensure that all actions that they fund or authorize do not jeopardize the existence of any listed species. Section 10(a) regulates a variety of activities that affect endangered or threatened species and prohibits activities that affect these species and their habitat unless authorized by a permit from USFWS.

The City was issued an incidental take permit pursuant to Section 10(a) through the approval of the Multiple Species Conservation Plan (MSCP) Subarea Plan as well as through approval of the Vernal Pool Habitat Conservation Plan (VPHCP).

2.1.2 Rivers and Harbors Act and Clean Water Act

The Rivers and Harbors Act of 1899 and the Clean Water Act (CWA) regulate project activities within non-marine traditional navigable waters (TNWs) and/or waters of the United States. The discharge of any pollutant from a point source into TNWs is illegal unless a permit under the CWA's provisions is acquired. Permitting for projects that include both permanent and temporary dredging and filling in wetland and non-wetland waters of the United States is overseen by the U.S. Army Corps of Engineers (USACE) under Section 404 of the CWA. Projects can be permitted on an individual basis or be covered by one of several approved nationwide permits or regional general permits. In addition, the Regional Water Quality Control Board (RWQCB) issues Water Quality Certifications under Section 401 of the CWA for project activities that fill or dredge within wetland and non-wetland waters of the United States and waters of the state, including isolated waters such as vernal pools and other waters showing lack of connectivity to a TNW.

2.1.3 Coastal Zone Management Act

The Coastal Zone Management Act of 1972 (CZMA) is administered by the National Oceanic Atmospheric Administration's Office of Ocean and Resource Management and was established as a national policy to preserve, protect, develop, and – where possible – enhance or restore the coastal zone in the U.S. The federal consistency provision, Section 307 of the CZMA, encourages states to join the Coastal Zone Management Program (CZMP), which takes a comprehensive approach to coastal resource management by balancing the competing and/or conflicting demands of coastal resource use, economic development, and conservation and allows states to issue the applicable permits. California has a federally approved CZMP, and the CZMA is administered by the CCC. Therefore, the CZMP and permit requirements are discussed further in Section 2.2.4, California Coastal Act and Environmentally Sensitive Habitat Areas, and Section 2.2.5, Coastal Zone Management Program.

2.1.4 Migratory Bird Treaty Act

All migratory bird species that are native to the United States or its territories are protected under the federal Migratory Bird Treaty Act (MBTA), as amended under the Migratory Bird Treaty Reform Act of 2004. The MBTA prohibits the kill or transport of native migratory birds or any part, nest, or egg of any such bird unless allowed by another regulation adopted in accordance with the MBTA. No permit is issued under the MBTA, and the MBTA does not mandate specific protection. However, typical acceptable requirements include nesting bird surveys during the avian breeding season and avoidance measures if nesting birds are discovered within or adjacent to a project. In addition, the USFWS commonly places restrictions on disturbances allowed near active raptor nests.

2.2 APPLICABLE STATE REGULATIONS

Applicable state regulations that apply to the UCPU area are discussed in this section.

2.2.1 California Environmental Quality Act

The California Environmental Quality Act (CEQA) is a stature that requires state and local agencies to go through an environmental review for projects with potentially significant environmental impacts on the environment. Significant environmental impacts are either avoided to the extent feasible or mitigated in accordance with existing local and/or state laws and regulations.

2.2.2 California Endangered Species Act

The California ESA (CESA) provides the legal framework for the conservation and protection of species and their habitats that are identified as being endangered or threatened with extinction within California. A plant or animal species may be listed as rare, threatened, or endangered under CESA after a formal listing process by the

California Fish and Game Commission. Once listed, a species cannot be "taken" (i.e., killed, possessed, purchased, or sold) without proper authorization.

California Department of Fish and Wildlife (CDFW) administers permitting programs to authorize incidental "take" of listed species. For projects that may impact species listed under both FESA and CESA and that have obtained a Federal Incidental Take Permit, CDFW can certify that the incidental take is consistent with CESA by issuing concurrence under the California Fish and Game Code (CFGC) Section 2080.1. For projects that my impacts species listed only under CESA, CDFW can issue incidental take permits under CFGC Section 2081 if incidental take is consistent with the requirements outlined under CESA.

The City was issued an incidental take permit pursuant to Section 2081 through the approval of the MSCP Subarea Plan.

2.2.3 California Fish and Game Code

CFGC Sections 1600 through 1603 regulate project activities within rivers, streams, lakes, and riparian habitat. CFGC Section 1602 requires an entity to notify CDFW prior to commencing any activity that may do one or more of the following:

- Substantially divert or obstruct the natural flow of any river, stream, or lake;
- Substantially change or use any material from the bed, channel, or bank of any river, stream, or lake; or
- Deposit debris, waste, or other materials that could pass into any river, stream, or lake.

CDFW can issue a Lake and Streambed Alteration Agreement for projects that substantially adversely affect CDFW jurisdictional resources. If the activity will not substantially adversely affect any CDFW jurisdictional resources, the entity may commence the activity without a Lake and Streambed Alteration Agreement.

CFGC Section 3503 makes it unlawful to take (i.e., hunt, pursue, catch, capture, kill, or attempt to hunt, pursue, catch, capture, or kill), possess, or needlessly destroy the nest or eggs of any wild bird, except as otherwise provided by the CFGC or any regulation made pursuant to the CFGC.

CFGC Section 3503.5 makes it unlawful to take (i.e., hunt, pursue, catch, capture, kill, or attempt to hunt, pursue, catch, capture, or kill), possess, or destroy raptors and/or the nest or eggs of any such bird, except as otherwise provided by the CFGC or any regulation made pursuant to the CFGC.

CFGC Section 3513 makes it unlawful to take (i.e., hunt, pursue, catch, capture, kill, or attempt to hunt, pursue, catch, capture, or kill) or possess and migratory non-game bird that is designated under the MBTA or any part of a migratory non-game bird except as allowed by the rules and regulations adopted by the Secretary of the Interior under the provisions of the MBTA.

2.2.4 California Coastal Act and Environmentally Sensitive Habitat Areas

The California Coastal Act of 1972 (CCA) is the primary legislation that provides the standards for balancing development and conservation of resources within the coastal zone, which includes approximately 1.5 million acres along the Pacific Coast of the U.S. The CCA is administered by the California Coastal Commission (CCC) to regulate the short- and long-term conservation and use of coastal resources through responsible development.

Section 30107.5 of the CCA defines an Environmentally Sensitive Habitat Area (ESHA) as "any area in which plant or animal life or their habitats are either rare or especially valuable because of their special nature or role in an ecosystem and which could be easily disturbed or degraded by human activities and developments". Pursuant to Section 30240 of the CCA, ESHAs "shall be protected against any significant disruption of habitat values, and only uses dependent on those resources shall be allowed within those areas". In addition, development adjacent to ESHAs must be located and designed to prevent significant impacts to the functions and values of the ESHA.

2.2.5 Coastal Zone Management Program

California has a federally approved CZMP (see Section 2.1.3, Coastal Zone Management Act), which is administered through a partnership between state and local governments. Within Southern California, the two state coastal management agencies include the California Coastal Conservancy and the CCC. The California Coastal Conservancy is responsible for purchasing, protecting, restoring, and enhancing coastal resources, while the CCC manages the development within the coastal zone. The CCA encourages local governments to establish Local Coastal Programs (LCPs) to govern decisions on behalf of the CCC and to protect public access and coastal resources on a local level. After certification of an LCP, authority to issue Coastal Development Permits is delegated to the local government, but the CCC maintains permit jurisdiction over certain specified lands (e.g., tidelands, submerged islands, and public trust lands) and can appeal permits approved by local governments in specified geographic areas.

Development within the coastal zone may not occur until the CCC or a local government with a CCC-certified LCP has issued a Coastal Development Permit. When federal activities or federally licensed, permitted, or assisted activities are proposed that are likely to affect land use, water use, or natural resources within the coastal zone, a federal consistency review is pursuant to Section 307 of the CZMA, which gives the CCC or approved local government regulatory control over the proposed federal activities. The CCC uses this review authority to facilitate cooperation and coordination between the local, state, and/or federal agencies and to authorize Coastal Development Permits.

2.2.6 Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act regulates water quality for project activities in California. Pursuant to the Porter-Cologne Act, under Section 13000 et seq. of the California Water Code, the RWQCB issues Water Quality Certifications for project activities that fill or dredge within wetland and non-wetland waters of the United States

and state, including isolated waters – such as vernal pools – and other waters showing lack of connectivity to a TNW.

2.3 APPLICABLE CITY OF SAN DIEGO PROGRAMS AND REGULATIONS

Applicable City programs and regulations are discussed in this section.

2.3.1 Multiple Species Conservation Program and Multi-Habitat Planning Area

The County of San Diego MSCP was prepared in accordance with the California Natural Communities Conservation Planning Act and provides not only the planning framework required for implementation of the comprehensive conservation program but also guidelines for the preparation of individual subarea plans for each jurisdiction within the MSCP Planning Area. The City Subarea Plan Implementing Agreement was adopted by USFWS, CDFW, and the City in July 1997 and outlines the implementation of the City Subarea Plan as well as grants the City the authority to issue incidental take permits for MSCP-covered species, pursuant to FESA Section 10(a) and CESA 2080.1. MSCP-covered species include species that are covered under the City's federal incidental take permit and that are also considered adequately protected within the Multi-Habitat Planning Area (MHPA), which is the City's preserve system.

The MSCP-covered species include 85 rare, threatened, and/or endangered plant and wildlife species, 15 of which are also listed as "Narrow Endemic Species" that have restricted geographic distributions, soil affinities, and/or habitats within the region. Under the MSCP, impacts to Narrow Endemic Species are to be avoided to the maximum extent practicable. Appendix A of the City Subarea Plan provides the conditions under which these species were granted coverage, conditions which include (but are not limited to) avoidance of impacts to Narrow Endemic species to the maximum extent possible and avoidance of impacts to MSCP-covered species within the MHPA.

In addition to the conditions of coverage for the MSCP-covered species, projects within the City must comply with other City Subarea Plan requirements, which include Boundary Adjustments (Section 1.1.1); Compatible Land Uses (Section 1.4.1), General Planning Policies and Design Guidelines (Section 1.4.2), and Land Use Adjacency Guidelines (Section 1.4.3). Other management policies as well as additional local, state, and federal laws and regulations my also apply for impacts that are not covered under the MSCP, such as impacts to wetland habitat and to species that are not MSCP-covered.

Undeveloped land occurs within the UCPU area. Sensitive plant and wildlife species are known to occur or have a potential to occur on these undeveloped lands, within and outside the MHPA. Therefore, the City's MSCP Subarea Plan and Implementing Agreement are applicable to proposed development within the UCPU area. Sections of the MSCP Subarea Plan that are applicable to the UCPU are discussed in the following subsections.

2.3.2 Multi-Habitat Planning Area

The MHPA refers to the City's planned habitat preserve system, which includes core biological resource areas that have been targeted for conservation. The MHPA includes both private and public lands that have biological resource value and/or provide

important linkages (or potential linkages) between important biological resource areas and other open space. The MHPA will be assembled through conservation of existing public lands, land use restrictions within the MHPA, open space exactions imposed on new development outside the MHPA, inclusion of open space previously set aside on private lands for conservation as part of the development process, and public acquisition of private lands. Once assembled, the preserve system will include a network of habitat and open space that will protect the biodiversity in San Diego while also maintaining healthy populations of native species and aiding in the long-term recovery of the 85 MSCP-covered species.

To maintain the biological value of the designated MHPA lands, development within and adjacent to these lands is limited. For areas designated as MHPA, a maximum of 25% development is allowed in the least sensitive area (e.g., avoid wetlands, sensitive habitats, MSCP-covered narrow endemics). If more than 25% is required, an MHPA boundary line adjustment would be required for the portion that exceeds the 25% allowable development area. The MHPA boundary line adjustment must satisfy the six functional equivalency criteria outlined in Section 5.4.2 of the MSCP, which include (1) effects on significantly and sufficiently conserved habitats, (2) effects to covered species, (3) effects on habitat linkages and function of preserve areas, (4) effects on preserve configuration and management, (5) effects on ecotones of other conditions affecting species diversity, and (6) effects to species of concern not on the covered species list. All MHPA boundary line adjustments require approval by USFWS, CDFW, and the City.

In addition, in some cases at the community plan level or during a subsequent specific project review, some areas of the MHPA that were placed over legal development in 1997 may be able to process a MHPA boundary line correction which is reviewed by City MSCP staff and provided to the Wildlife Agencies for review and comment. A MHPA correction will typically be considered by the City when it can be shown that there is a discrepancy between the adopted MHPA boundary and other mapping information (e.g., aerial photography, vegetation maps, topographic maps), which results in inclusion of existing developed areas in the MHPA due to the regional scale of the MHPA mapping.

For a MHPA correction to be supported by City staff, it must be clearly demonstrated that: 1) the proposed area to be corrected out was legally permitted prior to the adoption of the MSCP March 1997 OR 2) no habitat, including wetlands, would be removed; 3) no buffer area (e.g., wetland buffer, wildlife corridor) would be impacted; and, 4) removing the area from the MHPA would not avert the applicant from having to otherwise comply with the City's MSCP Land Use Adjacency Guidelines.

For projects outside of the MHPA, compensatory mitigation may be required for unavoidable significant impacts to sensitive habitats and Environmentally Sensitive Lands (ESLs). The City's Land Development Manual – Biology Guidelines (City 2018) provide guidance on mitigation requirements for significant impacts outside of the MHPA. Generally, compensatory mitigation for impacts outside the MHPA is based on the habitat type that would be impacted and would require a lower ratio for preservation occurring inside the MHPA versus preservation occurring outside the MHPA. For all

proposed preservation, the mitigation sites must have long-term viability, including connectivity to a larger planned open space system.

2.3.2.1 MSCP Subarea Plan: Northern Area MHPA and Urban Area MHPA

The UCPU area is divided between two areas – the southern portion is within the City Subarea Plan 'Urban Area' (Section 1.2.3) and the northern portion is within the City Subarea Plan 'Northern Area' (Section 1.2.4). Both Urban Area MHPA and Northern Area MHPA occur in the UCPU area (Figure 4, Conserved Lands and Open Space).

Urban Area MHPA

MHPA areas within the portion of the Urban Area that is within the UCPU area mainly consist of undeveloped, urban canyons (i.e., San Clemente Canyon, Rose Creek Canyon, Torrey Canyon, Carroll Canyon) and other undeveloped hillsides that are in relative proximity to other lands designated as MHPA. While these MHPA areas have not been incorporated in the major planned areas of the MHPA, they are important in the urban environment because they support habitats for native plant and wildlife species.

Under Section 1.2.3 of the City Subarea Plan, two specific guidelines for MHPA within the Urban Area are provided at locations designated as B15 and B16 (see Figure 4, Conserved Vegetation Communities in Urban Area, on page 20 of the City Subarea Plan). Neither B15 nor B16 is located within the UCPU area; therefore, they do not apply to projects within the UCPU area.

Northern Area MHPA

MHPA areas within the portion of the Northern Area that is included in the UCPU area mainly consist of intact natural open space areas, such as Los Peñasquitos Canyon and Lopez Canyon. Los Peñasquitos Canyon serves as regional corridor that links habitat within coastal San Diego to inland habitats farther east, while Lopez Canyon as well as other undeveloped hillsides and patches of open space provide and interface between the developed and natural landscapes and provide important habitat features for native plant and wildlife species within the UCPU area.

Under Section 1.2.4 of the City Subarea Plan, 29 specific guidelines for MHPA within the Northern Area are provided at locations designated as C1 though C29 (see Figure 5, Conserved Vegetation Communities in Northern Area, on page 25 of the City Subarea Plan). None of these is located within the UCPU area; therefore, they do not apply to projects within the UCPU area.

2.3.2.2 MSCP Subarea Plan: Land Use Considerations

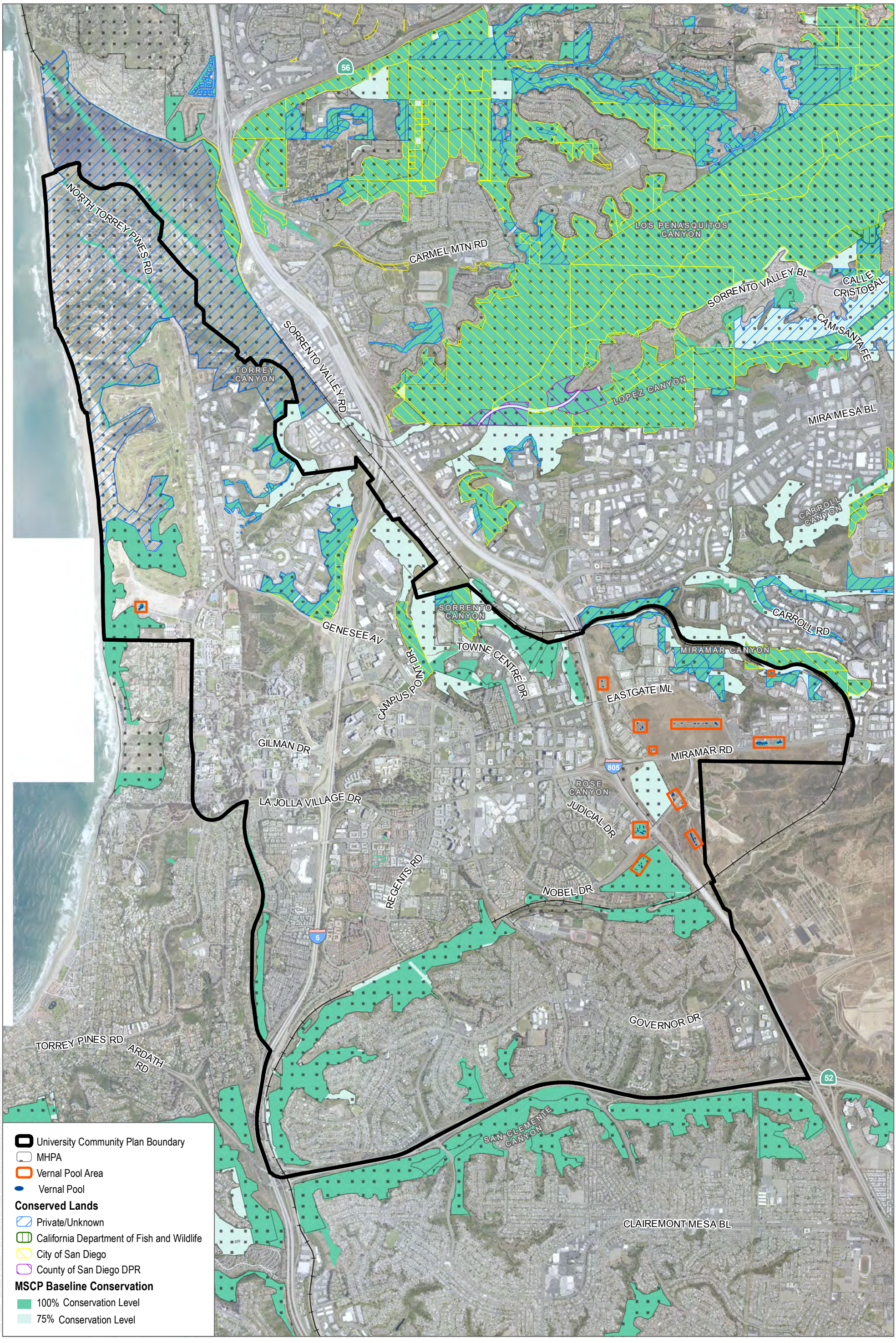
Section 1.4 of the City Subarea Plan describes compatible land uses, general planning policies and design guidelines, and the MHPA Land Use Adjacency Guidelines. Each of these topics is discussed in this section.

Compatible Land Uses

Section 1.4.1 of the City Subarea Plan outlines land uses that are conditionally compatible with the biological objectives in the MSCP and thus are allowed within the MHPA. These include passive recreation, utility lines and roads in compliance with the General Planning Policies and Design Guidelines described in Section 1.4.2 of the City Subarea Plan (discussed below), limited water facilities and other essential public facilities, limited low density residential uses, Brush Management (Zone 2), and limited agriculture.

General Planning Policies and Design Guidelines

Section 1.4.2 of the City Subarea Plan describes the general planning policies and design guidelines that should be applied to the review and approval of development projects within and/or adjacent to the MHPA. The guidelines described below would apply to projects within the UCPU area.



SOURCE: SANGIS 2017, 2019; USFWS 2020

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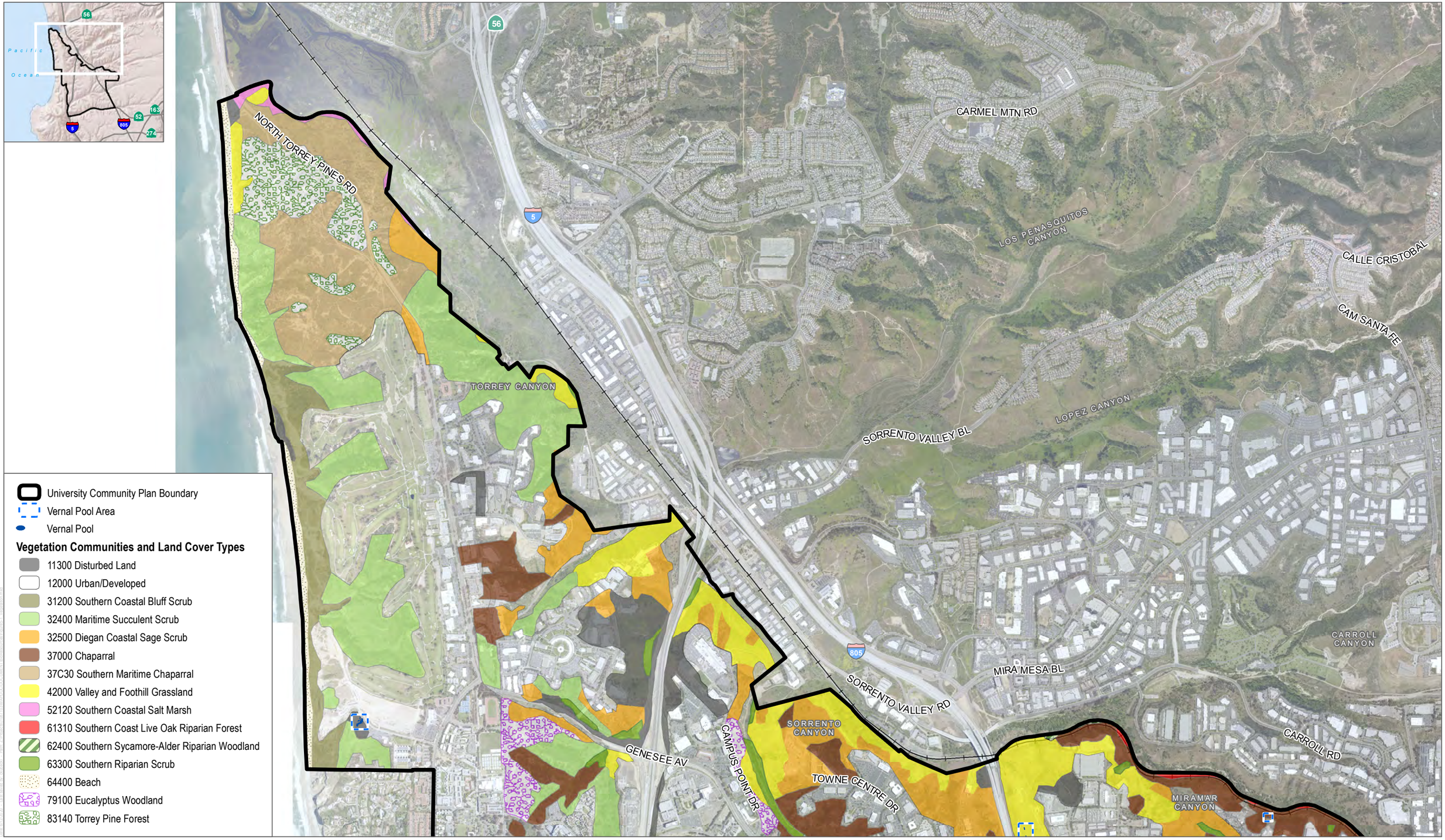
0 1,400 2,800 Feet

FIGURE 4

Conserved Lands and Open Space

University Community Plan Update



SOURCE: SANGIS 2017

DUDEK

0 1,000 2,000 Feet

FIGURE 5-1

Vegetation

University Community Plan Update

Roads and Utilities: Construction and Maintenance Policies

1. All proposed utility lines (e.g., sewer, water) should be designed to avoid or minimize intrusion into the MHPA. These facilities should be routed through developed or developing areas rather than the MHPA, where possible. If no other routing is feasible, then the lines should follow previously existing roads, easements, rights-of-way and disturbed areas, minimizing habitat fragmentation.
2. All new development for utilities and facilities within or crossing the MHPA shall be planned, designed, located, and constructed to minimize environmental impacts. All such activities must avoid disturbing the habitat of MSCP-covered species and wetlands. If avoidance is infeasible, mitigation will be required.
3. Temporary construction areas and roads, staging areas, or permanent access roads must not disturb existing habitat unless determined to be unavoidable. All such activities must occur on existing agricultural lands or in other disturbed areas rather than in habitat. If temporary habitat disturbance is unavoidable, then restoration of and/or mitigation for the disturbed area after project completion will be required.
4. Construction and maintenance activities in wildlife corridors must avoid significant disruption of corridor usage. Environmental documents and mitigation monitoring and reporting programs covering such development must clearly specify how this will be achieved, and construction plans must contain all the pertinent information and be readily available to crews in the field. Training of construction crews and field workers must be conducted to ensure that all conditions are met. A responsible party must be specified.
5. Roads in the MHPA will be limited to those identified in Community Plan Circulation Elements, collector streets essential for area circulation, and necessary maintenance/emergency access roads. Local streets should not cross the MHPA except where needed to access isolated development areas.
6. Development of roads in canyon bottoms should be avoided whenever feasible. If an alternative location outside the MHPA is not feasible, then the road must be designed to cross the shortest length possible of the MHPA to minimize impacts and fragmentation of sensitive species and habitat. If roads cross the MHPA, they should provide for fully functional wildlife movement capability. Bridges are the preferred method of providing for movement; although, culverts in selected locations may be acceptable. Fencing, grading, and plant cover should be provided where needed to protect and shield animals, and guide them away from roads to appropriate crossings.
7. Where possible, roads within the MHPA should be narrowed from existing design standards to minimize habitat fragmentation and disruption of wildlife movement and breeding areas. Roads must be located in lower quality habitat or disturbed areas to the extent possible.
8. For the most part, existing roads and utility lines are considered a compatible use within the MHPA and, therefore, will be maintained. Exceptions may occur where underutilized or duplicative road systems are determined not to be necessary as identified in the Framework Management (Section 1.5 of the City Subarea Plan).

Fencing, Lighting, and Signage

1. Fencing or other barriers will be used where it is determined to be the best method to achieve conservation goals and adjacent to land uses incompatible with the MHPA. For example, use chain link or cattle wire to direct wildlife to appropriate corridor crossings, natural rocks/boulders or split rail fencing to direct public access to appropriate locations, and chain link to provide added protection of certain sensitive species or habitats (e.g., vernal pools).
2. Lighting shall be designed to avoid intrusion into the MHPA and effects on wildlife. Lighting in areas of wildlife crossings should be of low sodium or similar lighting. Signage will be limited to access and litter control and educational purposes.

Materials Storage

1. Prohibit storage of materials (e.g., hazardous or toxic, chemicals, equipment) within the MHPA and ensure appropriate storage per applicable regulations in any areas that may impact the MHPA, especially as a result of potential leakage.

Mining, Extraction, and Processing Facilities

1. Mining operations include mineral extraction, processing, and other related mining activities (e.g., asphaltic processing). Currently permitted mining operations that have approved restoration plans may continue operating in the MHPA. New or expanded mining operations on lands conserved as part of the MHPA are incompatible with MSCP preserve goals for MSCP-covered species and their habitats unless otherwise agreed to by the wildlife agencies at the time the parcel is conserved. New operations are permitted in the MHPA if: 1) impacts have been assessed and conditions incorporated to mitigate biological impacts and restore mined areas; 2) adverse impacts to MSCP-covered species in the MHPA have been mitigated consistent with the City Subarea Plan; and 3) requirements of other City land use policies and regulations (e.g., Adjacency Guidelines, Conditional Use Permit) have been satisfied. Existing and any newly permitted operations adjacent to or within the MHPA shall meet noise, air quality, and water quality regulation requirements as identified in the conditions of any existing or new permit to adequately protect adjacent preserved areas and MSCP-covered species. Such facilities shall also be appropriately restored upon cessation of mining activities.
2. All mining and other related activities must be consistent with the objectives, guidelines, and recommendations in the MSCP plan, the City's Environmentally Sensitive Lands Ordinance, all relevant long-range plans, as well as with the State Surface Mining and Reclamation Act of 1975.
3. Any sand removal activities should be monitored for noise impacts to surrounding sensitive habitats, and all new sediment removal or mining operations proposed in proximity to the MHPA, or changes in existing operations, must include noise reduction methods that take into consideration the breeding and nesting seasons of sensitive bird species.

4. All existing and future mined lands adjacent to or within the MHPA shall be reclaimed pursuant to the Surface Mining and Reclamation Act. Ponds are considered compatible uses where they provide native wildlife and wetland habitats and do not conflict with conservation goals of the MSCP and/or City Subarea Plan.
5. Any permitted mining activity including reclamation of sand must consider changes and impacts to water quality, water table level, fluvial hydrology, flooding, wetlands, and habitats upstream and downstream, and provide adequate mitigation.

Flood Control

1. Flood control should generally be limited to existing agreements with resource agencies unless demonstrated to be needed based on a cost benefit analysis and pursuant to a restoration plan. Floodplains within the MHPA and upstream from the MHPA, if feasible, should remain in a natural condition and configuration to allow for the ecological, geological, hydrological, and other natural processes to remain or be restored.
2. No berming, channelization, or man-made constraints or barriers to creek, tributary, or river flows should be allowed in any floodplain within the MHPA unless reviewed by all appropriate agencies and adequately mitigated. Review must include impacts to upstream and downstream habitats, flood flow volumes, velocities and configurations, water availability, and changes to the water table level.
3. No riprap, concrete, or other unnatural material shall be used to stabilize river, creek, tributary, and channel banks within the MHPA. River, stream, and channel banks shall be natural and stabilized where necessary with willows and other appropriate native plantings. Rock gabions may be used where necessary to dissipate flows and should incorporate design features to ensure wildlife movement.

Land Use Adjacency Guidelines

Land uses planned or existing adjacent to the MHPA include single and multiple family residential, active recreation, commercial, industrial, agricultural, landfills, and extractive uses. Land uses adjacent to the MHPA will be managed to ensure minimal impacts to the MHPA. Consideration will be given to good planning principles in relation to adjacent land uses as described below. The following are adjacency guidelines that will be addressed, on a project-by-project basis, during either the planning (new development) or management (new and existing development) stages to minimize impacts and maintain the function of the MHPA. Implementation of these guidelines is addressed further in Section 1.5 of the City Subarea Plan (see Section 2.3.2.3 below). Many of these issues will be identified and addressed through the CEQA Process.

Drainage

All new and proposed parking lots and developed areas in and adjacent to the preserve must not drain directly into the MHPA. All developed and paved areas

must prevent the release of toxins, chemicals, petroleum products, exotic plant materials and other elements that might degrade or harm the natural environment or ecosystem processes within the MHPA. This can be accomplished using a variety of methods including natural detention basins, grass swales or mechanical trapping devices. These systems should be maintained approximately once a year, or as often as needed, to ensure proper functioning. Maintenance should include dredging out sediments if needed, removing exotic plant materials, and adding chemical-neutralizing compounds (e.g., clay compounds) when necessary and appropriate.

Toxics

Land uses, such as recreation and agriculture, that use chemicals or generate by-products such as manure, that are potentially toxic or impactive to wildlife, sensitive species, habitat, or water quality need to incorporate measures to reduce impacts caused by the application and/or drainage of such materials into the MHPA. Such measures should include drainage/detention basins, swales, or holding areas with non-invasive grasses or wetland-type native vegetation to filter out the toxic materials. Regular maintenance should be provided. Where applicable, this requirement should be incorporated into leases on publicly owned property as leases come up for renewal.

Lighting

Lighting of all developed areas adjacent to the MHPA should be directed away from the MHPA. Where necessary, development should provide adequate shielding with non-invasive plant materials (preferably native), berming, and/or other methods to protect the MHPA and sensitive species from night lighting.

Noise

Uses in or adjacent to the MHPA should be designed to minimize noise impacts. Berms or walls should be constructed adjacent to commercial areas, recreational areas, and any other use that may introduce noises that could impact or interfere with wildlife utilization of the MHPA. Excessively noisy uses or activities adjacent to breeding areas must incorporate noise reduction measures and be curtailed during the breeding season of sensitive species. Adequate noise reduction measures should also be incorporated for the remainder of the year.

Barriers

New development adjacent to the MHPA may be required to provide barriers (e.g., non-invasive vegetation, rocks/boulders, fences, walls, and/or signage) along the MHPA boundaries to direct public access to appropriate locations and reduce domestic animal predation.

Invasives

No invasive non-native plant species shall be introduced into areas adjacent to the MHPA.

Brush Management

New residential development located adjacent to and topographically above the MHPA (e.g., along canyon edges) must be set back from slope edges to incorporate Zone 1 brush management areas on the development pad and outside of the MHPA. Zones 2 and 3 will be combined into one zone (Zone 2) and may be located in the MHPA upon granting of an easement to the City (or other acceptable agency) except where narrow wildlife corridors require it to be located outside of the MHPA. Zone 2 will be increased by 30 feet, except in areas with a low fire hazard severity rating where no Zone 2 would be required. Brush management zones will not be greater in size that is currently required by the City's regulations. The amount of woody vegetation clearing shall not exceed 50 percent of the vegetation existing when the initial clearing is done. Vegetation clearing shall be done consistent with City standards and shall avoid/minimize impacts to covered species to the maximum extent possible. For all new development, regardless of the ownership, the brush management in the Zone 2 area will be the responsibility of a homeowners association or other private party.

For existing project and approved projects, the brush management zones, standards and locations, and clearing techniques will not change from those required under existing regulations.

Grading/Land Development

Manufactured slopes associated with site development shall be included within the development footprint for projects within or adjacent to the MHPA.

2.3.2.3 MSCP Subarea Plan: Framework Management Plan

Section 1.5 of the City Subarea Plan describes general management goals, objectives, and directives that apply throughout the subarea as well as specific management policies and directives for the Urban Habitat Lands and the Northern Area.

General Management Goals, Objectives, and Directives

Sections 1.5.1 and 1.5.2 of the City Subarea Plan outline the plan's habitat management goals, objectives, and general management directives that apply to the entire subarea. The habitat management component of the MHPA is essential to meeting the overall goal of the MSCP, which is to maintain and enhance the biological diversity in the region while also conserving viable populations of sensitive species and their habitats. By doing this, local extirpations and extinctions will be prevented and future species' listings will be minimized while allowing for responsible, economic growth in the region.

Section 1.5.1 of the City Subarea Plan outlines the plan's management objectives for the MHPA. To assure that the goal of the MHPA is attained and fulfilled, these management objectives are as follows:

1. To ensure the long-term viability and sustainability of native ecosystem function and natural processes throughout the MHPA.
2. To protect the existing and restored biological resources from intense or disturbing activities within and adjacent to the MHPA while accommodating compatible public recreational uses.
3. To enhance and restore, where feasible, the full range of native plant associations in strategic locations and functional wildlife connections to adjoining habitat in order to provide viable wildlife and sensitive species habitat.
4. To facilitate monitoring of selected target species, habitats, and linkages in order to ensure long-term persistence of viable populations of priority plant and animal species and to ensure functional habitats and linkages.
5. To provide for flexible management of the preserve that can adapt to changing circumstances to achieve the above objectives.

Section 1.5.2 of the City Subarea Plan outlines the plan's general management directives that support the above objectives. These directives are organized by priority to assist decisions on where to spend limited funds and direct mitigation efforts. Priority 1 refers to directives that protect management actions needed to adequately protect MSCP-covered species within the MHPA, and Priority 2 refers to directives that address the long-term conservation actions that can be implemented during the life of the City Subarea Plan as funds become available. The directives outlined in Section 1.5.2 of the City Subarea Plan would apply to projects within the UCPU area and are summarized below.

Public Access, Trails, and Recreation

Priority 1:

1. Provide sufficient signage to clearly identify public access to the MHPA. Barriers such as vegetation, rocks/boulders, or fencing may be necessary to protect highly sensitive areas. Use an appropriate type of barrier based on location, setting, and use. For example, use chain link or cattle wire to direct wildlife movement, and natural rocks/boulders or split rail fencing to direct public access away from sensitive areas. Lands acquired through mitigation may preclude public access to satisfy mitigation.
2. Locate trails, view overlooks, and staging areas in the least sensitive areas of the MHPA. Locate trails along the edges of urban land uses adjacent to the MHPA, or the seam between land uses (e.g., agriculture/habitat), and follow existing dirt roads as much as possible rather than entering habitat or wildlife movement areas. Avoid locating trails between two different habitat types (ecotones) for longer than necessary because of the typically heightened resource sensitivity in those locations.
3. In general, avoid paving trails unless management and monitoring evidence shows otherwise. Clearly demarcate and monitor trails for degradation and off-

trail access and use. Provide trail repair/maintenance as needed. Undertake measures to counter the effects of trail erosion, including the use of stone or wood cross joints, edge plantings of native grasses, and mulching of the trail.

4. Minimize trail widths to reduce impacts to critical resources. For the most part, do not locate trails wider than four (4) feet in core areas or wildlife corridors. Exceptions are in the San Pasqual Valley, where other agreements have been made; in Mission Trails Regional Park, where appropriate; and in other areas where necessary to safely accommodate multiple uses or disabled access. Provide trail fences or other barriers at strategic locations when protection of sensitive resources is required.
5. Limit the extent and location of equestrian trails to the less sensitive areas of the MHPA. Locate staging areas for equestrian uses at a sufficient distance (e.g., 300 to 500 feet) from areas with riparian and coastal sage scrub habitats to ensure that the biological values are not impaired.
6. Off-road or cross-country vehicle activity is an incompatible use in the MHPA, except when these vehicles are used for law enforcement, preserve management, or emergency purposes. Restore disturbed areas to native habitat where possible or critical, or allow to regenerate.
7. Limit recreational uses to passive uses such as birdwatching, photography, and trail use. Locate developed picnic areas near MHPA edges or specific areas within the MHPA to minimize littering, feeding of wildlife, and attracting or increasing populations of exotic or nuisance wildlife (e.g., opossums, raccoons, skunks). Where permitted, restrain pets on leashes.
8. Remove homeless and itinerant worker camps in habitat areas as soon as found pursuant to existing enforcement procedures.
9. Maintain equestrian trails on a regular basis to remove manure (and other pet feces) from the trails and preserve system in order to control cowbird invasion and predation. Design and maintain trails where possible to drain into a gravel bottom or vegetated (e.g., grass-lined) swale or basin to detain runoff and remove pollutants.

Litter/Trash and Materials Storage

Priority 1:

1. Remove litter and trash on a regular basis. Post signage to prevent and report littering in trail and road access areas. Provide and maintain trash cans and bins at trail access points.
2. Impose penalties for littering and dumping. Fines should be sufficient to prevent recurrence and also cover reimbursement of costs to remove and dispose of debris, restore the area if needed, and to pay for enforcement staff time.
3. Prohibit permanent storage of materials (e.g., hazardous and toxic chemicals, equipment) within the MHPA and ensure appropriate storage per applicable regulations in any areas that may impact the MHPA as a result of potential leakage.
4. Keep wildlife corridor undercrossings free of debris, trash, homeless encampments, and all other obstructions to wildlife movement.

Priority 2:

1. Evaluate areas where dumping recurs for the need for barriers. Provide additional monitoring as needed (possibly by local and recreational groups on a "Neighborhood Watch" type program), and/or enforcement.

Adjacency Management Issues

Priority 1:

1. Enforce, prevent and remove illegal intrusions into the MHPA (e.g., orchards, decks) on an annual basis, in addition to complaint basis.
2. Disseminate educational information to residents adjacent to and inside the MHPA to heighten environmental awareness, and inform residents of access, appropriate plantings, construction or disturbance within MHPA boundaries, pet intrusion, fire management, and other adjacency issues.
3. Install barriers (e.g., fencing, rocks/boulders, vegetation) and/or signage where necessary to direct public access to appropriate locations.

Invasive Exotics Control and Removal

Priority 1:

1. Do not introduce invasive non-native species into the MHPA. Provide information on invasive plants and animals harmful to the MHPA and prevention methods to visitors and adjacent residents. Encourage residents to voluntarily remove invasive exotics from their landscaping.
2. Remove giant reed, tamarisk, pampas grass, castor bean, artichoke thistle, and other exotic invasive species from creek and river systems, canyons and slopes, and elsewhere within the MHPA as funding or other assistance becomes available. If possible, it is recommended that removal begin upstream and/or upwind and move downstream/downwind to control re-invasion. Priorities for removal should be based on invasive species' biology (e.g., time of flowering, reproductive capacity), the immediate need of a specific area, and where removal could increase the habitat available for use by MSCP-covered species such as the least Bell's vireo and coastal California gnatcatcher. Avoid removal activities during the reproductive seasons of sensitive species and avoid/minimize impacts to sensitive species or native habitats. Monitor the areas and provide additional removal and apply herbicides if necessary. If herbicides are necessary, all safety and environmental regulations must be observed. The use of heavy equipment, and any other potentially harmful or impact-causing methodologies, to remove the plants may require some level of environmental or biological review and/or supervision to ensure against impacts to sensitive species.

Priority 2:

1. If funding permits, initiate a baseline survey with regular follow-up monitoring to assess invasion or re-invasion by exotics and to schedule removal. Utilize trained volunteers to monitor and remove exotic species as part of a neighborhood, community, school, or other organization's activities program. If done on a

volunteer basis, prepare and provide information on methods and timing of removal to staff and the public if requested.
2. Conduct an assessment of the need for cowbird trapping in each area of the MHPA where cattle, horses, or other animals are kept, as recommended by the habitat management technical committee in coordination with the wildlife agencies.
3. If eucalyptus trees die or are removed from the MHPA area, replace with appropriate native species. Ensure that eucalyptus trees do not spread into new areas, nor increase substantially in numbers over the years. Eventual replacement by native species is preferred.
4. On a case by case basis some limited trapping of non-native predators may be necessary at strategic locations, and where determined feasible to protect ground and shrub-nesting birds, lizards, and other sensitive species from excessive predation. This management directive may be considered a Priority 1 if necessary to meet the conditions for species coverage. If implemented, the program would only be on a temporary basis and where a significant problem has been identified and, therefore, needed to maintain balance of wildlife in the MHPA. The program would be operated in a humane manner, providing adequate shade and water, and checking all traps twice daily. A domestic animals release component would be incorporated into the program. Provide signage at access points and noticing of adjacent residents to inform people that trapping occurs, and how to retrieve and contain their pets.

Flood Control

Priority 1:
1. Perform standard maintenance, such as clearing and dredging of existing flood channels, during the non-breeding season of sensitive bird or wildlife species utilizing the riparian habitat. For the least Bell's vireo, the non-breeding season generally includes mid-September through mid- March.

Priority 2:
1. Review existing flood control channels within the MHPA periodically (every 5 to 10 years) to determine the need for their retention and maintenance, and to assess alternatives, such as restoration of natural rivers and floodplains.

Management Policies and Directives for Urban Habitat Lands and Northern Area

Sections 1.5.7 and 1.5.8 of the City Subarea Plan outline the management policies and directives for Urban Habitat Lands and for the Northern Area, respectively. More specifically, these sections provide the City Subarea Plan goals and objectives, covered species, major issues, and overall management policies and directives for Urban Habitat Lands and for the Northern Area as well as specific management directives for the Northern Area.

Urban Habitat Lands

Section 1.5.7 of the City Subarea Plan identifies the ideal future condition of the Urban Habitat Lands that are scattered throughout the City and included in the MHPA as being (1) a system of canyons that provide habitat to native species that continue to use these Urban Habitat Lands, (2) habitats that provide 'stepping stones' for migratory bird species and those establishing new territories, and (3) environmental education opportunities for residents who visit these natural areas. The major issues associated with these Urban Habitat Lands include:

- Intense land uses and activities adjacent to and in MSCP-covered species' habitat.
- Dumping, litter, and vandalism.
- Itinerant living quarters.
- Utility, facility and road repair, construction, and maintenance activities. 5. Exotic (non-native) and invasive plants and animals.
- Urban runoff, and water quality.

Overall Management Policies and Directives for Urban Habitat Lands

The overall management policies and directives for Urban Habitat Lands include:

1. Where the MHPA's Urban Habitat Lands are part of a natural resource park, the City Park and Recreation Department shall manage these lands in accordance with a Natural Resource Management Plan (NRMP). The NRMPs for Urban Habitat Lands include the Marian Bear Memorial Park NRMP, Mission Bay Park NRMP, First San Diego River Improvement Project, and Los Peñasquitos Canyon Preserve NRMP.
2. All other Urban Habitat Lands included within the MHPA should be managed, to the extent possible, according to the general management policies and directives as described in the City Subarea Plan and summarized above.
3. Special management needs or issues for specific Urban Habitat Lands should be resolved by the MHPA Preserve Managers according to an appropriate adaptive management strategy and through coordination with the MSCP habitat management technical committee.

Specific Management Directives for Urban Habitat Lands

The City Subarea Plant does not include any specific management directives for Urban Habitat Lands.

Northern Area

Section 1.5.8 of the City Subarea Plan describes the goals and objectives of the Northern Area as maintaining the regional wildlife corridors that provide connectivity from the coast to natural areas further east. Key linkages and core areas within the Northern Area include Del Mar Mesa, Los Peñasquitos Canyon Preserve, Los Peñasquitos Lagoon, Torrey Pines State Park, the San Dieguito River Valley Regional

Park, and the Black Mountain Preserve. The major issues associated with these natural areas within the Northern Area include:

- Intense land uses and activities adjacent to and in MSCP-covered species' habitat and linkages.
- Itinerant living quarters.
- Enhancement and restoration needs.
- Exotic (non-native), invasive plants and animals.
- Water drainage issues, including water quality, urban runoff, erosion, sedimentation, and flood control.
- Utility, facility and road repair, construction, and maintenance activities.

Overall Management Policies and Directives for the Northern Area

The overall management policies and directives for the Northern Area that apply to the UCPU area include:

- San Dieguito River Park Concept Plan (San Dieguito River Park JPA 2002) – While not within the UCPU area, the San Dieguito River Park Concept Plan provides a regional planning document that will provide connectivity within the San Dieguito River Valley and to adjacent open space, such as Los Peñasquitos Canyon Preserve. The San Dieguito River Park Concept Plan outlines both general and specific policies, design considerations, and park proposals that should be considered in conjunction with the Framework Management Plan for long-term management of the San Dieguito River Valley.
- Torrey Pines State Park and Los Peñasquitos Lagoon – Torrey Pines State Park is located within the UCPU area, and Los Peñasquitos Lagoon is located immediately adjacent to the northern boundary of the UCPU area. Both of these areas support wildlife that utilize the natural habitats within the UCPU area. Both of these areas are managed by state park rangers and ecologists according to their general plans and management plans.
- Los Peñasquitos Canyon Preserve Master Plan (Van Dell and Associates 1998) – While Los Peñasquitos Canyon Preserve is located outside of the UCPU area, there are important wildlife movements corridors and linkages that connect the UCPU area with Los Peñasquitos Canyon Preserve, which is managed according to the Los Peñasquitos Canyon Preserve Master Plan. The Los Peñasquitos Canyon Preserve Master Plan contains general policies and guidelines on access, trails, usage, and sensitive species as well as specific management guidelines for natural, cultural, and historical resources for the Los Peñasquitos Canyon Preserve.

Specific Management Directives for the Northern Area

One specific management directive for the Northern Area that applies to the UCPU area south of Lopez Canyon includes the following:

Priority 2:
Develop a trail system, including appropriate signage and barriers, to direct/redirect human access into the MHPA. Close unapproved trails and access points and provide barriers or signage where necessary.

In addition, several management directives that apply to the adjacent Torrey Pines Community also apply to the UCPU area, including the following:

Priority 2:

1. In the long term, remove and regularly control the giant reed, castor bean, pampas grass and other invasive non-natives throughout the Sorrento Valley area and Los Peñasquitos Lagoon.
3. Assess the need for a large detention/sedimentation basin at the mouth of Soledad and Los Peñasquitos Creeks in the Los Peñasquitos Lagoon. The purpose would be to capture sediments, pollutants, non-native invasive plant species, and excessive fresh water flows that might affect the estuarine system.
5. the long term, if funding becomes available, replace the concrete and riprap channels within the Sorrento Valley area with natural bank and bottom flood channels (of adequate width to contain a 50 to 100-year flood if possible). This includes the channel leading from Los Peñasquitos Canyon into the Sorrento Valley. Such channels should be two-tiered, with a deeper low-flow channel area, and a narrow terrace along one bank to allow for wildlife movement.
   Plant the banks and bottoms with native riparian and wetland species, and plant the terraces with grassland components. The channel bottoms may need occasional maintenance to prevent obstruction of flood flows. Maintenance should consist of selective thinning of variably aged thickets of riparian vegetation, during the non-breeding/nesting season of sensitive bird species.

2.3.3 Local Coastal Program

Local governments use the LCP in partnership with the CCC as a basic planning tool to guide responsible development and to protect natural resources within the coastal zone. Development within the coastal zone may not occur until the CCC or a local government with a CCC-certified LCP (e.g., the City) has issued a Coastal Development Permit. When federal activities or federally licensed, permitted, or assisted activities are proposed that are likely to affect land use, water use, or natural resources within the coastal zone, a federal consistency review, pursuant to Section 307 of the CZMA, which gives the CCC or approved local government regulatory control over the proposed federal activities, is required. The CCC uses this review authority to facilitate cooperation and coordination between the local, state, and/or federal agencies and to authorize Coastal Development Permits.

The UCPU area is located within the City LCP Area. The City LCP, which is administered by the City, provides the requirements for future development and protection of coastal resources within the portions of the City that occur within the Coastal Zone. On August 14, 2014, the City LCP Coastal Land Use Maps were

amended to include the North Coast Corridor Public Works Plan/Transportation and Resource Enhancement Program Project Overlay Map and Project Overlay Improvements Map (Resolution Number PWP-6- NCC-13- 0203-1).

2.3.4 Environmentally Sensitive Lands

ESL regulations protect, preserve, and, where damaged, restore the environmentally sensitive areas within the City (City 2018). ESL include lands within, partially within, or immediately adjacent to the MHPA and VPHCP (see Section 2.3.5); wetlands occurring within or outside the MHPA; vegetation communities classified as Tier I, II, IIIA, or IIIB; habitat for rare, endangered, or threatened species; or narrow endemic species. Tier IV vegetation communities are not considered ESL (City 2018).

In addition, ESL includes Steep Hillside Guidelines, which apply to areas (1) with a natural slope gradient of at least 25% (25 feet of vertical rise for every 100 feet of horizontal distance) with an increase in vertical elevation of at least 50 feet or (2) where a portion of the site has a slope gradient of at least 200% (200 feet of vertical rise for every 100 feet of horizontal distance) with an increase in elevation of at least ten (10) feet (City 2018). The vertical elevation must occur generally in the area with the steep hillside and may include some pockets of area with less than 25% gradient. No community-specific requirements for the UCPU area are included in the Steep Hillside Guidelines; however, all applicable general measures would apply to the UCPU area.

Furthermore, ESL includes Coastal Bluffs and Beaches Guidelines, which apply to development proposed on a sensitive coastal bluff (within 100 feet of the bluff edge) or on a site containing a coastal beach (where the development will be within 100 feet of the beach). No community-specific requirements for the UCPU area are included in the Coastal Bluffs and Beaches Guidelines; however, all applicable general measures would apply to the UCPU area.

ESL regulations are intended to guide development so that it occurs in a manner that protects the overall quality of the biological resources while protecting the public health, safety, and welfare and while allowing for continued, mindful development. To the extent feasible, ESL regulations require that development avoid impacts to sensitive biological resources, including (but not limited to) MHPA lands; wetlands and vernal pools in naturally occurring complexes; federally and state-listed species that are not covered by the MSCP; and MSCP-covered Narrow Endemic species. For wetland impacts, the ESL regulations recommend impact avoidance; however, if impacts are unavoidable, they must be minimized to the maximum extent feasible through project design and/or implementation of appropriate minimization and/or mitigation measures. The minimization and/or mitigation measures typically include a 100-foot wetland buffer to assure the functions and values of the wetland system are protected and maintained; however, the wetland buffer can be greater or less than 100 feet based on the discretion of the regulatory agency (e.g., USACE, CDFW, RWQCB, USFWS, City).

All future development within the UCPU area that will occur within or adjacent to ESL will be required to comply with all applicable City ESL regulations as outlined in the San Diego Municipal Code, Chapter 14: General Regulations (Article 3, Division 1: Environmentally Sensitive Lands Regulations); San Diego Municipal Code, Land Development Code, Biology Guidelines (City 2018); San Diego Municipal Code, Land Development Code, Steep Hillside Guidelines (City 2004a); and San Diego Municipal Code, Land Development Code, Coastal Bluffs and Beaches Guidelines (City 2004b). All projects proposed in these areas will be evaluated for conformance with these guidelines as part of the review process for the required Site Development Permit unless the proposed development is exempt from the ESL Regulations. In addition to the findings required for the Site Development Permit, supplemental findings for ESL must also be made to approve the development. A Coastal Development Permit will be required in addition to the Site Development Permit for all *coastal development* proposed within the Coastal Overlay Zone and which does not qualify for an exemption (City 2004b).

2.3.5 Vernal Pool Habitat Conservation Plan

The City VPHCP (City 2017) was finalized in 2017 and provides a framework to protect, enhance, and restore vernal pool resources within the City, while also improving and streamlining the environmental permitting process for impacts to threatened and endangered species associated with vernal pools. The VPHCP is compatible with the MSCP and expands upon the existing MHPA to conserve additional lands with vernal pool resources and provides coverage for seven threatened and endangered species associated with vernal pools that are not covered by the City Subarea Plan, including Otay mesa mint (*Pogogyne nudiuscula*), San Diego mesa mint, spreading navarretia, San Diego button-celery, California Orcutt grass, Riverside fairy shrimp, and San Diego fairy shrimp.

The overall VPHCP Area includes a total of 206,124 acres in southwestern San Diego County and is divided into three planning units – Northern, Central, and Southern. The UCPU area is within the North VPHCP planning unit, which includes approximately 110,891 acres within City jurisdiction north of State Route 52. Within the portion of the North VPHCP planning unit that is within the UCPU area, vernal pools occur primarily in the eastern portion of the UCPU area, along Miramar Road (Figure 5-2, Vegetation), with one isolated vernal pool area in the western portion of the UCPU, just south of the gliderport (Figure 5-1, Vegetation).

The VPHCP includes a list of four covered projects that involve development within the City and for which hardline Preserve boundaries have been established and incidental take of VPHCP-covered species would be approved through implementation of the VPHCP. For these projects, adequate avoidance and/or minimization measures have been identified and compensatory mitigation (i.e., conservation measures) have been incorporated for anticipated impacts to VPHCP-covered species and their vernal pool habitat. One of the covered projects – the North City Area component of the Pure Water Program – occurs within the UCPU area. This project includes expansion of the existing North City Water Reclamation Plant, construction of a new Advanced Purification

Facility, pipelines, and support facilities such as pump stations. The project is not located within the MHPA or within USFWS Critical Habitat designated for San Diego fairy shrimp, and it is not identified in the USFWS Recovery Plan for Vernal Pools of Southern California.

Future City projects as well as other public and provide projects that occur within the UCPU area and that require discretionary permits from the City will be subject to the requirements outlined in the VPHCP.

2.3.6 General Plan

The City's General Plan includes a Conservation Element that contains policies that will guide the City's long-term conservation and sustainable management of the biological resources within the City. Relevant policies from the following Conservation Element sections are provided in this section – Open Space and Landform Preservation, Coastal Resources, Water Resources Management, Urban Runoff Management, Biological Diversity, Wetlands, and Urban Forestry.

2.3.6.1 Open Space and Landform Preservation

The goal of the Open Space and Landform Preservation section is the "preservation and long-term management of natural landforms and open spaces that help make San Diego unique" (City 2008). The following policies are applicable to the biological resources within the UCPU area and taken directly from the General Plan:

CE-B.1. Protect and conserve the landforms, canyon lands, and open spaces that define the City's urban form; provide public views/vistas; serve as core biological areas and wildlife linkages; are wetlands habitats; provide buffers within and between communities; or provide outdoor recreational opportunities.

a. Utilize Environmental Growth Funds and pursue additional funding for the acquisition and management of MHPA and other important community open space lands.
b. Support the preservation of rural lands and open spaces throughout the region.
c. Protect urban canyons and other important community open spaces, including those that have been designated in community plans for the many benefits they offer locally and regionally as part of a collective city-wide open space system.
d. Minimize or avoid impacts to canyons and other environmentally sensitive lands by relocating sewer infrastructure out of these areas where possible, minimizing construction of new sewer access roads into these areas, and redirecting of sewage discharge away from canyons and other environmentally sensitive lands.
e. Encourage the removal of invasive plant species and the planting of native plants near open space preserves.

f. Pursue formal dedication of existing and future open space areas throughout the City, especially in core biological resource areas of the City's Subarea Plan.
g. Require sensitive design, construction, relocation, and maintenance of trails to optimize public access and resources conservation.

CE-B.2. Apply the appropriate zoning and ESL regulations to limit development of floodplains and sensitive biological areas, including wetlands, steep hillsides, canyons, and coastal lands.
a. Manage watersheds and regulate floodplains to reduce disruption of natural systems, including the flow of sand to the beaches. Where possible and practical, restore water filtration, flood and erosion control, biodiversity, and sand replenishment benefits.
b. Limit grading and alterations of steep hillsides, cliffs, and shoreline to prevent increased erosion and landform impacts.

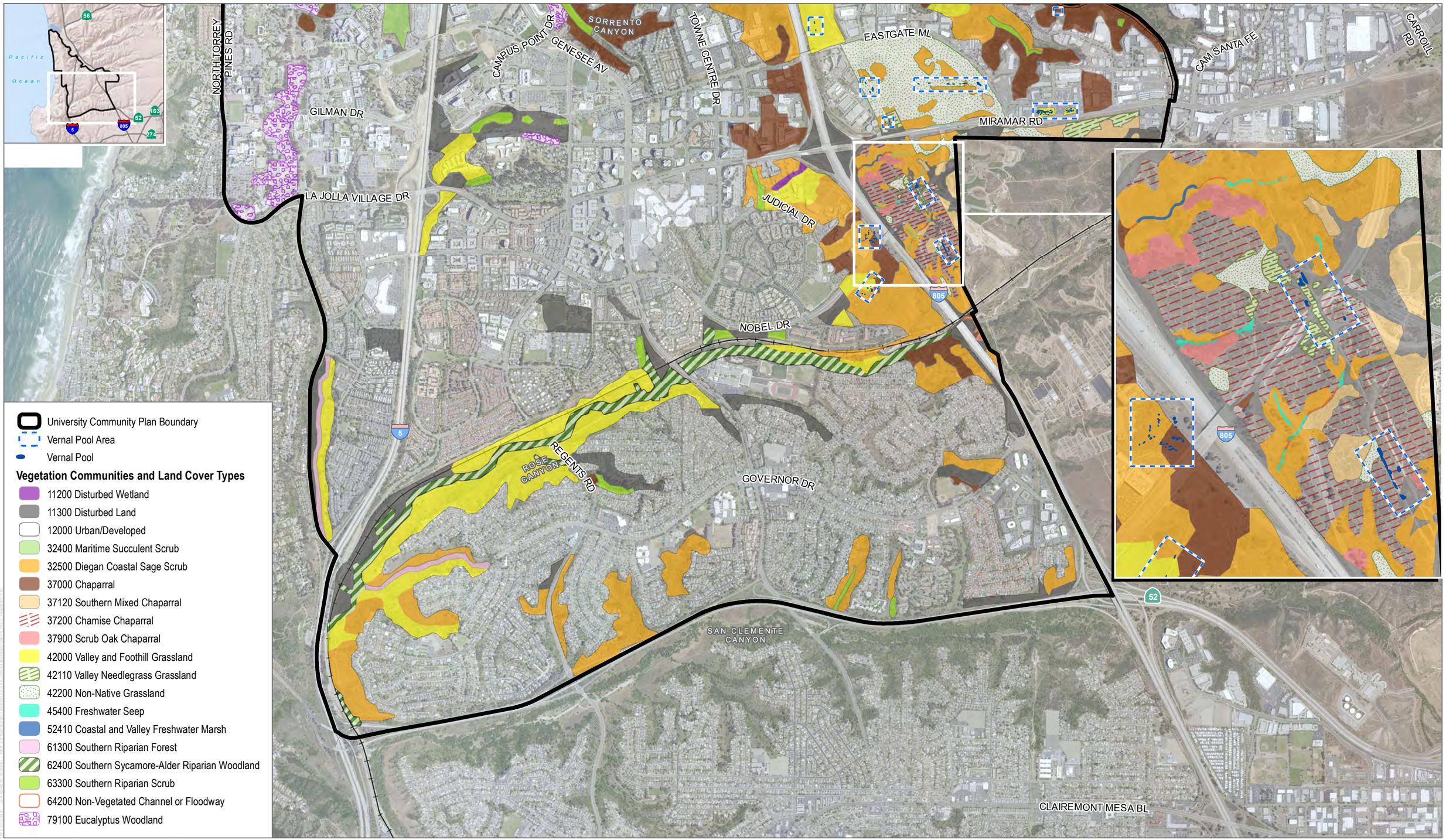
CE-B.4. Limit and control runoff, sedimentation, and erosion both during and after construction activity.

2.3.6.2 Coastal Resources

The goal of the Coastal Resources section is "coastal resource preservation and enhancement, clean coastal waters by continuing to improve the quality of ocean outfall discharges, [and] enhanced public access to the shoreline and coast" (City 2008). The following policies are applicable to the biological resources within the UCPU area and taken directly from the General Plan:

CE-C.1. Protect, preserve, restore, and enhance important coastal wetlands and habitat (tide pools, lagoons, and marine canyons) for conservation, research, and limited recreational purposes.

CE-C.2. Control sedimentation entering coastal lagoons and waters from upstream urbanization using a watershed management approach that is integrated into local community and land use plans.



SOURCE: SANGIS 2017

DUDEK

0 1,000 2,000 Feet

FIGURE 5-2

Vegetation

University Community Plan Update

CE-C.3. Minimize alterations of cliffs and shorelines to limit downstream erosion and to ensure that sand flow naturally replenishes beaches.

CE-C.4. Manage wetland areas as described in Wetlands (Section 2.3.6.6) for natural flood control and preservation of landforms.

CE-C.6. Implement watershed management practices designed to reduce runoff and improve the quality of runoff discharge into coastal waters.

2.3.6.3 Water Resources Management

The goal of the Water Resources Management section is "effective long-term management of water resources so that demand is in balance with efficient, sustainable supplies [and] a safe and adequate water supply that effectively meets the demand for the existing and future population through water efficiency and reclamation programs" (City 2008). The following policies are applicable to the biological resources within the UCPU area and taken directly from the General Plan:

CE-D.3. Continue to participate in the development and implementation of watershed management plans.

a. Control water discharge in a manner that does not reduce reasonable use by others, damage important native habitats and historical resources, or create hazardous conditions (e.g., erosion, sedimentation, flooding, subsidence)
c. Improve and maintain drinking water quality and urban runoff water quality through implementation of Source Water Protections Guidelines for New Development.
d. Improve and maintain urban runoff water quality through implementation of storm water protection measures.

2.3.6.4 Urban Runoff Management

The goal of the Urban Runoff Management section is "protection and restoration of waterbodies, including reservoirs, coastal waters, creeks, bays, and wetlands, [and] preservation of natural attributes of both the floodplain and floodway without endangering life and property" (City 2008). The following policies are applicable to the biological resources within the UCPU area and taken directly from the General Plan:

CE-E.1. Continue to develop and implement public education programs.

a. Involve the public in addressing runoff problems associated with development and raising awareness of how an individual's activities contribute to runoff pollution.
b. Work with local businesses and developers to provide information and incentives for the implantation of Best Management Practices for pollution prevention and control.

c. Implement watershed awareness and water quality educational programs for City staff, community planning groups, the general public, and other appropriate groups.

CE-E.2. Apply water quality protection measures to land development projects early in the process – during project design, permitting, construction, and operations – in order to minimize the quantity of runoff generated on-site, the disruption of natural water flows, and the contamination of storm water runoff.

a. Increase on-site infiltration, and preserve, restore, or incorporate natural drainage systems into site design.
b. Direct concentrated drainage flows away from the MHPA and open space areas. If not possible, drainage should be directed into sedimentation basins, grassy swales, or mechanical trapping devices prior to draining into the MHPA or open space areas.
c. Reduce the amount of impervious surfaces through selection of materials, site planning, and street design where possible.
d. Increase the use of vegetation in drainage design.
e. Maintain landscape design standards that minimize the use of pesticides and herbicides.
f. Avoid development of areas particularly susceptible to erosion and sediment loss (e.g., steep slopes) and, where impacts are unavoidable, enforce regulations that minimize their impacts.
g. Apply land use, site development, and zoning regulation that limit impacts on and protect the natural integrity of topography, drainage systems, and water bodies.
h. Enforce maintenance requirements in development permit conditions.

CE-E.3. Require contractors to comply with accepted storm water pollution prevention planning practices for all projects.

a. Minimize the amount of graded land surface exposed to erosion and enforce erosion control ordinances.
b. Continue routine inspection practices to check for proper erosion control methods and housekeeping practices during construction.

CE-E.4. Continue to participate in the development and implementation of Watershed Management Plans for water quality and habitat protection.

CE-E.5. Assure that City departments continue to use “Best Practice” procedures so that water quality objectives are routinely implemented.

a. Incorporate water quality objectives into existing regular safety inspections.
b. Follow Best Management Practices and hold training sessions to ensure that employees are familiar with those practices.
c. Education City employees on sources and impacts of pollutants on urban runoff and actions that can be taken to reduce these sources.

d. Ensure that contractors used by the City are aware of and implement urban runoff control programs.
e. Serve as an example to the community-at-large.

CE-E.6. Continue to encourage "Pollution Control" measures to promote the proper collection and disposal of pollutants at the source, rather than allowing them to enter the storm drain system.
a. Promote the provision of used oil recycling and/or hazardous waste recycling facilities and drop-off locations.
b. Review plans for new development and redevelopment for connections to the storm drain system.
c. Follow up on complaints of illegal discharges and accidental spills into storm drains, waterways, and canyons.

CE-E.7. Manage floodplains to address their multi-purpose use, including natural drainage, habitat preservation, and open space and passive recreation, while also protecting public health and safety.

2.3.6.5 Biological Diversity

The goal of the Biological Diversity section is "preservation of healthy, biologically diverse regional ecosystems and conservation of endangered, threatened, and key sensitive species and their habitats" (City 2008). The following policies are applicable to the biological resources within the UCPU area and taken directly from the General Plan:

CE-G.1. Preserve natural habitats pursuant to the MSCP, preserve rare plants and animals to the maximum extent practicable, and manage all City-owned native habitats to ensure their long-term biological viability.
a. Educate the public about the impacts invasive plant species have on open space.
b. Remove, avoid, or discourage the planting of invasive plant species.
c. Pursue funding for removal of established populations of invasive species within open space.

CE-G.2. Prioritize, fund, acquire, and manage open spaces that preserve important ecological resources and provide habitat connectivity.

CE-G.3. Implement the conservation goals/policies of the City's Subarea Plan, such as providing connectivity between habitats and limiting recreational access and use to appropriate areas.

CE-G.4. Protect important ecological resources when applying floodplain regulation and development guidelines.

CE-G.5. Promote aquatic biodiversity and habitat recovery by reducing hydrological alteration, such as grading a stream channel.

2.3.6.6 Wetlands

The goal of the Wetlands section is "preservation of San Diego's rich biodiversity and heritage through the protection and restoration of wetland resources [and] preservation of all existing wetland habitat in San Diego through a 'no net loss' approach" (City 2008). The following policies are applicable to the biological resources within the UCPU area and taken directly from the General Plan:

CE-H.1. Use a watershed planning approach to preserve and enhance wetlands.

CE-H.2. Facilitate public-private partnerships that improve private, federal, state, and local coordination through removal of jurisdictional barriers that limit effective wetland management.

CE-H.3. Seek state and federal legislation and funding that supports efforts to research, classify, and map wetlands, including vernal pools and their functions, and improve restoration and mitigation procedures.

CE-H.4. Support the long-term monitoring of restoration and mitigation efforts to track and evaluate changes in wetland acreage, functions, and values.

CE-H.5. Support research and demonstration projects that use created wetlands to help cleanse urban and storm water runoff, where not detrimental to natural upland and wetland habitats.

CE-H.6. Support educational and technical assistance programs, for both planning and development professionals, and the general public, on wetlands protection in the land use planning and development process.

CE-H.7. Encourage site planning that maximizes the potential biological, historical, hydrological, and land use benefits of wetlands.

CE-H.8. Implement a "no net loss" approach to wetlands conservation in accordance with all City, state, and federal regulations.

2.3.6.7 Urban Forestry

The goal of the Urban Forestry section is "protection and expansion of a sustainable urban forest" (City 2008). The following policies are applicable to the biological resources within the UCPU area and taken directly from the General Plan:

CE-J.1. Develop, nurture, and protect a sustainable urban/community forest.

a. Seek resources and take actions needed to plant, care for, and protect trees in the public right-of-way and parks and those of significant importance to our community.

b. Plant large canopy shade trees, where appropriate and with consideration of habitat and water conservation goals, in order to maximize environmental benefits.
d. Provide forest linkages to connect and enhance public parks, plazas, recreation, and open space areas.

CE-J.4. Continue to require the planting of trees through the development permit process.
a. Consider tree planting as mitigation for air pollution emissions, storm water runoff, and other environmental impacts as appropriate.

2.3.7 University Community Plan Policies

The current UCP includes three elements that are applicable to the biological resources within the UCPU area - the Open Space and Recreation Element, the Resource Management Element, and the General Plan Consistency Element. Section 2.3.6 discussed the UCPU consistency with the General Plan. This section discusses the applicable goals and proposals from the Open Space and Recreation Element and the Resource Management Element.

2.3.7.1 Open Space and Recreation Element Goals and Proposals

The goals of the Open Space and Recreation Element section are to:

- Preserve the natural resources of the community through the appropriate designation and use of open space. Major topographic features and biological resources should be preserved as undeveloped open space.
- Provide a system of population-based parks to meet the community's needs for outdoor recreation.
- Establish an open space system that will utilize the terrain and natural drainage system to guide the form of urban development, enhance neighborhood identity and separate incompatible land uses.
- Promote public health and safety by designating areas with high potential for landslides, earthquake faults or aircraft accidents as open space.
- Develop a linkage system to connect recreational and natural open space areas throughout the community (City 2019).

The following Open Space and Recreation proposals are applicable to the biological resources within the UCPU area and taken directly from the current UCP:

Proposal A Regional and Resource-Based Open Space

1. General
   It is proposed that the Torrey Pines Mesa and coastal area, Sorrento Valley and Soledad Canyon hillsides and canyons, Rose Canyon, San Clemente Canyon and areas most severely impacted by aircraft overflights be preserved as open space.
2. Torrey Pines City Park

The park should be developed to enhance unique recreational opportunities, such as beach access and gliding activities, while preserving existing biological and archaeological resources and topographic features.

   a. Future improvements to the City Park should be designed to promote public safety and minimize future environmental damage.
   b. The two coastal canyons should be preserved in a natural condition. Presently disturbed vegetation should be restored.

3. Torrey Pines Golf Course/Hotel Development
   The golf course facilities should continue to be operated for the benefit of San Diego residents. The additional development of hotel or other facilities should be compatible with the Airport Land Use Compatibility Plan for MCAS Miramar.
4. Sorrento Valley - Soledad Canyon Open Space
   This open space system includes (1) the Torrey Pines State Reserve, east of North Torrey Pines Road; (2) slopes with a 25 percent or greater gradient on the edge of the Torrey Pines Science Park, Campus Point, and adjacent properties; (3) the branch canyon adjacent to I-5 and penetrating the UCSD [University of California, San Diego] campus; (4) the slopes on the south side of the AT & SF Railroad right-of-way; and (5) Torrey Pines Science Center.
   a. These areas should be retained in an open and natural state and should either be preserved as natural open space easements or deeded to the City for open space.
   b. Any disturbance of the hillsides should be mitigated by contour grading and revegetation with native species.
   c. Steep hillsides facing the canyons should be preserved by establishing open space easements in conjunction with new development.
5. U.S. Marine Corps Air Station Miramar Impacts
   In the interest of public health, safety and welfare it is recommended that certain areas influenced by MCAS Miramar activities be retained as open space per the existing fee ownership of the Federal Government.
6. Rose Canyon
   City-owned land within Rose Canyon should be preserved as dedicated open space.
   a. Future uses of Rose Canyon should consider the topography, vegetation and scenic value of the canyon. For this reason, passive recreational uses are recommended rather than active uses requiring major grading and construction.
   b. Pedestrian and bicycle paths should be constructed as illustrated in the current Transportation Element and Urban Design Element of the UCPU.
   c. The San Diego Unified School District should consider the granting of an easement along the north side of the University City Senior High School to permit public access through Rose Canyon and under the railroad track to the north.
   d. An open space easement with access permitted should be granted along the north side of the AT & SF Railroad between I-5 and I-805.
   e. Developments along the northern edge of Rose Canyon should provide open space easements bordering the canyon. If grading within the easements is required for development, the final grading and revegetation

should blend with the natural canyon features. The existing open space easement between Regents Road and Genesee Avenue should be maintained; access rights should be acquired to permit pedestrian and bicycle paths linking this area with Rose Canyon.

f. If a linkage can be made to an equestrian center outside the community, an equestrian trail could be developed in Rose Canyon in accordance with the adopted Plan for Equestrian Trails and Facilities. No developments or staging areas are proposed by this designation.

7. San Clemente Canyon
   Marian Bear Park should be preserved and maintained by the City as a regional, resource-based park. The canyon and its riparian vegetation, including the mature oak and sycamore trees, should be preserved in their natural state.
   a. Pedestrian bicycle paths should be constructed to connect Standley Park and Marian Bear Park, utilizing the existing State Route 52 undercrossing.
   b. Three branches of the canyon, which extend northward into South University, should be preserved as open space by retaining existing open space easements. These areas include 19.47 acres between Stadium Street and Tulane Street, approximately 3.00 acres west of Kantor Street, and 15.47 acres east of Gullstrand Street, developed as a golf course.
8. Gilman Drive Slopes
   The slopes along Gilman Drive between I-5 and Via Alicante should be preserved as undeveloped open space. In addition, properties bordering Gilman Drive should provide a visual extension of the open space corridor north from Via Alicante to La Jolla Village Drive. Landscaping and site design on private properties abutting the street and adjacent to the canyon should enhance the visual quality and continuity of this open space corridor. An existing partial bike lane should be continued to connect the UCSD with the Rose Canyon bikeway via Gilman Drive.

Proposal D Open Space Connections

1. Linkage System
   An open space trails linkage system should be implemented to connect the major canyons with the neighborhood parks, schools, and private open space areas. Pedestrian pathways and bicycle lanes should also connect recreational areas with major activity centers such as the town center core and UCSD. Consideration should also be given to the utilization of utility easements as trail linkages.
2. Private Open Space
   Open spaces within residential or commercial developments should be linked, wherever feasible, to nearby parks or open space canyons. The design of the projects should encourage access to recreational areas by means of pedestrian and bicycle movement.

Proposal E Hillside Development

Development within canyon bottoms and on slopes with greater than 25 percent gradients should be strongly discouraged. However, if development does occur on

canyon bottoms, along bluffs or on steep slopes, the following guidelines should be followed:

1. Planned Residential, Commercial and Industrial Developments
   It is recommended that planned developments be used in developing hillsides to permit clustering the structures on the more level areas and to reduce grading.
2. Grading Principles
   In steep terrain, padded areas should be made in smaller increments to minimize bank height and level areas should be created more by building structures than by grading. The creation of standard, level building pads should be avoided. As a general guideline, only a small portion (10 percent) of the slopes with 25 percent or greater gradients should be graded.
3. Vegetation
   Except as necessary to provide adequate fire buffers around structures, the natural vegetation on slopes should be retained. Disturbed slopes should be revegetated with native flora.
4. Coastal Development
   Development, alteration, or grading of natural landforms should not occur along bluffs or cliffs, within drainage canyons, or on slopes of 25 percent or greater in the Coastal Zone to prevent erosion and to protect existing native plant communities and visual resources.
5. Visual Impacts
   The design of hillside developments should relate to the existing topography and should be compatible with the scale and character of surrounding development. Attention should be given to building scale, roof design, materials and color. Visual access to open space areas from public roadways should be maintained.
6. Safety
   Development on slopes or near bluffs should not contribute to erosion or geologic instability of the site or adjacent properties. A detailed drainage plan should be required for all new bluff-top development. Any geologic constraints to development should be identified prior to project approval.
7. Use and Future Standards
   Each open space area can serve a variety of functions beyond the more readily apparent primary uses. These functions should be considered when determining future uses of the open space areas and when determining the design and type of adjacent development.

2.3.7.2 Resource Management Element Goals and Proposals

The goals of the Resource Management Element section that are applicable to the biological resources are to:

- Preserve the community's natural topography, particularly in the Coastal Zone and in major canyon systems.
- Increase accessibility to the beaches and shoreline in a manner compatible with resources preservation.
- Protect biological resources through the wise management and use of the community's natural open space and parks.

- Contribute to the maintenance or improvement of regional water quality by controlling siltation and urban pollutants in runoff.

The following Resource Management proposals are applicable to the biological resources within the UCPU area and taken directly from the current UCP:

Proposal A Natural Resources

1. Landform Preservation
   Canyons, hillsides, and natural drainage systems should be preserved. Grading should be kept to a minimum, particularly adjacent to designated open space areas. Specific proposals for development of resource-based parks and hillside development are contained in the Open Space and Recreation Element of the UCPU.
2. Biological Resources
   Many of the community's biological resources are proposed for preservation in natural parks, as specifically addressed in the Open Space and Recreation Element of the UCPU. In other areas, native vegetation should be retained wherever feasible to reduce erosion, to preserve native species and representative habitats, and to buffer open space parks and canyons from urban encroachment. Disturbed areas should be revegetated with native flora.
3. Water Quality/Erosion
   Development should minimize erosion and sedimentation. If a project site is on or adjacent to sloping lands, drainage systems should be designed so that the peak rate of runoff for the 10-year-frequency storm event will not exceed the rate under undeveloped conditions. Runoff control should be accomplished by catchment basins, siltation traps, or detention basins along with energy dissipating measures or by other methods which are equally effective.
   Grading during the rainy season should be avoided wherever possible. Erosion should be minimized by grading in increments during the rainy season and by using temporary erosion control measures. In areas where grading is completed, all disturbed slopes should be stabilized by vegetation or other means prior to the rainy season.

SECTION 3.0 – METHODS

This UCPU biological resources report was prepared using data available obtained from existing environmental documents and database queries. No field surveys were conducted, because this UCPU biological resources report is intended to provide a broad-scale analysis of biological resources, and all future proposed projects within the UCPU area would be required to provide a detailed evaluation of existing biological resources; analyze potential proposed project impacts; and develop appropriate, project-specific avoidance, minimization, and/or mitigation measures to reduce proposed project impacts to below a level of significance. Methods used for obtaining the data presented in this UCPU biological resources support are described in this section.

3.1 LITERATURE AND DATABASE REVIEW

Busby Biological Services Inc., in coordination with Dudek, conducted a literature review of applicable environmental documents as well as database searches for historical biological resources information within the UCPU area. The sources for the literature and database review included but were not limited to the following:

- San Diego Geographic Information Source Vegetation Information in the San Diego Region (SanGIS 2020)
- CDFW California Natural Diversity Database (CNDDB) (CDFW 2020a)
- California Native Plant Society (CNPS) Inventory of Rare and Endangered Plants (CNPS 2020)
- Calflora: information on wild California plants (Calflora 2020)
- USFWS historical species database (USFWS 2020a)
- USFWS critical habitat database (USFWS 2020b)
- County MSCP (County 1992)
- City of San Diego MSCP Subarea Plan (City 1997)
- U.S. Department of Agriculture Natural Resources Conservation Service Soil Survey Geographic Database (USDA NRCS 2020)
- USFWS National Wetlands Inventory (USFWS 2020c)
- San Diego County Plant Atlas (SDNHM 2020)
- San Diego County Bird Atlas (Unitt 2004)
- San Diego County Mammal Atlas (Tremor et. al 2017)
- City of San Diego Vernal Pool Habitat Conservation Plan (City 2017)

3.2 BOTANICAL RESOURCES

The methods used to obtain data pertaining to the vegetation communities and plant species found within the UCPU area are described below.

3.2.1 Vegetation Communities and Land Cover Types

The vegetation communities and land cover types documented within the UCPU area were obtained by using San Diego Geographic Information Source (SanGIS 2020), which maintains a regional geographic information system database that provides public access to data layers for vegetation communities and land cover types that are updated frequently.

Vegetation communities and land cover types were classified following Holland (1986) as modified by Oberbauer et al. (2008). Sensitive vegetation communities were determined following the City's Land Development Manual – Biology Guidelines (City 2018).

3.2.2 Sensitive Plant Species

Sensitive plant species locations were obtained from database queries of the USFWS sensitive species database, CNDDB (CDFW 2020a), and SanBIOS database (SanGIS 2020). In addition, data obtained from the CNPS online rare plant inventory (CNPS 2020), Calflora website (Calflora 2020), and the San Diego County Plant Atlas (SDNHM 2020) were used to provide additional data on the locations of sensitive plant species within the UCPU area.

Common and scientific names for plant species are those presented in the CDFW CNDDB *State and Federally Listed Endangered, Threatened, and Rare Plants of California* (CDFW 2020b).

3.3 SENSITIVE WILDLIFE

Sensitive wildlife species locations were obtained from database queries of the USFWS sensitive species database, CNDDB (CDFW 2020a), and SanBIOS database (SanGIS 2020). In addition, the San Diego County Bird Atlas (Unitt 2004) and the San Diego County Mammal Atlas (Tremor et al. 2017) were used to provide additional data on the locations of sensitive plant species within the UCPU area.

Common and scientific names for wildlife species are those presented in the CDFW CNDDB *State and Federally Listed Endangered and Threatened Animals of California* (CDFW 2020c).

SECTION 4.0 – EXISTING CONDITIONS

4.1 PLAN AREA DESCRIPTION

This section provides a brief description of the topography, land uses, and soil types within the UCPU area.

4.1.1 Topography

The topography within the UCPU ranges from the lowest elevation, which is approximately two (2) feet above mean sea level and is located in the far northwestern corner of the UCPU area in Torrey Pines State Reserve to the highest elevation, which is approximately 450 feet above mean sea level in the northern portion of the UCPU area, east of Torrey Pines Golf Course and east of North Torrey Pines Road. The topography within the UCPU area is highly varied and includes coastal bluffs within the Torrey Pines State Reserve and Torrey Pines City Park; canyons, including San Clemente Canyon, Rose Canyon, Soledad Canyon, and Sorrento Valley; rolling topography and mesa tops in the vicinity of University Towne Centre, where side canyons and rounded ridges transition from the more major canyons to the mesa tops that are generally located along Miramar Road, north of University Towne Centre, and north of UCSD.

The entire UCPU area is located in the Los Peñasquitos Creek Hydrologic Unit (HU) (Figure 6, Hydrology). Hydrologic subareas divide HUs into smaller areas of relatively similar topography and land use. Thus, more specifically, the UCPU is located within three hydrologic subareas, including Miramar Hydrologic Subarea, Miramar Reservoir Hydrologic Subarea, and Scripps Hydrologic Subarea. The Los Peñasquitos Creek HU is approximately 162 square miles and contains much of the cities of San Diego and Poway as well as a small portion of unincorporated San Diego County. This HU includes multiple large canyons, such as Carmel Canyon, Los Peñasquitos Canyon, Carroll Canyon, Rose Canyon, San Clemente Canyon, and Tecolote Canyon. Carmel Creek and Carroll Canyon Creek merge with Los Peñasquitos Creek in Soledad Canyon downstream of I-5 and ultimately terminate in the Los Peñasquitos Lagoon. Rose Canyon and San Clemente Canyon merge near I-5 and ultimately feed into Mission Bay. Tecolote Canyon feeds directly into Mission Bay (River Focus 2020).

The only major canyon within the UCPU area is Rose Canyon, in which Rose Creek flows from east to west before turning south towards Mission Bay as it approaches I-5. Carroll Canyon, which becomes Soledad Canyon/Sorrento Valley bounds the community to the north, and San Clemente Canyon bounds the community to the south (Figure 6) (River Focus 2020).

4.1.2 Land Use

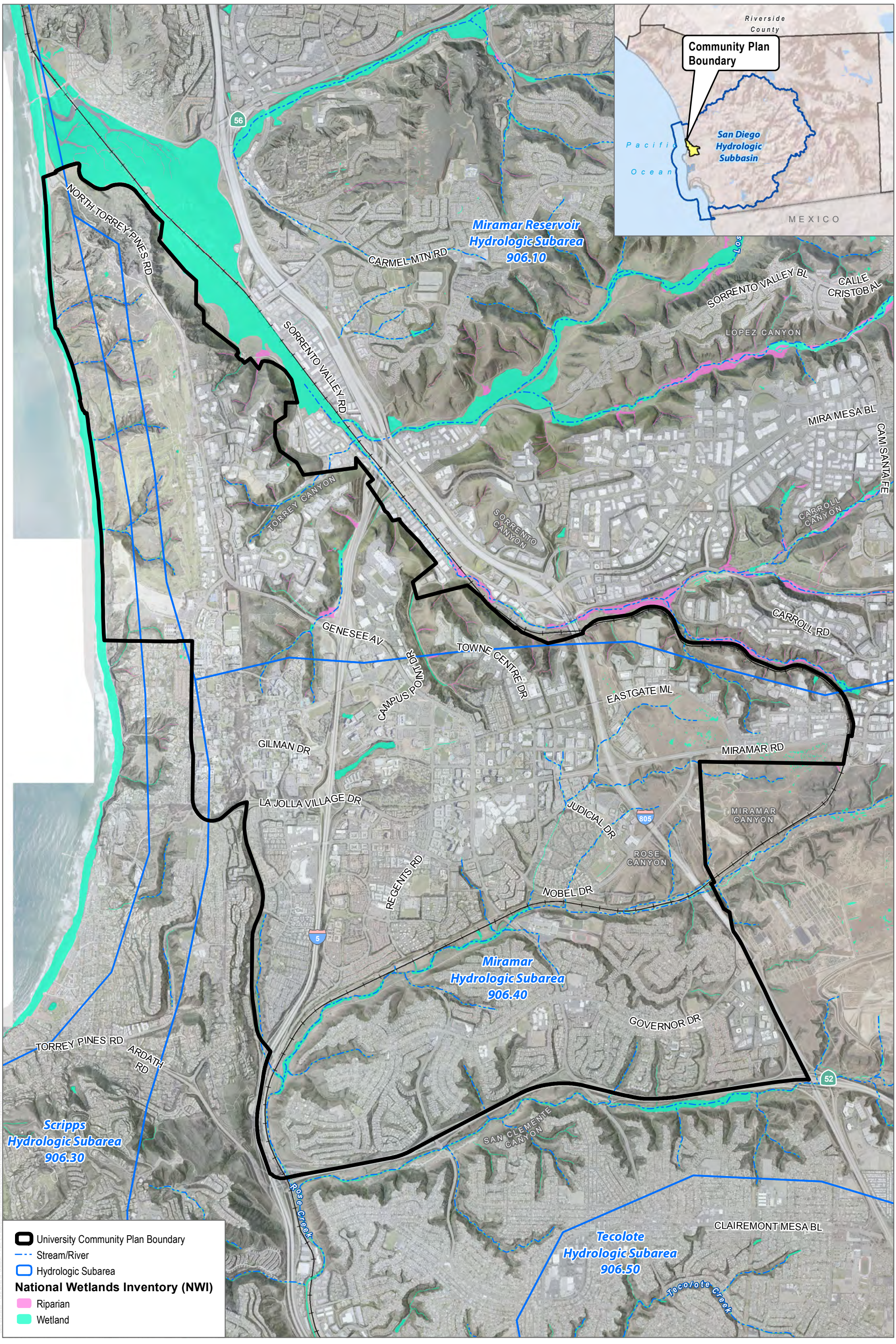
The UCPU area currently supports a mix of public, private, and governmental land uses that include educational facilities, low to high-density residential developments, industrial and commercial facilities, and a variety of parks and open space areas as well

as transportation and utility infrastructure. UCSD along with its constant expansion and modification has been the focal point of the UCPU area and has encouraged the scale, intensity, and pace of the private development within much of the UCPU area. University Towne Centre serves as a social center for residents within the UCPU area and as a major regional commercial center as well. In addition, the research, corporate headquarters, and medical centers in the northern portion of the UCPU area as well as the urbanized South University residential area round out the urbanized portion of the UCPU area. However, the UCPU area also includes parks, open spaces, and recreational areas, such as Torrey Pines State Reserve, Torrey Pines Golf Course, Rose Canyon, and San Clemente Canyon.

4.1.3 Soils

A query of the U.S. Department of Agriculture Natural Resources Conservation Service database (USDA NRCS 2020) indicated that 23 soil types have been mapped within the UCPU area. Of these, only one – Olivenhain cobbly loam, 2% to 9% slopes – is associated only with urban/developed lands but is not associated with native habitats within the UCPU area, whereas four – coastal beaches, Corralitos loamy sand (9% to 15% slopes), Marina loamy coarse sand (9% to 30% slopes), and tidal flats – are associated only with native habitats and not associated with urban/developed lands in the UCPU area. The 21 soil types associated with both native and urban/developed lands and include:

- Altamont clay (9% to 15%, 15% to 30% [some eroded], and 30% to 50% slopes)
- Carlsbad gravelly loamy sand (2% to 5%, 5% to 9%, and 9% to 15% slopes)
- Carlsbad-Urban land complex (2% to 9% slopes)
- Chesterton fine sandy loam (2% to 5%, 5% to 9%, and 9% to 15% [eroded] slopes)
- Chesterton-Urban land complex (2% to 9% slopes)
- Chino silt loam, saline (0% to 2% slopes)
- Corralitos loamy sand (0% to 5% and 5% to 9% slopes)
- Gaviota fine sandy loam (9% to 30% and 30% to 50% slopes)
- Huerhuero loam (5% to 9% [eroded], 9% to 15% [eroded], and 15% to 30% [eroded] slopes)
- Huerhuero-Urban land complex (9% to 30% slopes)
- Loamy alluvial land-Huerhuero complex (9% to 50% slopes)
- Made land
- Marina loamy coarse sand (2% to 9% slopes)
- Olivenhain cobbly loam (30% to 50% slopes)
- Redding cobbly loam (9% to 30%, 15% to 50% [dissected] slopes)
- Redding gravelly loam (2% to 9% slopes)
- Redding-Urban land complex (9% to 30% slopes)
- Riverwash
- Salinas clay loam (2% to 9% slopes)
- Steep gullied land
- Terrace escarpments



SOURCE: SANGIS 2017, 2019; USFWS 2020; USGS 2018; California Dept. of Water Resrouces 2019

DUDEK

0 1,400 2,800 Feet

FIGURE 6

Hydrology

University Community Plan Update

4.2 BOTANICAL RESOURCES

The approximately 8,676-acre UCPU area supports 26 vegetation communities and land cover types (Figures 5-1 and 5-2) (SanGIS 2020). These vegetation communities and land cover types are summarized in Table 1.

Table 1. Vegetation Communities and Land Cover Types in the UCPU Area

Vegetation Community/Land Cover Type	Approx. Acres
Upland Vegetation Communities	
Torrey Pines Forest	104.9
Southern Coastal Bluff Scrub	98.4
Maritime Succulent Scrub	446.3
Diegan Coastal Sage Scrub	595.6
Chaparral/Southern Mixed Chaparral	354.3
Chamise Chaparral	45.0
Southern Maritime Chaparral	255.3
Scrub Oak Chaparral	6.5
Valley and Foothill Grassland/Valley Needlegrass Grassland	509.3
Non-Native Grassland	111.4
Upland Land Cover Types	
Disturbed Land	367.2
Eucalyptus Woodland	94.7
Urban/Developed	5,451.3
Total Uplands	**8,440.3**
Wetland Vegetation Communities/Land Cover Types	
Southern Riparian Forest	18.1
Southern Coast Live Oak Riparian Forest	6.5
Southern Sycamore-Alder Riparian Woodland	88.8
Southern Riparian Scrub	56.9
Southern Willow Scrub	0.1
Southern Coastal Salt Marsh	12.8
Coastal and Valley Freshwater Marsh	0.2
Freshwater Seep	0.9
Vernal Pools	1.1
Beach	43.8
Subtidal Ocean	3.8
Non-Vegetated Channel or Floodway	0.5
Disturbed Wetland	2.8
Total Wetlands	**236.1**

The upland vegetation communities and land cover types and the wetland vegetation communities are discussed in this section.

4.2.1 Upland Communities

Thirteen (13) upland vegetation communities and land cover types occur within the UCPU area, including Torrey pine forest, southern coastal bluff scrub, maritime succulent scrub, Diegan coastal sage scrub, chaparral/southern mixed chaparral, chamise chaparral, southern maritime chaparral, scrub oak chaparral, valley and foothill grassland/valley needlegrass grassland, non-native grassland, disturbed land, eucalyptus woodland, and urban/developed. A brief description of each of these vegetation communities and land cover types is provided below.

4.2.1.1 Torrey Pines Forest

Torrey pines forest is an open to moderately dense forest that can grow up to about 65 feet in height in sheltered areas but that is much shorter in areas that are wind-blown and exposed. It typically occurs on rocky sandstone soils in mild, frost-free climates with low precipitation and seasonal fog. The dominant species in this vegetation community is the Torrey pine (*Pinus torreyana*). The understory varies greatly. On dry, rocky sites where the Torrey pines create a dense tree canopy and needles accumulate on the ground, there are few or almost no understory species. However, where the Torrey pines are more sparse, a fairly dense understory of grasses and shrubs can occur.

Within the UCPU area, there are approximately 104.9 acres of Torrey pine forest. Torrey pine forest occurs within the northernmost portion of the UCPU area, primarily within and immediately adjacent to Torrey Pines State Reserve (Figures 5-1 and 7-1).

4.2.1.2 Southern Coastal Bluff Scrub

Southern coastal bluff scrub is a low-growing scrub community that grows in exposed, windy areas on rocky, poorly developed soils and is dominated by woody and/or succulent species that are typically less than seven (7) feet in height. This vegetation community can either form a continuous, closed canopy or can be more scattered. Typical shrubs that occur within southern coastal bluff scrub include salt bush (*Atriplex* spp.), California sunflower (*Encelia californica*), prickly pear (*Opuntia littoralis*), and lemonadeberry (*Rhus integrifolia*) with an understory of morning glory (*Calystegia macrostegia* ssp.), Indian paintbrush (*Castilleja affinis* ssp.), sea dahlia (*Coreopsis maritima*), dudleya (*Dudleya* spp.), and wild cucumber (*Marah macrocarpa*).

Within the UCPU area, there are approximately 98.4 acres of southern coastal bluff scrub. Southern coastal bluff scrub occurs along the northwestern border of the UCPU area, within Torrey Pines State Reserve and adjacent to Torrey Pines Golf Course (Figures 5-1 and 7-1).

4.2.1.3 Maritime Succulent Scrub

Maritime succulent scrub is a low-growing (one (1) to three (3) feet high), open scrub community that is dominated by drought deciduous, woody shrubs and a diverse mixture of stem and leaf succulents, often with a high proportion of cacti. This

vegetation community grows on thin rocky or sandy soils, often on steep slopes along coastal bluffs. Typical species within maritime succulent scrub include Shaw's agave (*Agave shawii*), California sagebrush (*Artemisia californica*), bush sunflower, cliff spurge (*Euphorbia misera*), San Diego barrel cactus (*Ferocactus viridescens*), California box thorn (*Lycium californicum*), prickly pear, lemonadeberry, and San Diego sunflower (*Bahiopsis laciniata*); the areas between these species is usually bare.

Within the UCPU area, there are approximately 446.3 acres of maritime succulent scrub. Maritime succulent scrub occurs in the northern half of the UCPU area, west of I-5 (Figures 5-1, 5-2, 7-1, and 7-2).

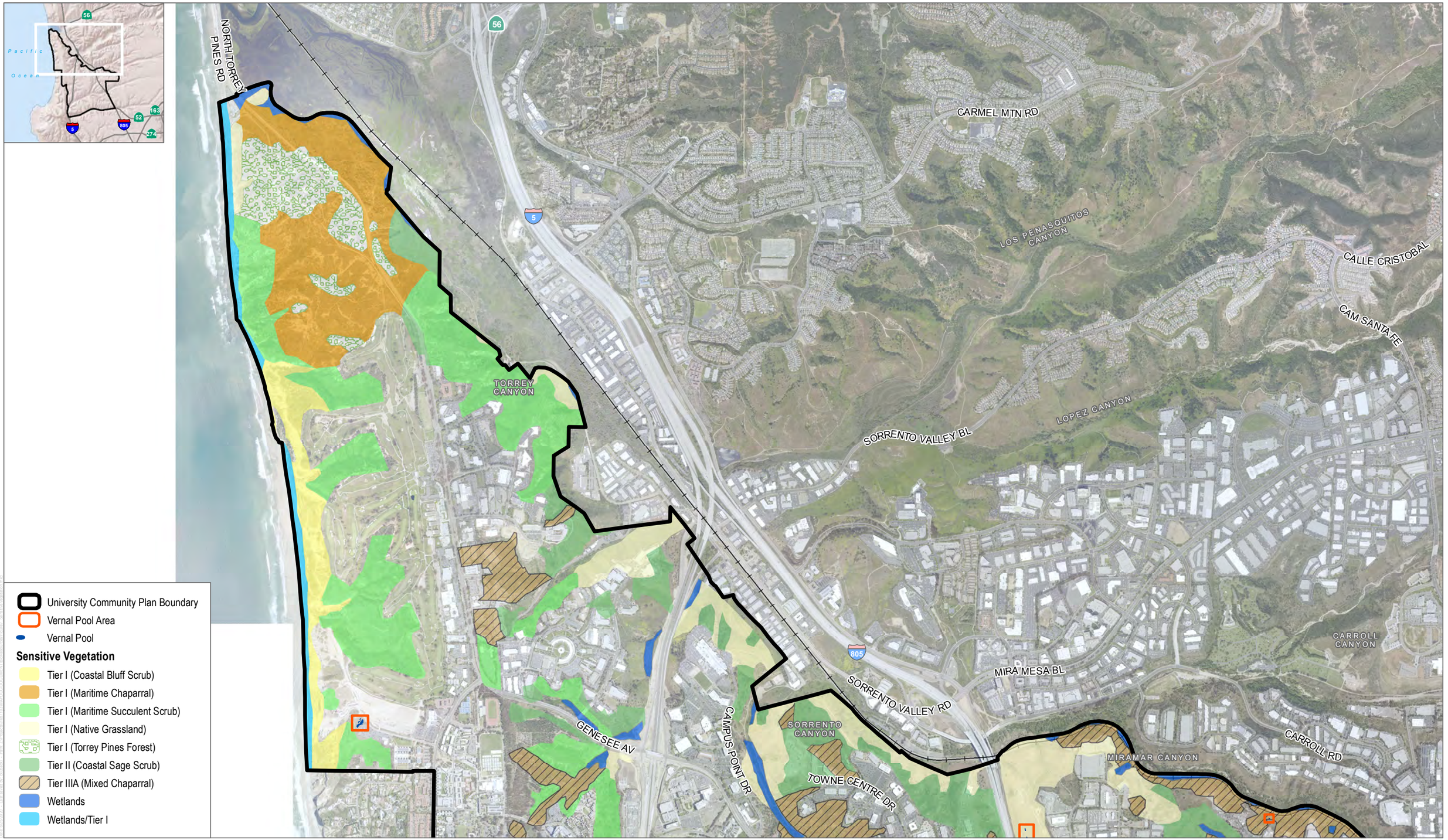
4.2.1.4 Diegan Coastal Sage Scrub

Diegan coastal sage scrub (including the disturbed phase) consists mainly of low, soft-woody sub-shrubs (approximately three (3) feet high) that are most actively growing in winter and early spring. Many taxa are facultatively drought-deciduous. Stem- and leaf-succulents are also often present, but are usually not conspicuously dominant species. This association is typically found on dry sites, such as steep, south-facing slopes or clay-rich soils that are slow to release stored water. Dominant shrub species in this vegetation type may vary, depending on local site factors and levels of disturbance, but often include a variable mix of California sagebrush, California buckwheat (*Eriogonum fasciculatum* var. *fasciculatum*), black sage (*Salvia mellifera*), laurel sumac (*Malosma laurina*), deerweed (*Acmispon glaber*), broom baccharis (*Baccharis sarothroides*), coyote brush (*Baccharis pilularis*), California sunflower, and occasionally live-forevers (*Dudleya* spp.), San Diego barrel cactus, and needlegrass (*Stipa* spp.).

Within the UCPU area, there are approximately 595.6 acres of Diegan coastal Sage scrub. Diegan coastal sage scrub occurs in many locations within the UCPU area, along the eastern and southern boundaries (Figures 5-1, 5-2, 7-1, and 7-2).

4.2.1.5 Chaparral/Southern Mixed Chaparral

Chaparral is a broad-scale vegetation community category and, in San Diego, typically refers to southern mixed chaparral. Southern mixed chaparral is composed of broad-leaved sclerophyll shrubs that grow to between five (5) and ten (10) feet in height. It occurs on dry, rocky, steep, north-facing slopes with little soil and moderate temperatures. This vegetation community type typically has high species diversity but is dominated by ceanothus species. In San Diego County, mixed chaparral is usually dominated by Ramona lilac (*Ceanothus tomentosus* var. *olivaceous*) but may also include other ceanothus species, such as chaparral whitethorn (*C. leucodermis*); however, the presence of other ceanothus species typically indicates other chaparral types. In addition to ceanothus, other species often associated with this vegetation community include chamise (*Adenostoma fasciculatum*), Eastwood's manzanita (*Arctostaphylos glandulosa*), toyon (*Heteromeles arbutifolia*), Nuttall's scrub oak (*Quercus dumosa*), laurel sumac, lemonadeberry, spiny redberry (*Rhamnus crocea*), and yucca species (*Yucca* spp.).



SOURCE: SANGIS 2017

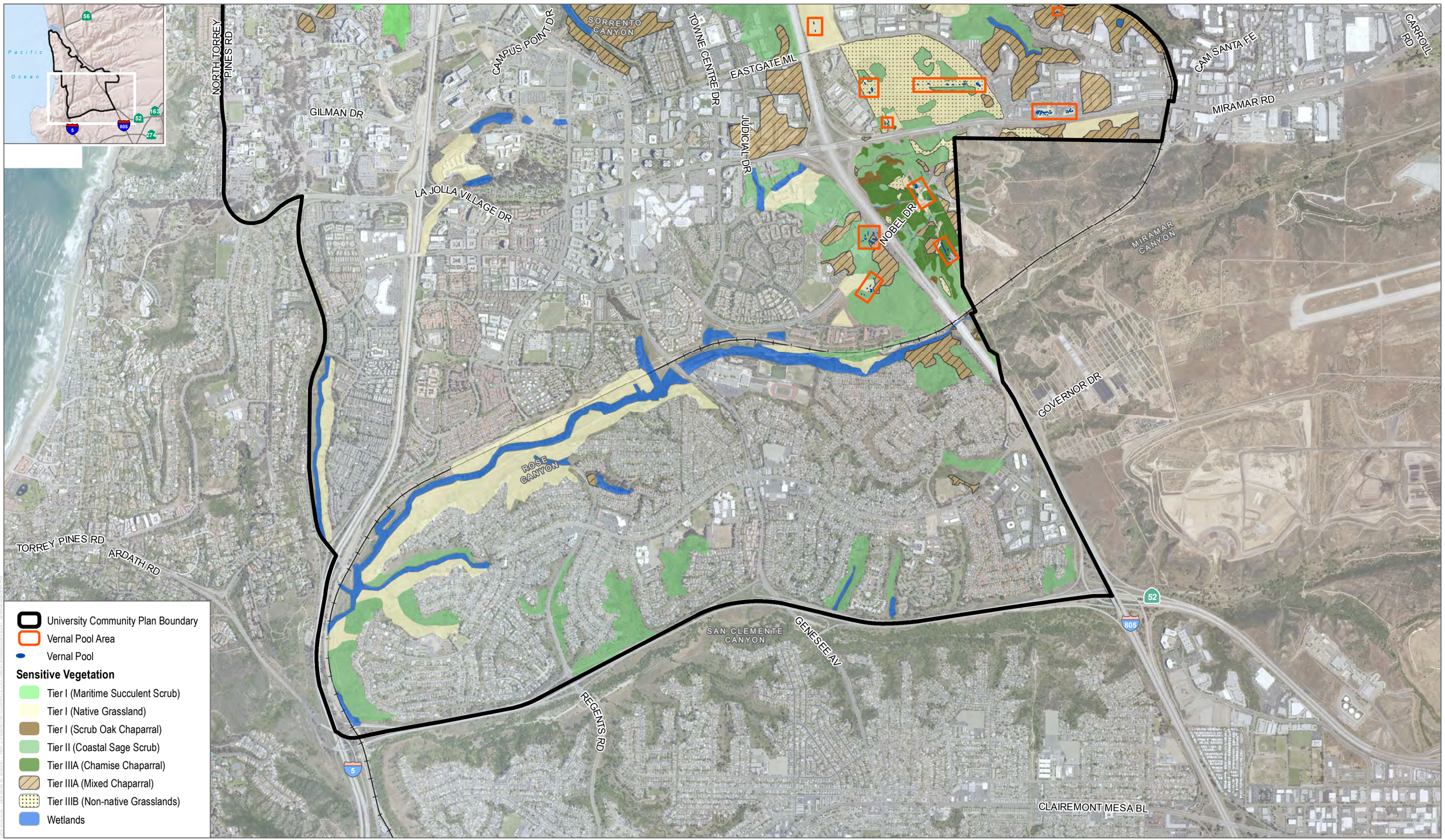
DUDEK

0 1,000 2,000 Feet

FIGURE 7-1

Sensitive Vegetation Communities

University Community Plan Update



SOURCE: SANGIS 2017

DUDEK

0 1,000 2,000 Feet

FIGURE 7-2

Sensitive Vegetation Communities

University Community Plan Update

Within the UCPU area, there are approximately 354.3 acres of chaparral/southern mixed chaparral, including 327.9 acres of chaparral and 26.4 acres of southern mixed chaparral. Chaparral/southern mixed chaparral primarily occurs scattered through the central and eastern portions of the UCPU area (Figures 5-1, 5-2, 7-1, and 7-2).

4.2.1.6 Chamise Chaparral

Chamise chaparral is a chaparral community ranging from about three (3) to nine (9) feet in height and overwhelmingly dominated by chamise. Other shrub species, such as black sage, mission manzanita (*Xylococcus bicolor*), laurel sumac, and felt-leaved yerba santa (*Eriodictyon crassifolium*), may be present but typically contribute little to the overall cover. Mature stands of chamise chaparral have a dense overstory with very little herbaceous understory or leaf litter.

Within the UCPU area, there are approximately 45.0 acres of chamise chaparral. Chamise chaparral occurs in a few small patches in the eastern portion of the UCPU area, east of I-805, south of Miramar Road, and west of U.S. MCAS Miramar (Figures 5-2 and 7-2).

4.2.1.7 Southern Maritime Chaparral

Southern maritime chaparral is a low, fairly open chaparral community that grows on weathered sands within the coastal fog belt. It is typically dominated by wart-stemmed ceanothus (*Ceanothus verrucosus*) and Del Mar manzanita (*Arctostaphylos glandulosa* ssp. *crassifolia*). Other shrub species associated with this vegetation community include chamise (*Adenostoma fasciculatum*), smooth mountain mahogany (*Cercocarpus minutiflorus*), bushrue (*Cneoridium dumosum*), summer-holly (*Comarostaphylis diversifolia*), sea dahlia, toyon, Torrey pine, Nuttall's scrub oak, sugar bush (*Rhus ovata*), and Mojave yucca (*Yucca schidigera*). Many of these species require fire for continued reproduction.

Within the UCPU area, there are approximately 255.3 acres of southern maritime chaparral. Southern maritime chaparral occurs within the northernmost portion of the UCPU area, primarily within and immediately adjacent to Torrey Pines State Reserve (Figures 5-1 and 7-1).

4.2.1.8 Scrub Oak Chaparral

Scrub oak chaparral is a dense, evergreen chaparral association that grows to 20 feet in height and is dominated by Nuttall's scrub oak and/or oak hybrids such as *Quercus xacutidens*. This habitat occurs on more mesic sites (such as east and north facing slopes and ravines) than the other chaparral associations and often at slightly higher elevations. These more favorable sites often allow scrub oak chaparral to recover from fire more quickly than other chaparral types. Additional shrub species found in scrub oak chaparral include chamise, mission manzanita, and bushrue.

Within the UCPU area, there are approximately 6.5 acres of scrub oak chaparral. Scrub oak chaparral occurs in a few small patches in the eastern portion of the UCPU area, east of I-805, south of Miramar Road, and west of U.S. MCAS Miramar (Figures 5-2 and 7-2).

4.2.1.9 Valley and Foothill Grassland/Valley Needlegrass Grassland

Valley and foothill grassland is the general heading (Holland 42000) that does not have a definition of its own but includes valley needlegrass grassland; therefore, it is assumed that valley and foothill grassland that has been mapped within the UCPU area is synonymous with valley needlegrass grassland. Valley needlegrass grassland is characterized by mid-height (up to two (2) feet), relatively low (greater than 20%) to dense herbaceous cover of perennial, tussock-forming bunchgrasses, such as purple needle grass (*Nassella pulchra*). Native and non-native annual and perennial forbs – such as blue-eyed grass (*Sisyrinchium bellum*), California poppy (*Eschscholzia californica*), and goldfields (*Lasthenia californica*) – grow between the perennial grasses and often exceed the bunchgrass in cover. This vegetation community generally occurs on fine-textured, clay soils that are moist or wet in winter, but very dry in summer. Shrubs are infrequent, probably as a result of unstable soils. The degree of habitat quality in native grasslands varies greatly, depending on the history of grazing, cultivation, or other disturbance factors, and it has been replaced in many areas by non-native grassland, which is dominated by exotic annual grass species.

Within the UCPU area, there are approximately 509.3 acres of valley and foothill grassland. Valley and foothill grassland occurs in many patches around the UCPU area, with the majority scattered along the northern UCPU boundary and within Rose Canyon, in the southern portion of the UCPU area (Figures 5-1, 5-2, 7-1, and 7-2).

4.2.1.10 Non-Native Grassland

Non-native grassland is characterized by a dense to sparse cover of annual grasses, often with showy-flowered native and non-native annual forbs. This vegetation community generally occurs on fine-textured loam or clay soils that are moist or even waterlogged during the winter rainy season and very dry during the summer and fall. This habitat is a disturbance-related community most often found in old agricultural fields or openings in native scrub habitats; it has replaced native grassland and coastal sage scrub at many localities throughout Southern California. Typical non-native grasses found within this vegetation community include red brome (*Bromus rubens*), ripgut grass, wild oat (*Avena barbata*), and soft chess (*Bromus hordeaceus*). Characteristic forbs include red-stem filaree (*Erodium cicutarium*), mustard (*Brassica* spp.), tar plant (*Deinandra* spp.), and goldfields (*Lasthenia* spp.).

Within the UCPU area, there are approximately 111.4 acres of non-native grassland. Non-native grassland occurs mixed with Diegan coastal sage scrub along Miramar Road, in the eastern portion of the UCPU area (Figures 5-2 and 7-2).

4.2.1.11 Disturbed Land

Disturbed land refers to areas that retain a soil substrate but on which the native vegetation has been significantly altered by previous human activity, such that the species composition and site conditions are no longer recognizable as a native or naturalized vegetation community. Vegetation, if present, is typically composed of predominantly non-native species – such as Russian-thistle (*Salsola tragus*), horseweed (*Conyza* spp.), mustard (*Hirschfeldia incana*), and non-native grasses – that have been introduced and established through human action. These areas are not typically artificially irrigated but receive water from precipitation and runoff. Examples of disturbed land include areas that have been graded, cleared for fuel management purposes, recently graded firebreaks, graded construction pads and staging areas, off-road vehicle trails, and old home sites.

Within the UCPU area, there are approximately 367.2 acres of disturbed land. Disturbed land is scattered throughout the UCPU area, both within the open space/canyons as well as within the more urbanized areas (Figures 5-1 and 5-2).

4.2.1.12 Eucalyptus Woodland

Eucalyptus woodland is typically characterized by dense stands of gum trees (*Eucalyptus* spp.), often monotypic and dominated by either blue gum (*Eucalyptus globulus*) or river red gum (*E. camaldulensis*); however, sparse eucalyptus woodland also occurs. In many areas with eucalyptus woodland, there is little understory, as very few plants are able to tolerate the chemical compounds in the bark and leaf litter. Plants in this genus, imported primarily from Australia, were originally planted in groves throughout many regions of coastal California as a potential source of lumber and building materials, for their use as windbreaks, and for their horticultural novelty. They have increased their cover through natural regeneration, particularly in moist areas sheltered from strong coastal winds. Gum trees naturalize readily in the State of California and, where they form dense, monotypic stands, tend to completely supplant native vegetation, greatly altering community structure and dynamics.

Within the UCPU area, there are approximately 94.7 acres of eucalyptus woodland. Eucalyptus woodland occurs in the central portion of the UCPU area, primarily on and adjacent to the UCSD campus (Figures 5-1 and 5-2).

4.2.1.13 Urban/Developed

Urban/developed lands have been constructed upon or physically altered such that they support no naturally occurring native vegetation and are characterized by the presence of permanent or semi-permanent human-made structures, such as buildings or roads. The level of soil disturbance is such that only the most ruderal plant species would be expected. In many areas, ornamental plantings are included in developed lands where they are immediately adjacent and part of the residential and/or commercial development. Developed land can also describe areas where no natural land is evident

as a result of a large amount of debris or other man-made materials, such as a recycling plant or quarry.

Within the UCPU area, there are approximately 5,451.3 acres of urban/developed. The majority of the UCPU area is classified as urban/developed (Figures 5-1 and 5-2).

4.2.2 Wetland Communities

Thirteen (13) wetland vegetation communities occur within the UCPU area, including southern riparian forest, southern coast live oak riparian forest, southern sycamore-alder riparian woodland, southern riparian scrub, southern willow scrub, mulefat scrub, southern coastal salt marsh, coastal and valley freshwater marsh, freshwater seep, vernal pools, beach, subtidal, non-vegetated channel or floodway, and disturbed wetland. A brief description of each of these vegetation communities and land cover types is provided below.

4.2.2.1 Southern Riparian Forest

Southern riparian forest is a general vegetation community classification used for dense riparian forests that cannot be categorized into a more defined vegetation community description. It is composed of winter-deciduous, broad-leaved tree species that require water near the soil surface and is most often found along stream courses. Typically this community contains a dense canopy of trees located within moist canyons and drainage bottoms and is dominated by species such as willows (*Salix* spp.), cottonwoods (*Populus* sp.), and western sycamore (*Platanus racemosa*). Associated understory species can include species such as mulefat (*Baccharis salicifolia*), stinging nettle (*Urtica dioica* ssp. *holosericea*), and wild grape (*Vitis girdiana*).

Within the UCPU area, there are approximately 18.1 acres of southern riparian forest. Southern riparian forest occurs along in the southwestern portion of the UCPU area in two small arms of Rose Canyon (Figures 5-2 and 7-2).

4.2.2.2 Southern Coast Live Oak Riparian Forest

Southern coast live oak riparian forest refers to a dense riparian forest that is dominated by coast live oak trees, which can reach from 30 feet to over 80 feet in height, and that typically has a closed or nearly closed canopy. This vegetation community often has a poorly developed understory of shrubs but a richer herbaceous understory. Understory shrubs may include toyon, blue elderberry *(Sambucus nigra* ssp. *caerulea*), and lemonadeberry, among others. The herb layer often includes California wild rose (*Rosa californica*), California blackberry (*Rubus ursinus*), poison oak (*Toxicodendron diversilobum*), and nettles (*Urtica* spp.), and various native and non-native grasses. This habitat can be found on well-drained bottomlands and outer floodplains on fine-grained, rich alluvium.

Within the UCPU area, there are approximately 6.5 acres of southern coast live oak riparian forest. Southern coast live oak riparian forest occurs in several small

patches in Miramar Canyon along the northeastern boundary of the UCPU area (Figures 5-2 and 7-2).

4.2.2.3 Southern Sycamore-Alder Riparian Woodland

Southern sycamore-alder riparian woodland is a tall, open, broad-leaved, winter deciduous woodland found along very rocky streams (sometimes with seasonally high-intensity flooding) and is dominated by western sycamore but often also has white alder (*Alnus rhombifolia*). This vegetation community rarely forms a closed canopy and sometimes occurs as scattered trees in a shrubby thicket of sclerophyllous and deciduous species. Other species characteristic of this vegetation community include California mugwort (*Artemisia douglasiana*), blue elderberry, poison oak, California bay (*Umbellularia californica*), and stinging nettle.

Within the UCPU area, there are approximately 88.8 acres of southern sycamore-alder riparian woodland. Southern sycamore-alder riparian woodland occurs primarily in the southern portion of the UCPU area in Rose Canyon with several small patches along the northeastern boundary of the UCPU area in Carroll Canyon (Figures 5-1, 5-2, 7-1, and 7-2).

4.2.2.4 Southern Riparian Scrub

Southern riparian scrub refers to riparian zones that are dominated by small trees or shrubs but that lack larger, taller riparian trees. It is usually found along river systems where flood scour occurs, and its distribution has expanded from increased urban and agricultural runoff. It varies from a dense, broad-leafed, winter-deciduous association dominated by several species of willow (*Salix* spp.) to an herbaceous scrub dominated by mulefat. Understory vegetation is usually composed of non-native, weedy species or is lacking altogether. This association may represent a successional stage leading to riparian woodland or forest, or it may be a stable vegetation community.

Within the UCPU area, there are approximately 56.9 acres of southern riparian scrub. Southern riparian scrub occurs in many scattered patches within the UCPU area and east of I-5 (Figures 5-1, 5-2, 7-1, and 7-2).

4.2.2.5 Southern Willow Scrub

Southern willow scrub (including the disturbed phase and disturbed willow scrub) is a dense, broad-leaved, winter deciduous riparian thicket that is found on loose, sandy, or fine gravelly alluvium deposited near stream channels during floods. This vegetation community is typically dominated by several willow species (*Salix* spp.), sometimes with scattered, emergent western sycamore and/or Fremont cottonwood (*Populus fremontii*). Most southern willow scrub stands are too dense to allow much understory to develop.

Within the UCPU area, there is approximately 0.1 acre of southern willow scrub. Southern willow scrub occurs in a tiny patch located in Rose Canyon, just east of I-805 (not visible on Figures 5-2 or 7-2 because of its small size).

4.2.2.6 Southern Coastal Salt Marsh

Southern coastal salt marsh is a low-growing (up to three (3) feet in height) and highly productive vegetation community composed of herbaceous and suffrutescent, salt-tolerant hydrophytes that typically form moderate to dense vegetative cover. This vegetation community is typically found along sheltered margins of bays, lagoons, and estuaries along the coast that are subject to regular tidal inundation by salt water for at least part of the year. The species found within southern coastal salt marsh are usually segregated horizontally by elevation. Species that typically occur along the upper, landward edges include alkali heath (*Frankenia salina*), seablite (*Suaeda* spp.), and/or pickleweed and glasswort (*Salicornia* spp.). Species that occur along the middle elevations typically include pickleweed, glasswort, and saltwort (*Batis maritima*), and species that occur closest to open water include cordgrass (*Spartina* spp.).

Within the UCPU area, there are approximately 12.8 acres of southern coastal salt marsh. Southern coastal salt marsh occurs in several patches along the northernmost boundary of the UCPU area (Figures 5-1 and 7-1).

4.2.2.7 Coastal and Valley Freshwater Marsh

Coastal and valley freshwater marsh is dominated by perennial, emergent monocots that grow up to about 15 feet in height that often form a completely closed canopy. Freshwater marsh occurs in wetlands that are permanently flooded by standing fresh water that lacks a significant current and, thus, prolongs saturation and permits the accumulation of deep, peaty soils. Characteristic plant species associated with this vegetation community include cattails (*Typha* spp.), rushes (*Juncus* spp.), sedges (*Carex* spp., *Cyperus* spp., *Eleocharis* spp.), bulrushes (*Scirpus* spp.), and other perennial herbs.

Within the UCPU area, there are approximately 0.2 acres of coastal and valley freshwater marsh. Coastal and valley freshwater marsh occurs in one small patch in the eastern portion of the UCPU area, east of I-805, south of Miramar Road, and west of U.S. MCAS Miramar (Figures 5-2 and 7-2).

4.2.2.8 Freshwater Seep

Freshwater seep is a vegetation community classification that applies to portions of grasslands or meadows with permanently moist or wet soils. This vegetation community is dominated by perennial herbs, especially low-growing sedges and grasses that typically form a complete cover. Characteristic species include sedges (*Carex* spp.), rushes (*Juncus* spp.), watercress (*Nasturtium officinale*), mulefat, and prairie mallow (*Sidalcea malviflora*).

Within the UCPU area, there are approximately 0.9 acres of freshwater seep. Freshwater seep occurs in several patches in the eastern portion of the UCPU area, east of I-805, south of Miramar Road, and west of U.S. MCAS Miramar (Figures 5-2 and 7-2).

4.2.2.9 Vernal Pools

Vernal pools are seasonal, depression-type wetlands that result from a unique set of physical parameters and support a specific biological assemblage of plant and animal species. Functional vernal pool ecosystems form under specific physical conditions when small, shallow depressions collect precipitation to create a seasonally perched water table. The features occur most often on level ground and are often associated with hillocks known as mima mounds; however, sometimes these wetlands can occur on former landslide areas and are then referred to as “slump” pools (City 2017).

Vernal pools in the City are primarily associated with Huerhuero, Stockpen, Redding, and Olivenhain soil series, and the basins are sealed either by subsurface layers of impervious hardpan, or clay that expands to seal the basin when saturated (City 2017). The claypan or the hardpan subsurface creates the perched water table that is required for the presence of ponding (Greenwood and Abbot 1980). From a geomorphological level, most of complexes associated with a hardpan are found in the central portions of the City in the Kearny Mesa, Claremont Mesa, and Mira Mesa areas. Claypan pools are mostly associated with Otay Mesa in the southern portion of the City. Vernal pools in the Del Mar Mesa area of the City are a mixture of claypan and hardpan substrates (Bauder and McMillan 1998).

The VPHCP considers a seasonally flooded depression to be a vernal pool if it includes one or more of the vernal pool indicator species (USACE 1997; Bauder and McMillan 1998). Consistent with Attachment II, A.3 of the City’s Land Development Manual Biology Guidelines (City 2018), depressions that are man-made, such as tire tracks or road ruts, may still be considered vernal pools if they contain at least one indictor plant species. Road ruts and other seasonal depressions that are not vernal pools may contain wildlife associated with vernal pools, such as San Diego or Riverside fairy shrimp, but will not contain vernal pool plant indicator species. The VPHCP also applies to these man-made road ruts and other seasonal depressions if they contain one or more of the covered species.

Within the UCPU area, the ‘vernal pool’ classification includes all areas mapped as vernal pools (City 2017) and includes approximately 1.1 acres of vernal pools of which 0.1 acres occur in Diegan coastal sage scrub, less than 0.1 acres occur in chaparral, 0.1 acres occur in chamise chaparral, 0.4 acres occur in valley and foothill grassland/valley needlegrass grassland, 0.2 acres occur in non-native grassland, 0.1 acres occur in disturbed land, and less than 0.1 acres occur in urban/developed. Vernal pools occur primarily in the eastern portion of the UCPU area, along Miramar Road, with one additional occurrence in the western portion of the UCPU area, near the Torrey Pines Gliderport (Figures 5-1, 5-2, 7-1, and 7-2).

4.2.2.10 Beach

Beach is a land cover type that refers to sandy and/or cobbly habitat along coastal strands, lagoons, or lakes. Ocean beaches are formed by wave and tidal action off the coast and consist primarily of deposited sand. These beaches are mostly unvegetated;

however, the upper portions may be thinly populated with herbaceous species, and marine sea grasses from the Posidoniaceae, Zosteraceae, Hydrocharitaceae, and Cymodoceaceae families may be exposed during low tides.

Within the UCPU area, there are approximately 43.8 acres of beach. Beach occurs along the northwestern boundary of the UCPU area, and includes the beach portions of Torrey Pines State Reserve and Blacks Beach, just west of Torrey Pines Golf Course (Figures 5-1 and 7-1).

4.2.2.11 Subtidal Ocean

The subtidal zone extends from the low tide line into the ocean to the depth that supports canopy-forming kelps, typically to about 120 feet below the ocean surface. This area supports a variety of aquatic marine plants, phytoplankton, algae, and macroalgae when there is suitable substrate.

Within the UCPU area, there are approximately 3.8 acres of subtidal. Subtidal occurs in a narrow strip along the far northwestern UCPU boundary inside the Torrey Pines State Reserve (not visible on Figures 5-1 or 7-1 because of its small size).

4.2.2.12 Non-Vegetated Channel or Floodway

Non-vegetated channel or floodway is the land cover classification given to the sandy, gravelly, or rocky fringe of waterways or flood channels that are unvegetated on a relatively permanent basis. Small amounts of vegetation (less than 10% total cover) may occur, typically composed of weedy grass species. This land cover classification does not apply to areas that are unvegetated as a result of a very recent or uncommon flood event in the upper parts of watersheds.

Within the UCPU area, there are approximately 0.5 acres of non-vegetated channel or floodway. Non-vegetated channel or floodway occurs in Rose Canyon, immediately east of I-805 and immediately south of the railroad track (Figures 5-2 and 7-2).

4.2.2.13 Disturbed Wetland

Disturbed wetlands are areas that are permanently or periodically inundated by water and that have been significantly modified by human activity, preventing an accurate description of the vegetation community that may have been present prior to the disturbance. These areas are frequently unvegetated, but if vegetation is present, there is a predominance of non-native plants, such as bristly ox tongue (*Helminthotheca echioides*), cocklebur (*Xanthium strumarium*), giant reed (*Arundo donax*), salt cedar (*Tamarix* spp.), gum trees (*Eucalyptus* spp.), Pampas grasses (*Cortaderia* spp.), and Bermuda grass (*Cynodon dactylon*). Examples of disturbed wetlands include lined channels, Arizona crossings, detention basins, culverts, and ditches.

Within the UCPU area, there are approximately 2.8 acres of disturbed wetland. Disturbed wetland occurs in one small location in the central portion of the UCPU area, just west of I-805 and just south of La Jolla Village Drive (Figures 5-2 and 7-2).

4.3 SENSITIVE BIOLOGICAL RESOURCES

Sensitive biological resources are defined in Chapter 11, Article 3, Division 1 of the City's Municipal Code and in the City's Land Development Manual – Biology Guidelines (City 2018). These include lands that satisfy one or more of the following criteria:

1. Lands within the City's MSCP Preserve (i.e., the Multi-Habitat Planning Area [MHPA]);
2. Wetlands;
3. Lands outside the City's MHPA that contain Tier I, Tier II, Tier IIIA, or Tier IIIB habitats;
4. Lands supporting species or subspecies listed as rare, endangered, or threatened under Section 670.2 or 670.5, Title 14, California Code of Regulations, or the Federal Endangered Species Act, Title 50, Code of Federal Regulations, Section 17.11 or 17.12, or candidate species under the California Code of Regulations;
5. Lands containing habitats with Narrow Endemic Species as listed in the City's Land Development Manual – Biology Guidelines (City 2018); and/or
6. Lands containing habitats of covered species as listed in the City's Land Development Manual – Biology Guidelines (City 2018).

According to the above criteria, sensitive biological resources include sensitive vegetation communities, sensitive plant and wildlife species, critical habitat, jurisdictional resources, and wildlife movement corridors. Assessments for the potential occurrence of sensitive biological resources are based upon known ranges, habitat preferences for the species, historical species occurrence records from the CNDDB (CDFW 2020a), and species occurrence records from the vicinity of the UCPU area from other databases (SanGIS 2020; CNPS 2020; USFWS 2020a). No focused sensitive species surveys were conducted for the UCPU.

The following sections provide definitions for each of these sensitive biological resources and describe the sensitive biological resources that are known to occur or have a potential to occur within and/or adjacent to the UCPU area.

4.3.1 Sensitive Vegetation Communities

Sensitive vegetation communities are vegetation assemblages, associations, or subassociations that have cumulative losses throughout the region, have relatively limited distribution, support or potentially support sensitive species, or have particular value to other wildlife. Typically, sensitive vegetation communities are considered sensitive whether or not they have been disturbed. Within the UCPU area, there are both sensitive upland vegetation communities and sensitive wetland communities.

Within the City's Land Development Manual – Biology Guidelines (City 2018), upland vegetation communities have been divided into four different tiers based on their sensitive and ecological value – Tier I: Rare Uplands; Tier II: Uncommon Uplands; Tier IIIA and IIIB: Common Uplands; and Tier IV: Other Uplands. In most cases, upland vegetation communities classified as Tier I, II, IIIA, and IIIB are considered sensitive

vegetation communities, while vegetation communities and land cover types classified as Tier IV are not considered sensitive.

Wetland communities are not assigned a tier classification; however, all wetland vegetation communities are considered sensitive under the City's Land Development Manual – Biology Guidelines (City 2018). More specifically, City Wetlands are defined in Chapter 11, Article 3, Division 1 of the City's Municipal Code and include areas characterized by the following conditions:

1. All areas persistently or periodically containing naturally occurring wetland vegetation communities characteristically dominated by hydrophytic vegetation;
2. Areas that have hydric soils or wetland hydrology and lack naturally occurring wetland vegetation communities; and/or
3. Areas lacking wetland vegetation communities, hydric soils, and wetland hydrology resulting from non-permitted filling of previously existing wetlands.

Based on these definitions of sensitive vegetation communities, the UCPU area supports 23 sensitive vegetation communities/land cover types – 10 upland vegetation communities and 13 wetland vegetation communities/land cover types (including marine cover types). These sensitive vegetation communities are summarized in Table 2 and shown on Figures 7-1 and 7-2.

Table 2. Sensitive Vegetation Communities and Land Cover Types in the UCPU Area

Vegetation Community/Land Cover Type	Tier
Upland	
Torrey Pines Forest	I
Southern Coastal Bluff Scrub	I
Maritime Succulent Scrub	I
Southern Maritime Chaparral	I
Scrub Oak Chaparral	I
Valley and Foothill Grassland/Valley Needlegrass Grassland	I
Diegan Coastal Sage Scrub	II
Chaparral/Southern Mixed Chaparral	IIIA
Chamise Chaparral	IIIA
Non-Native Grassland	IIIB
Wetland*	
Southern Riparian Forest	N/A
Southern Coast Live Oak Riparian Forest	N/A
Southern Sycamore-Alder Riparian Woodland	N/A
Southern Riparian Scrub	N/A
Southern Willow Scrub	N/A
Southern Coastal Salt Marsh	N/A
Coastal and Valley Freshwater Marsh	N/A
Freshwater Seep	N/A
Vernal Pools	N/A

Table 2. Sensitive Vegetation Communities and Land Cover Types in the UCPU Area

Vegetation Community/Land Cover Type	Tier
Beach	N/A
Subtidal Ocean	N/A
Non-Vegetated Channel or Floodway	N/A
Disturbed Wetland	N/A

Notes: N/A = not applicable.
*wetland does not refer to U.S. Army Corps of Engineers wetlands or waters of the United States.

4.3.2 Sensitive Plants

Based on the definitions provided in Chapter 11, Article 3, Division 1 of the City's Municipal Code, sensitive plant species include those that are (1) considered rare, endangered, or threatened by USFWS and/or CDFW; (2) proposed for listing by USFWS and/or CDFW; (3) California Rare Plant Ranks (CRPR) List 1A (plants presumed extirpated in California and either rare or extinct elsewhere), CRPR List 1B (plants rare, threatened, or endangered in California and elsewhere), CRPR List 2A (plants presumed extirpated in California but common elsewhere), or CRPR List 2B (plants rare, threatened, or endangered in California but more common elsewhere) species (CNPS 2020); and/or (4) MSCP-covered species and Narrow Endemic species. In addition, a plant species that is included on the CNPS Inventory of Rare and Endangered Plants (CNPS 2020) but with no other listing may also be considered sensitive based on its CRPR ranking; however, CRPR List 3 (plants about which more information is needed) and CRPR List 4 (plants of limited distribution) species are considered noteworthy species but are not considered sensitive.

No focused sensitive plant species surveys were conducted for the UCPU. Assessments for the potential occurrence of sensitive plant species are based upon known ranges, habitat preferences for the species, historical species occurrence records from the CNDDB (CDFW 2020a), and species occurrence records from the vicinity of the UCPU area from other databases (SanGIS 2020; CNPS 2020; USFWS 2020a). Based on this data, 49 sensitive plant species have been reported within and/or immediately adjacent to the UCPU area and include:

- **San Diego thorn-mint** (*Acanthomintha ilicifolia*; federally threatened, state endangered, CRPR 1B.1, MSCP-covered narrow endemic)
- **Nuttall's acmispon** (*Acmispon prostratus*; CRPR 1B.1, MSCP-covered)
- **California adolphia** (*Adolphia californica*; CRPR 2B.1)
- **Shaw's agave** (*Agave shawii* var. *shawii*, CRPR 2B.1, MSCP-covered narrow endemic)
- **San Diego ambrosia** (*Ambrosia pumila*; federally endangered, CRPR 1B.1, MSCP-covered narrow endemic)
- **aphanisma** (*Aphanisma blitoides*; CRPR 1B.2, MSCP-covered narrow endemic)
- **Del Mar manzanita** (*Arctostaphylos glandulosa* ssp. *crassifolia*; federally endangered, CRPR 1B.1, MSCP-covered)

- **coastal dunes milk-vetch** (*Astragalus tener* var. *titi*; federally endangered, state endangered, CRPR 1B.1, MSCP-covered narrow endemic)
- **south coast saltscale** (*Atriplex pacifica*; CRPR 1B.2)
- **Encinitas baccharis** (*Baccharis vanessae*; federally threatened, state endangered, CRPR 1B.1, MSCP-covered narrow endemic)
- **golden-spined cereus** (*Bergerocactus emoryi*; CRPR 2B.2)
- **San Diego goldenstar** (*Bloomeria clevelandii*; CRPR 1B.1, MSCP-covered)
- **Orcutt's brodiaea** (*Brodiaea orcuttii*; CRPR 1B.1, MSCP-covered)
- **Lakeside ceanothus** (*Ceanothus cyaneus*; CRPR 1B.2, MSCP-covered)
- **wart-stemmed ceanothus** (*Ceanothus verrucosus*; CRPR 2B.2, MSCP-covered)
- **southern tarplant** (*Centromadia parryi* ssp. *australis*; CRPR 1B.1)
- **Orcutt's pincushion** (*Chaenactis glabriuscula* var. *orcuttiana*; CRPR 1B.1)
- **Orcutt's spineflower** (*Chorizanthe orcuttiana*; federally endangered, state endangered, CRPR 1B.1)
- **long-spined spineflower** (*Chorizanthe polygonoides* var. *longispina*; CRPR 1B.2)
- **summer holly** (*Comarostaphylis diversifolia* ssp. *diversifolia*; CRPR 1B.2)
- **San Diego sand aster** (*Corethrogyne filaginifolia* var. *incana*; CRPR 1B.1, MSCP-covered)
- **Del Mar Mesa sand aster** (*Corethrogyne filaginifolia* var. *linifolia*; CRPR 1B.1, MSCP-covered)
- **snake cholla** (*Cylindropuntia californica* var. *californica*; CRPR 1B.1, MSCP-covered narrow endemic)
- **short-leaved dudleya** (*Dudleya brevifolia*; state endangered, CRPR 1B.1, MSCP-covered narrow endemic)
- **variegated dudleya** (*Dudleya variegata*; CRPR 1B.2, MSCP-covered narrow endemic)
- **sticky dudleya** (*Dudleya viscida*; CRPR 1B.2, MSCP-covered)
- **sessile-leaved yerba santa** (*Eriodictyon sessilifolium*; CRPR 2B.1)
- **San Diego button-celery** (*Eryngium aristulatum* var. *parishii*; federally endangered, state endangered, CRPR 1B.1, MSCP-covered narrow endemic, VPHCP-covered species)
- **sand-loving wallflower** (*Erysimum ammophilum*; CRPR 1B.2, MSCP-covered)
- **cliff spurge** (*Euphorbia misera*; CRPR 2B.2)
- **San Diego barrel cactus** (*Ferocactus viridescens*; CRPR 2B.1, MSCP-covered)
- **Campbell's liverwort** (*Geothallus tuberosus*; CRPR 1B.1)
- **beach goldenaster** (*Heterotheca sessiliflora* ssp. *sessiliflora*; CRPR 1B.1)
- **decumbent goldenbush** (*Isocoma menziesii* var. *decumbens*; CRPR 1B.2)
- **San Diego marsh-elder** (*Iva hayesiana*; CRPR 2B.2)
- **Coulter's goldfields** (*Lasthenia glabrata* ssp. *coulteri*; CRPR 1B.1)
- **sea dahlia** (*Leptosyne maritima*; CRPR 2B.2)
- **willowy monardella** (*Monardella viminea*; federally endangered, state endangered, CRPR 1B.1, MSCP-covered)
- **spreading navarretia** (*Navarretia fossalis*; federally threatened, CRPR 1B.1, MSCP-covered Narrow Endemic, VPHCP-covered species)
- **coast woolly-heads** (*Nemacaulis denudata* var. *denudata*; CRPR 1B.2)

- **California Orcutt grass** (*Orcuttia californica*; federally endangered, state endangered, CRPR 1B.1, MSCP-covered narrow endemic, VPHCP-covered species)
- **Brand's star phacelia** (*Phacelia stellaris*; CRPR 1B.1)
- **Torrey pine** (*Pinus torreyana* ssp. *torreyana*; CRPR 1B.2, MSCP-covered)
- **San Diego mesa mint** (*Pogogyne abramsii*; federally endangered, state endangered, CRPR 1B.1, MSCP-covered narrow endemic, VPHCP-covered species)
- **Nuttall's scrub oak** (*Quercus dumosa*; CRPR 1B.1)
- **chaparral ragwort** (*Senecio aphanactis*; CRPR 2B.2)
- **salt spring checkerbloom** (*Sidalcea neomexicana*; CRPR 2B.2)
- **bottle liverwort** (*Sphaerocarpos drewei*; CRPR 1B.1)
- **purple stemodia** (*Stemodia durantifolia*; CRPR 2B.1)

Of these 49 sensitive plant species, 35 are present within the UCPU area while 5 have a potential to occur and 9 are not expected to occur. The sensitivity status, species information, and potential for occurrence for each of these 49 plant species are summarized in Table 3.

Table 3. Sensitive Plant Species with a Potential to Occur within the University Community Plan Update Area

Species	Status[1]	Description	Potential For Occurrence
San Diego thornmint (*Acanthominth a ilicifolia*)	FT SE CRPR 1B.1 MSCP NE	Annual herb. Blooms Apr-Jun. Clay soils associated with vernal pools in chaparral, coastal sage scrub, grassland. Elev 150-3,085 ft. (Calflora 2020)	**Not Expected.** No historical records occur within the UCPU area or within the 1-mile buffer (USFWS 2020a; CDFW 2020a; Calflora 2020; SanGIS 2020).
Nuttall's acmispon (*Acmispon prostratus*)	CRPR 1B.1 MSCP	Annual herb. Blooms Mar-Jun. Coastal sage scrub and coastal strand within coastal dunes. Elev 0-2,395 ft. (Calflora 2020)	**Present.** Known from several historical locations within the UCPU area in Torrey Pines State Reserve (CDFW 2020a; Calflora 2020) and from a couple historical locations within the 1-mile buffer, just north of the UCPU boundary and just north of the Torrey Pines State Reserve (CDFW 2020a). May occur in other suitable habitat within the UCPU area.
California adolphia (*Adolphia californica*)	CRPR 2B.1	Deciduous shrub. Blooms Dec-May. Chaparral, coastal sage scrub, grassland. Elev 15-1,115 ft. (Calflora 2020)	**Potential.** Known from several very old historical locations within the UCPU area (Calflora 2020) and from one historical location within the 1-mile buffer, just outside the central northern boundary of the UCPU area (CDFW 2020a). May occur in suitable habitat within the UCPU area.
Shaw's agave (*Agave shawii* var*. shawii*)	CRPR 2B.1 MSCP NE	Leaf succulent. Blooms Sep-May. Coastal bluff scrub, coastal sage scrub. Elev 0-328 ft. (Calflora 2020; NatureServe 2020)	**Present.** Known from several historical locations within the UCPU area in Torrey Pines State Reserve (CDFW 2020a; Calflora 2020) May occur in other suitable habitat within the UCPU area.

Table 3. Sensitive Plant Species with a Potential to Occur within the University Community Plan Update Area

Species	Status[1]	Description	Potential For Occurrence
San Diego ambrosia (*Ambrosia pumila*)	FE CRPR 1B.1 MSCP NE	Perennial rhizomatous herb. Blooms Apr-Oct. Often in disturbed areas with sandy loam or clay soils, normally vernal pools, in chaparral, coastal sage scrub, grassland. Elev 50-785 ft. (Calflora 2020)	**Not Expected.** No historical records occur within the UCPU area or within the 1-mile buffer (USFWS 2020a; CDFW 2020a; Calflora 2020; SanGIS 2020SanGIS 2020).
aphanisma (*Aphanisma blitoides*)	CRPR 1B.2 MSCP NE	Annual herb. Blooms Mar-Jun. Coastal bluff scrub, coastal sage scrub. Elev 0-560 ft. (Calflora 2020)	**Present.** Known from several historical locations within the UCPU area in Torrey Pines State Reserve (CDFW 2020a; Calflora 2020) and from a couple historical locations along the cliffs just south of Torrey Pines State Reserve (CDFW 2020a; Calflora 2020). May occur in other suitable habitat within the UCPU area.
Del Mar manzanita (*Arctostaphylos glandulosa* ssp. *crassifolia*)	FE CRPR 1B.1 MSCP	Evergreen shrub. Blooms Dec-Jun. Sandy soils in maritime chaparral. Elev 115-820 ft. (Calflora 2020)	**Present.** Known from several historical locations within the UCPU area in Torrey Pines State Reserve (CDFW 2020a; Calflora 2020) and from a couple historical locations within the 1-mile buffer, just north of the UCPU boundary and just north of the Torrey Pines State Reserve (CDFW 2020a; Calflora 2020). May occur in other suitable habitat within the UCPU area.

Table 3. Sensitive Plant Species with a Potential to Occur within the University Community Plan Update Area

Species	Status[1]	Description	Potential For Occurrence
coastal dunes milk-vetch (*Astragalus tener* var. *titi*)	FE SE CRPR 1B.1 MSCP NE	Annual herb. Blooms Mar-May. Vernally mesic areas in coastal dunes, coastal bluff scrub, coastal prairie. Elev 15-195 ft. (Calflora 2020)	**Not Expected.** Known only from one historical location from 1882 within the 1-mile buffer, just outside the central northern boundary of the UCPU area (CDFW 2020a; Calflora 2020); however, no recent historical locations are known from the UCPU area (USFWS 2020a; CDFW 2020a; SanGIS 2020; Calflora 2020).
south coast saltscale (*Atriplex pacifica*)	CRPR 1B.2	Annual herb. Blooms Mar-Oct. Playas, coastal dunes, coastal bluff scrub, coastal sage scrub. Elev 80-1,050 ft. (Calflora 2020; NatureServe 2020)	**Present.** Known from one historical location within the UCPU area in Torrey Pines State Reserve (CDFW 2020a; Calflora 2020). May occur in other suitable habitat within the UCPU area.
Encinitas baccharis (*Baccharis vanessae*)	FT SE CRPR 1B.1 MSCP NE	Deciduous shrub. Blooms Aug-Nov. Maritime chaparral. Elev 245-2,460 ft. (Calflora 2020)	**Low Potential.** Known from one historical location within the 1-mile buffer, just outside the central northern boundary of the UCPU area (CDFW 2020a; Calflora 2020); however, no historical locations occur within the UCPU area (USFWS 2020a; CDFW 2020a; SanGIS 2020; Calflora 2020).
golden-spined cereus (*Bergerocactus emoryi*)	CRPR 2B.2	Stem succulent. Blooms May-Jun. Chaparral, coastal sage scrub, closed-cone coniferous forest. Elev 15-935 ft. (Calflora 2020)	**Present.** Known from several historical locations within the UCPU area in Torrey Pines State Reserve (CDFW 2020a; Calflora 2020) and from one old historical location within the 1-mile buffer, just south of the UCPU boundary and just south of Torrey Pines Golf Course (CDFW 2020a; Calflora 2020). May occur in other suitable habitat within the UCPU area.

Table 3. Sensitive Plant Species with a Potential to Occur within the University Community Plan Update Area

Species	Status[1]	Description	Potential For Occurrence
San Diego goldenstar (*Bloomeria clevelandii*)	CRPR 1B.1 MSCP	Perennial, bulbiferous herb. Blooms Apr-May. Typically clay soils in vernal pools in chaparral, coastal sage scrub, grassland. Elev 260-1,050 ft. (Calflora 2020)	**Present.** Known from one historical location within the UCPU area in Torrey Pines State Reserve (Calflora 2020) and from several locations in the eastern portion of the UCPU area, just south of Miramar Road (CDFW 2020a; Calflora 2020). Also known from a couple historical locations within the 1-mile buffer, just east of the UCPU boundary along Miramar Road (Calflora 2020). May occur in other suitable habitat within the UCPU area.
Orcutt's brodiaea (*Brodiaea orcuttii*)	CRPR 1B.1 MSCP	Perennial, bulbiferous herb. Blooms May-Jul. Typically mesic, clay soils (sometimes serpentine) in vernal pools associated with chaparral, cismontane woodland, closed-cone coniferous forest, meadows and seeps, grassland. Elev 330-5,610 ft. (Calflora 2020)	**Present.** Known from several historical locations within the eastern portion of UCPU area along Miramar Road and from multiple historical locations within the 1-mile buffer, also along Miramar Road (CDFW 2020a; Calflora 2020). May occur in other suitable habitat within the UCPU area.
Lakeside ceanothus (*Ceanothus cyaneus*)	CRPR 1B.2 MSCP	Shrub. Blooms Apr-Jul. Typically well-drained, granitic soil in chaparral, closed-cone pine forest. Elev 490-2,725 ft. (Calflora 2020)	**Not Expected.** Known from one historical location from 1938 in Torrey Pines State Reserve (CDFW 2020a; Calflora 2020); however, no recent historical locations are known from the UCPU area (USFWS 2020a; CDFW 2020a; SanGIS 2020; Calflora 2020).

Table 3. Sensitive Plant Species with a Potential to Occur within the University Community Plan Update Area

Species	Status[1]	Description	Potential For Occurrence
wart-stemmed ceanothus (*Ceanothus verrucosus*)	CRPR 2B.2 MSCP	Evergreen shrub. Blooms Jan-Apr. Chaparral. Elev 15-1,115 ft. (Calflora 2020)	**Present.** Known from many historical locations within the UCPU area within the 1-mile buffer (CDFW 2020a; Calflora 2020). May occur in other suitable habitat within the UCPU area.
southern tarplant (*Centromadia parryi* ssp. *australis*)	CRPR 1B.1	Annual herb. Blooms May-Nov. Vernal pools, along the margins of marshes, in vernally mesic areas within grassland. Elev 0-1,410 ft. (Calflora 2020)	**Not Expected.** No historical records occur within the UCPU area or within the 1-mile buffer (USFWS 2020a; CDFW 2020a; Calflora 2020; SanGIS 2020).
Orcutt's pincushion (*Chaenactis glabriuscula* var. *orcuttiana*)	CRPR 1B.1	Annual herb. Blooms Jan-Aug. Sandy soils in coastal dunes, coastal bluff scrub. Elev 0-460 ft. (Calflora 2020)	**Present.** Known from many historical locations within the UCPU area in Torrey Pines State Reserve (CDFW 2020a; Calflora 2020) and from several historical locations within the 1-mile buffer, just north of the UCPU boundary and just north of the Torrey Pines State Reserve (CDFW 2020a; Calflora 2020). May occur in other suitable habitat within the UCPU area.
Orcutt's spineflower (*Chorizanthe orcuttiana*)	FE SE CRPR 1B.1	Annual herb. Blooms Mar-May. Sandy openings in coastal chaparral, coastal sage scrub, closed-cone coniferous forest. Elev 150-490 ft. (Calflora 2020)	**Present.** Known from one historical location in Torrey Pines State Reserve (CDFW 2020a; Calflora 2020) and from one historical location within the 1-mile buffer, southeast of the UCPU area (CDFW 2020a). May occur in other suitable habitat within the UCPU area.

Table 3. Sensitive Plant Species with a Potential to Occur within the University Community Plan Update Area

Species	Status[1]	Description	Potential For Occurrence
long-spined spineflower (*Chorizanthe polygonoides* var. *longispina*)	CRPR 1B.2	Annual herb. Blooms Apr-Jul. Clay soils, vernal pools in chaparral, coastal sage scrub, grassland. Elev 330-5,315 ft. (Calflora 2020)	**Present.** Known from many historical locations within the UCPU area in Torrey Pines State Reserve (CDFW 2020a; Calflora 2020) and in the eastern portion of the UCPU area, along Miramar Road (Calflora 2020). Also known from several historical locations within the 1-mile buffer, just north of the UCPU boundary and just north of the Torrey Pines State Reserve (CDFW 2020a). May occur in other suitable habitat within the UCPU area.
summer-holly (*Comarostaphylis diversifolia* ssp. *diversifolia*)	CRPR 1B.2	Evergreen shrub. Blooms Apr-Jun. Chaparral. Elev 130-1,835 ft. (Calflora 2020)	**Present.** Known from one historical location in the eastern portion of the UCPU area along Miramar Road (CDFW 2020a) and from several historical locations within the 1-mile buffer southwest, southeast, and east of the UCPU boundary (CDFW 2020a; Calflora 2020). May occur in other suitable habitat within the UCPU area.
San Diego sand aster (*Corethrogyne filaginifolia* var. *incana*)	CRPR 1B.1 MSCP	Perennial herb. Blooms Jun-Sep. Coastal sage scrub. Elev 15-2,360 ft. (Calflora 2020)	**Present.** Known from many historical locations within the UCPU area, mainly in Torrey Pines State Reserve but also scattered locations throughout the UCPU area (CDFW 2020a; Calflora 2020). Also known from several historical locations within the 1-mile buffer, just north of the UCPU boundary and just north of the Torrey Pines State Reserve (CDFW 2020a; Calflora 2020). May occur in other suitable habitat within the UCPU area.

Table 3. Sensitive Plant Species with a Potential to Occur within the University Community Plan Update Area

Species	Status[1]	Description	Potential For Occurrence
Del Mar Mesa sand aster (*Corethrogyne filaginifolia* var. *linifolia*)	CRPR 1B.1 MSCP	Perennial herb. Blooms May-Sep. Openings in coastal bluff scrub, maritime chaparral, coastal sage scrub. Elev 0-425 ft.	**Present.** Known from many historical locations within the UCPU area, mainly in Torrey Pines State Reserve but also scattered locations throughout the UCPU area (CDFW 2020a; Calflora 2020). Also known from several historical locations within the 1-mile buffer, just north of the UCPU boundary and just north of the Torrey Pines State Reserve (CDFW 2020a; Calflora 2020). May occur in other suitable habitat within the UCPU area.
snake cholla (*Cylindropuntia californica* var. *californica*)	CRPR 1B.1 MSCP NE	Stem succulent. Blooms Apr-Jul. Sandy soils or sandy loam soils in chaparral and coastal sage scrub. Elev 65-885 ft. (Calflora 2020; NatureServe 2020)	**Present.** Known from one historical record within the central northern portion of the UCPU area (CDFW 2020a); however, no other locations are known within the UCPU area or within the 1-mile buffer (USFWS 2020a; CDFW 2020a; Calflora 2020; SanGIS 2020).
short-leaved dudleya (*Dudleya brevifolia*)	SE CRPR 1B.1 MSCP NE	Perennial herb. Blooms Apr-May. Sandstone, openings in chaparral, coastal sage scrub. Elev 330-460 ft. (Calflora 2020)	**Present.** Known from several historical locations within the UCPU area in Torrey Pines State Reserve (CDFW 2020a; Calflora 2020) and from several locations in the eastern portion of the UCPU area, just south of Miramar Road (Calflora 2020). May occur in other suitable habitat within the UCPU area.

Table 3. Sensitive Plant Species with a Potential to Occur within the University Community Plan Update Area

Species	Status[1]	Description	Potential For Occurrence
variegated dudleya (*Dudleya variegata*)	CRPR 1B.2 MSCP NE	Perennial herb. Blooms Apr-Jun. Clay soils associated with vernal pools in chaparral, foothill woodland, coastal sage scrub, grassland. Elev 115-1,015 ft. (Calflora 2020)	**Present.** Known from one historical location within the UCPU area in Torrey Pines State Reserve (Calflora 2020) and from several locations in the northeastern portion of the UCPU area, just east of Eastgate Mall (CDFW 2020a). Also known from one historical record within the 1-mile buffer, just outside the boundary south of the Torrey Pines Golf Course (CDFW 2020a). May occur in other suitable habitat within the UCPU area.
sticky dudleya (*Dudleya viscida*)	CRPR 1B.2 MSCP	Perennial herb. Blooms May-Jun. Rocky areas in coastal bluff scrub, chaparral, coastal scrub, cismontane woodland. Elev 15-2,330 ft. (Calflora 2020)	**Present.** Known from one historical record within the UCPU area in Torrey Pines State Reserve (CDFW 2020a; Calflora); however, no other locations are known within the UCPU area or within the 1-mile buffer (USFWS 2020a; CDFW 2020a; Calflora 2020; SanGIS 2020).
sessile-leaved yerba santa (*Eriodictyon sessilifolium*)	CRPR 2B.1	Shrub. Blooms Apr-Jun. Slopes and ridges in grassland, chaparral. Elev 82-262 ft. (Jepson Flora Project 2020)	**Not Expected.** No historical records occur within the UCPU area or within the 1-mile buffer (USFWS 2020a; CDFW 2020a; Calflora 2020; SanGIS 2020). May occur in other suitable habitat within the UCPU area.

Table 3. Sensitive Plant Species with a Potential to Occur within the University Community Plan Update Area

Species	Status[1]	Description	Potential For Occurrence
San Diego button-celery (*Eryngium aristulatum* var. *parishii*)	FE SE CRPR 1B.1 MSCP NE VPHCP	Annual/perennial herb. Blooms Apr-Jun. Vernal pools in coastal sage scrub, grassland. Elev 115-2,495 ft. (Calflora 2020)	**Present.** Known from one historical location in the central portion of the UCPU and from multiple locations within the eastern portion of the UCPU area along Miramar Road as well as from several locations within the 1-mile buffer, east of the UCPU area along Miramar Road (CDFW 2020a). May occur in other suitable habitat within the UCPU area.
sand-loving wallflower (*Erysimum ammophilum*)	CRPR 1B.2 MSCP	Perennial herb. Blooms Feb-Jun. Sandy openings in coastal dunes, chaparral, coastal sage scrub. Elev 15-330 ft. (Calflora 2020)	**Present.** Known from several historical locations within the UCPU area in Torrey Pines State Reserve (CDFW 2020a; Calflora 2020) and from several historical locations within the 1-mile buffer, north of Torrey Pines State Reserve (CDFW 2020a; Calflora 2020). May occur in other suitable habitat within the UCPU area.
cliff spurge (*Euphorbia misera*)	CRPR 2B.2	Shrub. Blooms Dec-Aug. Rocky areas in coastal bluff scrub, coastal sage scrub. Elev 0-920 ft. (Calflora 2020)	**Present.** Known from several historical locations within the UCPU area along the coast in Torrey Pines State Reserve (CDFW 2020a; Calflora 2020) and from several historical locations within the 1-mile buffer, south of the UCPU area along the immediate coast (CDFW 2020a; Calflora 2020). May occur in other suitable habitat within the UCPU area.

Table 3. Sensitive Plant Species with a Potential to Occur within the University Community Plan Update Area

Species	Status[1]	Description	Potential For Occurrence
San Diego barrel cactus (*Ferocactus viridescens*)	CRPR 2B.1 MSCP	Stem succulent. Blooms May-Jun. Found in sandy or gravelly soils in chaparral, coastal sage scrub, grassland. Elev 15-885 ft. (Calflora 2020)	**Present.** Known from many historical locations scattered throughout the UCPU area and 1-mile buffer (CDFW 2020a; Calflora 2020). May occur in other suitable habitat within the UCPU area.
Campbell's liverwort (*Geothallus tuberosus*)	CRPR 1B.1	Bryophyte/liverwort. Wet soil in coastal sage scrub. (NatureServe 2020)	**Present.** Known from several historical locations within the eastern UCPU area near Eastgate Mall and Miramar Road and from one historical location within the 1-mile buffer, south of the UCPU area in San Clemente Canyon (CDFW 2020a). May occur in other suitable habitat within the UCPU area.
beach goldenaster (*Heterotheca sessiliflora* ssp. *sessiliflora*)	CRPR 1B.1	Perennial herb. Blooms Mar-Dec. Coastal dunes, beaches. Elev 35-295 ft. (Calflora 2020; Jepson Flora Project 2020)	**Present.** Known from several historical locations within the UCPU in Torrey Pines State Reserve and from several historical locations within the 1-mile buffer, north of Torrey Pines State Reserve (CDFW 2020a; Calflora 2020). May occur in other suitable habitat within the UCPU area.
decumbent goldenbush (*Isocoma menziesii* var. *decumbens*)	CRPR 1B.2	Shrub. Blooms Apr-Nov. Sandy, often disturbed, areas in coastal sage scrub. Elev 65-1,640 ft. (Calflora 2020)	**Present.** Known from several historical locations within the UCPU in and adjacent to Torrey Pines State Reserve and from several historical locations within the 1-mile buffer, to the north, southwest, and southeast of the UCPU boundary (CDFW 2020a; Calflora 2020). May occur in other suitable habitat within the UCPU area.

Table 3. Sensitive Plant Species with a Potential to Occur within the University Community Plan Update Area

Species	Status[1]	Description	Potential For Occurrence
San Diego marsh-elder (*Iva hayesiana*)	CRPR 2B.2	Perennial herb. Blooms Apr-Oct. Marshes, playas. Elev 15-855 ft. (Calflora 2020)	**Present.** Known from several historical locations within the UCPU in Torrey Pines State Reserve (Calflora 2020) and from Rose Canyon (CDFW 2020a). Also known from several historical locations within the 1-mile buffer, to the north and northeast of Torrey Pines State Reserve (CDFW 2020a; Calflora 2020). May occur in other suitable habitat within the UCPU area.
Coulter's goldfields (*Lasthenia glabrata* ssp. *coulteri*)	CRPR 1B.1	Annual herb. Blooms Feb-Jun. Coastal salt marsh, playas, vernal pools. Elev 0-1,905 ft. (Calflora 2020)	**Present.** Known from one recent historical record in Torrey Pines State Reserve (Calflora 2020), and several old historical records occur within the 1-mile buffer, one to the east of Torrey Pines State Reserve and one south of Miramar Road (CDFW 2020a; Calflora 2020).
sea dahlia (*Leptosyne maritima*)	CRPR 2B.2	Perennial herb. Blooms Mar-May. Coastal bluff scrub, coastal sage scrub. Elev 0-425 ft. (Calflora 2020)	**Present.** Known from many historical locations within the UCPU area, mainly in Torrey Pines State Reserve and south along the coast (CDFW 2020a; Calflora 2020). Also known from several historical locations within the 1-mile buffer, north and south of the UCPU boundary along the coast (CDFW 2020a; Calflora 2020). May occur in other suitable habitat within the UCPU area.

Table 3. Sensitive Plant Species with a Potential to Occur within the University Community Plan Update Area

Species	Status[1]	Description	Potential For Occurrence
willowy monardella (*Monardella viminea*)	FE SE CRPR 1B.1 MSCP	Perennial herb. Blooms Jun-Aug. Sandy soils along alluvial, ephemeral washes in chaparral, coastal sage scrub, riparian habitats. Elev 150-885 ft. (Calflora 2020; NatureServe 2020)	**Low Potential.** No historical records occur within the UCPU area (USFWS 2020a; CDFW 2020a; Calflora 2020; SanGIS 2020). While the species is known from several historical locations within the 1-mile buffer, mainly immediately adjacent to the southern boundary of the UCPU area in San Clemente Canyon (CDFW 2020a; Calflora 2020), this species' distribution is well documented but could occur in suitable habitat within the UCPU area adjacent to known historical locations.
spreading navarretia (*Navarretia fossalis*)	FT CRPR 1B.1 MSCP NE VPHCP	Annual herb. Blooms Apr-Jun. Clay soils associated with marshes, playas, vernal pools. Elev 295-3,510 ft. (Calflora 2020)	**Present.** Known from several historical locations within the eastern portion of UCPU area, mainly along Miramar Road, and from a couple historical locations within the 1-mile buffer, south or Miramar Road (CDFW 2020a). May occur in other suitable habitat within the UCPU area.
coast woolly-heads (*Nemacaulis denudata* var. *denudata*)	CRPR 1B.2	Annual herb. Blooms Apr-Sep. Coastal dunes. Elev 0-35 ft. (Calflora 2020)	**Present.** Known from one recent historical record in Torrey Pines State Reserve (Calflora 2020) and from several historical records within the 1-mile buffer, to the north of Torrey Pines State Reserve (CDFW 2020a; Calflora 2020). May occur in other suitable habitat within the UCPU area.

Table 3. Sensitive Plant Species with a Potential to Occur within the University Community Plan Update Area

Species	Status[1]	Description	Potential For Occurrence
California Orcutt grass (*Orcuttia californica*)	FE SE CRPR 1B.1 MSCP NE VPHCP	Annual grass. Blooms Apr-Aug. Vernal pools. Elev 460-2,200 ft. (Calflora 2020)	**Low Potential.** No historical records occur within the UCPU area (USFWS 2020a; CDFW 2020a; Calflora 2020; SanGIS 2020). Several historical locations occur in the 1-mile buffer, east of the UCPU (CDFW 2020a). Could occur in suitable habitat within the UCPU area.
Brand's star phacelia (*Phacelia stellaris*)	CRPR 1B.1	Annual herb. Blooms Mar-Jun. Coastal bluff scrub, coastal sage scrub. Elev 0-230 ft. (Calflora 2020)	**Present.** Known from one historical record in Torrey Pines State Reserve (CDFW 2020a; Calflora 2020). May occur in other suitable habitat within the UCPU area.
Torrey pine (*Pinus torreyana* ssp. *torreyana*)	CRPR 1B.2 MSCP	Evergreen tree. Sandstone areas in chaparral, closed-cone coniferous forest. Elev 0-590 ft. (Calflora 2020)	**Present.** Known from many historical records in Torrey Pines State Reserve and from many historical records within the 1-mile buffer, to the north of Torrey Pines State Reserve (CDFW 2020a; Calflora 2020). May occur in scattered patches in other suitable habitat within the UCPU area and within ornamental/restoration sites.
San Diego mesa mint (*Pogogyne abramsii*)	FE SE CRPR 1B.1 MSCP NE VPHCP	Annual herb. Blooms Mar-Jul. Vernal pools in chaparral and coastal sage scrub. Elev 360-590 ft. (Calflora 2020)	**Present.** Known from several historical locations within the eastern portion of UCPU area along Miramar Road and from many historical locations within the 1-mile buffer also along Miramar Road (CDFW 2020a; Calflora 2020). May occur in other suitable habitat within the UCPU area.

Table 3. Sensitive Plant Species with a Potential to Occur within the University Community Plan Update Area

Species	Status[1]	Description	Potential For Occurrence
Nuttall's scrub oak (*Quercus dumosa*)	CRPR 1B.1	Evergreen shrub. Blooms Feb-Mar. Sandy or clay loam soils associated with chaparral and coastal sage scrub. Elev 50-4,035 ft. (Calflora 2020)	**Present.** Known from many historical locations scattered throughout the UCPU area and 1-mile buffer (CDFW 2020a; Calflora 2020). May occur in other suitable habitat within the UCPU area.
chaparral ragwort (*Senecio aphanactis*)	CRPR 2B.2	Annual herb. Blooms Jan-Apr. Alkaline flats, dry open rocky areas in coastal sage scrub and foothill woodlands. Elev 425-2,165 ft. (Calflora 2020)	**Not Expected.** No historical records occur within the UCPU area or within the 1-mile buffer (USFWS 2020a; CDFW 2020a; Calflora 2020; SanGIS 2020).
salt spring checkerbloom (*Sidalcea neomexicana*)	CRPR 2B.2	Perennial herb. Blooms Mar-Jul. Wetlands in chaparral, coastal sage scrub, and other scrub communities. Elev below 1,500 ft. (Calflora 2020; Jepson Flora Project 2020)	**Not Expected.** Known only from one historical location from 1961 within the eastern UCPU area along Miramar Road (CDFW 2020a; Calflora 2020); however, no recent historical locations are known from the UCPU area (USFWS 2020a; CDFW 2020a; SanGIS 2020; Calflora 2020).
bottle liverwort (*Sphaerocarpos drewei*)	CRPR 1B.1	Bryophyte/liverwort. Shady spots in coastal sage scrub. Elev 295-1,970 ft. (Calflora 2020; CNPS 2020)	**Low Potential.** Known only from one historical location (date unknown) within the eastern UCPU area along Miramar Road (CDFW 2020a). No other historical locations are known from the UCPU area (USFWS 2020a; CDFW 2020a; SanGIS 2020; Calflora 2020).

Table 3. Sensitive Plant Species with a Potential to Occur within the University Community Plan Update Area

Species	Status[1]	Description	Potential For Occurrence
purple stemodia (*Stemodia durantifolia*)	CRPR 2B.1	Perennial herb. Blooms year round. Wetland, riparian. Elev 50-560 ft. (Calflora 2020)	**Not Expected.** No historical records occur within the UCPU area or within the 1-mile buffer (USFWS 2020a; CDFW 2020a; Calflora 2020; SanGIS 2020).

Notes: UCPU = University Community Plan Update.

[1] **STATUS CODES**

Federal
FE = Federally listed endangered species
FT = Federally listed threatened species

State
SE = State-listed endangered species

California Native Plant Society Rare Plant Ranking
1B = Species rare, threatened, or endangered in California and elsewhere. These species are eligible for state listing.
2B = Species rare, threatened, or endangered in California but more common elsewhere. These species are eligible for state listing.
.1 = Species seriously threatened in California (over 80% of occurrences threatened; high degree and immediacy of threat)
.2 = Species fairly threatened in California (20-80% occurrences threatened; moderate degree and immediacy of threat)
.3 = Species not very threatened in California (<20% of occurrences threatened; low degree and immediacy of threat or no current threats known

City of San Diego
MSCP = City of San Diego Multiple Species Conservation Program covered species
NE = Narrow Endemic
VPHCP = Vernal Pool Habitat Conservation Plan covered species

4.3.3 Sensitive Wildlife

For the purposes of this report, sensitive wildlife species include those that are (1) listed as threatened or endangered or proposed for listing by USFWS or CDFW; (2) designated as "fully protected" by CDFW, (3) considered a Species of Special Concern by CDFW, and/or (4) considered a Species of Special Concern by CDFW and City MSCP-covered species. In addition, species included on the MSCP-covered species list are also included as sensitive species. Species that are covered by the federal MBTA were also considered. As the list of species covered under the MBTA is extensive, these species are not included in the sensitive wildlife species table.

No focused sensitive wildlife surveys were conducted for the UCPU. Assessments for the potential occurrence of sensitive wildlife species are based upon known ranges, habitat preferences for the species, historical species occurrence records from the CNDDB (CDFW 2020a), and species occurrence records from the vicinity of the UCPU area from other databases (SanGIS 2020; USFWS 2020a; Unitt 2004; Tremor et al. 2017). Based on this data, 49 sensitive wildlife species have been reported within and/or immediately adjacent to the UCPU area and include:

- **San Diego fairy shrimp** (*Branchinecta sandiegonensis*; federally endangered, MSCP-covered, VPHCP-covered species)
- **Riverside fairy shrimp** (*Streptocephalus woottoni*; federally endangered, MSCP-covered, VPHCP-covered species)
- **Quino checkerspot butterfly** (*Euphydryas editha quino*; federally endangered)

- **western spadefoot** (*Spea hammondii*; California Species of Special Concern)
- **southwestern pond turtle** (*Emys marmorata*; California Species of Special Concern, MSCP-covered)
- **Southern California legless lizard** (*Anniella stebbinsi*; California Species of Special Concern)
- **coast horned lizard** (*Phrynosoma blainvillii*; California Species of Special Concern, MSCP-covered)
- **Belding's orange-throated whiptail** (*Aspidoscelis hyperythra beldingi*; CDFW Watch List Species, MSCP-covered)
- **coastal whiptail** (*Aspidoscelis tigris stejnegeri*; California Species of Special Concern)
- **two-striped garter snake** (*Thamnophis hammondii*; California Species of Special Concern)
- **red diamond rattlesnake** (*Crotalus ruber*; California Species of Special Concern)
- **white-tailed kite** (*Elanus leucurus*; state fully protected [nesting])
- **northern harrier** (*Circus cyaneus*; California Species of Special Concern [nesting], MSCP-covered)
- **California brown pelican** (*Pelecanus occidentalis californicus*; state fully protected [nesting colony and communal roosts, MSCP-covered) no results
- **White-faced ibis** (*Plegadis chihi*; CDFW Watch List [nesting colony], MSCP-covered) no results
- **Cooper's hawk** (*Accipiter cooperii*; CDFW Watch List Species [nesting], MSCP-covered)
- **American peregrine falcon** (*Falco peregrinus anatum*; state fully protected [nesting], MSCP-covered)
- **California black rail** (*Laterallus jamaicensis coturniculus*; state threatened, state fully protected)
- **light-footed Ridgway's rail** (*Rallus obsoletus levipes*; federally endangered, state endangered, state fully protected, MSCP-covered)
- **western snowy plover** (*Charadrius alexandrinus nivosus*, federally threatened [nesting], California Species of Special Concern [nesting], MSCP-covered)
- **Long-billed curlew** (*Numenius americanus*; CDFW Watch List, MSCP-covered)
- **California least tern** (*Sternula antillarum browni*; federally endangered [nesting colony], state endangered [nesting colony], state fully protected, MSCP-covered)
- **elegant tern** (*Thalasseus elegans*; CDFW Watch List [nesting colony], MSCP-covered)
- **burrowing owl** (*Athene cunicularia*; California Species of Special Concern [burrow sites and some winter sites], MSCP-covered)
- **southwestern willow flycatcher** (*Empidonax traillii extimus*; federally endangered [nesting], state endangered [nesting], MSCP-covered)
- **loggerhead shrike** (*Lanius ludovicianus*; California Species of Special Concern [nesting])
- **least Bell's vireo** (*Vireo bellii pusillus*; federally endangered [nesting], state endangered [nesting], MSCP-covered)

- **Coastal cactus wren** (*Campylorhynchus brunneicapillus sandiegensis*; California Species of Special Concern, MSCP-covered)
- **coastal California gnatcatcher** (*Polioptila californica californica*; federally threatened, California Species of Special Concern, MSCP-covered)
- **yellow warbler** (*Dendroica petechia brewsteri*; California Species of Special Concern [nesting])
- **Southern California rufous-crowned sparrow** (*Aimophila ruficeps canescens*; CDFW Watch List Species, MSCP-covered)
- **Grasshopper sparrow** (*Ammodramus savannarum*; California Species of Special Concern [nesting])
- **Belding's savannah sparrow** (*Passerculus sandwichensis beldingi*; state endangered, MSCP-covered)
- **Large-billed savannah sparrow** (*Passerculus sandwichensis rostratus*; California Species of Special Concern [wintering], MSCP-covered)
- **tricolored blackbird** (*Agelaius tricolor*; California Species of Special Concern [nesting colony])
- **American badger** (*Taxidea taxus*, California Species of Special Concern, MSCP-covered)
- **northwestern San Diego pocket mouse** (*Chaetodipus fallax fallax*; California Species of Special Concern)
- **San Diego desert woodrat** (*Neotoma lepida intermedia*; California Species of Special Concern)
- **San Diego black-tailed jackrabbit** (*Lepus californicus bennettii*; California Species of Special Concern)
- **Mexican long-tongued bat** (*Choeronycteris mexicana*; California Species of Special Concern)
- **western mastiff bat** (*Eumops perotis californicus*; California Species of Special Concern)
- **Pocketed free-tailed bat** (*Nyctinomops femorosaccus*; California Species of Special Concern)
- **big free-tailed bat** (*Nyctinomops macrotis*); California Species of Special Concern)
- **western red bat** (*Lasiurus blossevillii*; California Species of Special Concern)
- **Townsend's big-eared bat** (*Corynorhinus townsendii*; California Species of Special Concern)
- **spotted bat** (*Euderma maculatum*; California Species of Special Concern)
- **pallid bat** (*Antrozous pallidus*; California Species of Special Concern)
- **southern mule deer** (*Odocoileus hemionus*; MSCP-covered)
- **mountain lion** (*Felis concolor*; MSCP-covered)

Of these 49 sensitive wildlife species, 20 are present within the UCPU area while 10 have a potential to occur and 19 are not expected to occur. The sensitivity status, species information, and potential for occurrence for each of these 49 wildlife species are summarized in Table 4.

Table 4. Sensitive Wildlife Species with a Potential to Occur in University Community Plan Update Area

Common Name	Status[1]	Habitat	Potential for Occurrence
Invertebrates			
San Diego fairy shrimp (*Branchinecta sandiegonensis*)	FE MSCP VPHCP	Vernal pools, swales, ditches, road ruts. Adult emerge typically mid-December to early May.	**Present.** Known from several historical locations within the eastern portion of UCPU area and from multiple historical locations within the 1-mile buffer, mainly on U.S. MCAS Miramar (CDFW 2020a) but with a few locations also to the north (USFWS 2020a; CDFW 2020a). May occur in other suitable vernal pool habitat within the UCPU area. Critical habitat for this species occurs in the eastern portion of the UCPU area, along Miramar Road (USFWS 2020a).
Riverside fairy shrimp (*Streptocephalus woottoni*)	FE MSCP VPHCP	Vernal pools, swales, ditches, road ruts that are long-lasting (i.e., several months).	**Low Potential.** No historical locations are known from the UCPU area (USFWS 2020a; CDFW 2020a; SanGIS 2020). However, this species could occur in suitable vernal pool habitat within the UCPU area.
Quino checkerspot butterfly (*Euphydryas editha quino*)	FE	Open, dry areas in foothills, mesas, lake margins where principal larval host plants dot-seed plantain, and secondary host plants woolly plantain, white snapdragon, thread-leaved bird's beak, and purple owl's clover occurs. Adult emergence mid-January to April.	**Not Expected.** No historical records occur within the UCPU area or within the 1-mile buffer (USFWS 2020a; CDFW 2020a; SanGIS 2020), and the UCPU area occurs outside of the USFWS Recommended Quino Survey Area.
Amphibians			
western spadefoot	SSC	Washes, river	**Present.** Known from several

Table 4. Sensitive Wildlife Species with a Potential to Occur in University Community Plan Update Area

Common Name	Status[1]	Habitat	Potential for Occurrence
(*Spea hammondii*)		floodplains, alluvial fans, playas, alkali flats, temporary ponds, vernal pools in mixed woodlands, grasslands, coastal sage scrub, and chaparral. Surface activity October to April. Oviposition late February to May in temporal pools and slow-moving sections of streams.	historical locations within the southern portion of UCPU area (CDFW 2020a; SanGIS 2020) and from a single historical location within the 1-mile buffer, to the east of the UCPU boundary along Miramar Road (CDFW 2020a). May occur in other suitable habitat in the UCPU area.
Reptiles			
southwestern pond turtle (*Emys marmorata*)	SSC MSCP	Valley-foothill hardwood and hardwood-conifer forests, coastal scrub, mixed chaparral, non-native grassland, and mixed conifer habitat at elevations from sea level to 5,900 ft. above mean sea level. Breeding occurs from December to May in ponds and streams.	**Not Expected.** No historical records occur within the UCPU area or within the 1-mile buffer (USFWS 2020a, CDFW 2020a, SanGIS 2020). Known from one historical location within the 1-mile buffer, to the northeast of the UCPU area in Los Peñasquitos Canyon (SanGIS 2020). Limited suitable habitat for this species is present in the UCPU area and the occurrence locations in San Diego County are well documented.
Southern California legless lizard (*Anniella stebbinsi*)	SSC	Found in leaf litter and loose soil on beaches and in coastal scrub, chaparral, and open riparian habitats. Sandy washes and beach dunes are used for burrowing, while logs and leaf litter are used for cover and feeding.	**Present.** Known from many historical locations in the northern portion of the UCPU area and from several historical locations within the 1-mile buffer, to the west and east of the UCPU area (CDFW 2020a; SanGIS 2020). May occur in other suitable habitat in the UCPU area.

Table 4. Sensitive Wildlife Species with a Potential to Occur in University Community Plan Update Area

Common Name	Status[1]	Habitat	Potential for Occurrence
coast horned lizard (*Phrynosoma blainvillii*)	SSC MSCP	Open chaparral, coastal sage scrub with sandy, loose soil. Partially dependent on harvester ants for forage.	**Present.** Known from several historical locations in the northern portion of the UCPU area in Torrey Pines State Reserve SanGIS 2020). Also known from several historical locations in the 1-mile buffer, one to the southwest (SanGIS 2020), one to the southeast (CDFW 2020a), and several to the north of the northern UCPU boundary (CDFW 2020a; SanGIS 2020).
Belding's orange-throated whiptail (*Aspidoscelis hyperythra beldingi*)	WL MSCP	Pristine open coastal sage scrub, chaparral, and streamside growth with loose sandy soils, revegetation sites.	**Present.** Known from many historical locations in the northern portion of the UCPU area, mainly in Torrey Pines State Reserve, but with other scattered locations (CDFW 2020a; SanGIS 2020). Also known from several historical locations in the 1-mile buffer to the east and southeast of the UCPU area. (CDFW 2020a). May occur in other suitable habitat in the UCPU area.
coastal whiptail (*Aspidoscelis tigris stejnegeri*)	SSC	Arid areas with sparse, open foliage in forests, woodland, chaparral, riparian areas.	**Present.** Known from many historical locations in the northern portion of the UCPU area in Torrey Pines State Reserve but with a couple other scattered locations in the UCPU area (CDFW 2020a; SanGIS 2020). May occur in other suitable habitat in the UCPU area.
two-striped garter snake (*Thamnophis hammondii*)	SSC	Permanent fresh water, inhabiting streams, ponds, vernal pools. Occupies adjacent coastal sage	**Low Potential.** No historical locations are known within the UCPU area (USFWS 2020a; CDFW 2020a; SanGIS 2020) and only two historical

Table 4. Sensitive Wildlife Species with a Potential to Occur in University Community Plan Update Area

Common Name	Status[1]	Habitat	Potential for Occurrence
		scrub and grasslands during the winter.	locations have been reported within the 1-mile buffer, one to the west (CDFW 2020a) and one to the south (SanGIS 2020). However, suitable habitat for this species occurs in multiple, natural locations within the UCPU area, and this species may occur in this suitable habitat.
red diamond rattlesnake (*Crotalus ruber*)	SSC	Coastal sage scrub, open chaparral, woodland, grassland, and cultivated areas.	**Present.** Known from two historical locations within the UCPU area, one in the northern portion and one in the southern portion (SanGIS 2020). May occur in other suitable habitat within the UCPU area.
Birds			
white-tailed kite (*Elanus leucurus*)	SFP (nesting)	Resident. Nest in riparian woodland, oaks, sycamores. Forage in open, grassy areas.	**Present.** Known from one historical location in the southern portion of the UCPU area in Rose Canyon (SanGIS 2020). Potential to nest at this location and in other suitable habitat within the UCPU area, because this species occurs in San Diego County year round, is widespread over the coastal slope of San Diego County, and breeding has been confirmed within the UCPU area (Unitt 2004).
northern harrier (*Circus cyaneus*)	SSC MSCP (nesting)	Uncommon resident with additional winter visitors. Coastal lowland, marshes, grassland, agricultural fields.	**Present.** Know from a couple locations within the southern portion of the UCPU area as well as from a couple locations within the 1-mile buffer, along the northern boundary of the UCPU area

Table 4. Sensitive Wildlife Species with a Potential to Occur in University Community Plan Update Area

Common Name	Status[1]	Habitat	Potential for Occurrence
			(SanGIS 2020). This species is found year round in grassland and marsh habitats in San Diego County and nesting is probable within the UCPU area in suitable habitat (Unitt 2004).
California brown pelican (*Pelecanus occidentalis californicus*)	SFP MSCP (nesting colony and communal roosts)	Nonbreeding year round visitor. Coastal salt water, open ocean; rare vagrant inland.	**Not Expected.** No historical locations are known within the UCPU area (USFWS 2020a; CDFW 2020a; SanGIS 2020). While this species may occur within the UCPU area in winter or migration, no nesting colonies or communal roosts are present within the UCPU area (Unitt 2004).
white-faced ibis (*Plegadis chihi*)	CDFW WL MSCP (nesting colony)	Migrant and winter visitor, rare in summer. Very localized breeding. Freshwater ponds, irrigated fields, brackish lagoons.	**Not Expected.** No historical locations are known within the UCPU area (USFWS 2020a; CDFW 2020a; SanGIS 2020). While this species may occur within the UCPU area in winter or migration, no nesting colonies are present within the UCPU area (Unitt 2004).
Cooper's hawk (*Accipiter cooperii*)	CDFW WL MSCP (nesting)	Resident with additional winter visitors. Mature forest, open woodlands, wood edges, and river groves. Parks and residential areas.	**Present.** Known from only a single historical location within the one-mile buffer in Carroll Canyon (SanGIS 2020); however, this species is widespread in mature forests along San Diego County's coastal slopes and is well adapted to city landscapes (Unitt 2004), and it is known to occur in both urban and natural habitats spread across the UCPU area. May nest in suitable woodland and forest habitats.

Table 4. Sensitive Wildlife Species with a Potential to Occur in University Community Plan Update Area

Common Name	Status[1]	Habitat	Potential for Occurrence
American peregrine falcon (*Falco peregrinus anatum*)	SFP MSCP (nesting)	Rare resident with additional winter visitors. Nests on cliff ledges, old raptor or raven nests, and man-made structures. Forages in open coastal areas, mud flats. Rare inland. Rare fall and winter resident, casual in late spring and early summer.	**Present.** Known from one historical location within the northern UCPU area in Torrey Pines State Reserve (SanGIS 2020; Unitt 2004) and from two historical locations in the one (1) mile buffer, one to the north and one to the south of Torrey Pines State Reserve (SanGIS 2020). Species likely just a migrant/non-breeder in the UCPU area; however, may nest in suitable habitat along the cliff ledges in the coastal portion of the UCPU area, which occur in Torrey Pines State Reserve and south.
California black rail (*Laterallus jamaicensis coturniculus*)	ST SFP	Resident populations thought to be extirpated. Tidal marshes, grassy marshes.	**Not Expected.** No historical locations are known within the UCPU area (USFWS 2020a; CDFW 2020a; SanGIS 2020; Unitt 2004), and only one historical location from 1954 occurs in the one-mile buffer to the north of the UCPU area (CDFW 2020a). This species was last documented breeding in San Diego County in 1954 and the last vagrant was detected in 1983 (Unitt 2004).
light-footed Ridgway's rail (*Rallus obsoletus levipes*)	FE SE SFP MSCP	Localized resident. Typically found in salt marshes primarily dominated by cordgrass but also in brackish and freshwater marsh vegetation upstream from bays/estuaries.	**Low Potential.** No historical locations are known within the UCPU area; however, known from several historical locations within the 1-mile buffer, just north of the UCPU boundary along Sorrento Valley Road (USFWS 2020a; CDFW 2020a; SanGIS 2020; Unitt 2004). Could occur in

Table 4. Sensitive Wildlife Species with a Potential to Occur in University Community Plan Update Area

Common Name	Status[1]	Habitat	Potential for Occurrence
			the limited suitable habitat within the UCPU area.
western snowy plover (*Charadrius alexandrinus nivosus*)	FT SSC MSCP (nesting)	Migrant and winter resident. Localized breeding Sandy beaches, lagoon margins, and tidal mud flats.	**Not Expected.** No historical locations are known within the UCPU area (USFWS 2020a; CDFW 2020a; SanGIS 2020; Unitt 2004), and several historical locations are known from the 1-mile buffer, immediately adjacent to the northern UCPU boundary (USFWS 2020a; CDFW 2020a; Unitt 2004). Species likely present during winter; however, it is not expected to nest in the UCPU area (Unitt 2004).
long-billed curlew (*Numenius americanus*)	CDFW WL MSCP (nesting)	Fall and spring migrant, winter resident, rare in summer. Tidal mud flats, salt marshes, bays. Breeds in grasslands.	**Not Expected.** No historical locations are known within the UCPU area or within the 1-mile buffer (USFWS 2020a; CDFW 2020a; SanGIS 2020; Unitt 2004). Species likely present during winter and migration; however, it is not expected to nest in the UCPU area (Unitt 2004).
California least tern (*Sternula antillarum browni*)	FE SE SFP MSCP (nesting colony)	Resident. Localized breeding. Bays, estuaries, lagoons, shoreline.	**Not Expected.** No historical locations are known within the UCPU area (USFWS 2020a; CDFW 2020a; SanGIS 2020; Unitt 2004). Several historical locations are known from the 1-mile buffer to the north of the UCPU boundary (USFWS 2020a; CDFW 2020a; Unitt 2004); however, this species is only expected to migrate/forage within the UCPU area, and no nesting colonies are anticipated (Unitt 2004).

Table 4. Sensitive Wildlife Species with a Potential to Occur in University Community Plan Update Area

Common Name	Status[1]	Habitat	Potential for Occurrence
elegant tern (*Thalasseus elegans*)	CDFW WL MSCP (nesting colony)	Summer resident. Localized breeding. Breeds at the salt works in southern San Diego Bay. Mud flats, sandbars, dunes, bays, lagoons.	**Not Expected.** No historical locations are known within the UCPU area or within the 1-mile buffer (USFWS 2020a; CDFW 2020a; SanGIS 2020; Unitt 2004). Species only expected to migrate/forage within the UCPU area, and no nesting colonies are anticipated (Unitt 2004).
burrowing owl (*Athene cunicularia*)	SSC MSCP (burrow sites and some winter sites)	Declining resident. Rare, localized resident, with additional winter visitors. Grassland, agricultural land, coastal dunes.	**Not Expected.** No historical locations are known within the UCPU area or within the 1-mile buffer (USFWS 2020a; CDFW 2020a; SanGIS 2020; Unitt 2004). Species unlikely to be present during migration, and it is it is not expected to winter or nest in the UCPU area (Unitt 2004).
southwestern willow flycatcher (*Empidonax traillii extimus*)	FE SE MSCP (nesting)	Rare spring and fall migrant, rare summer resident. Nests in extensive willow-dominated riparian forests and woodlands, occasionally oak woodlands.	**Not Expected.** No historical locations are known within the UCPU area or within the 1-mile buffer (USFWS 2020a; CDFW 2020a; SanGIS 2020; Unitt 2004). Species unlikely to be present during migration, and it is it is not expected to nest in the UCPU area (Unitt 2004).
loggerhead shrike (*Lanius ludovicianus*)	SSC (nesting)	Uncommon resident. Open country with short vegetation such as pastures with fence rows, agricultural fields and open woodlands.	**Low Potential.** No historical locations are known within the UCPU area or within the 1-mile buffer (USFWS 2020a; CDFW 2020a; SanGIS 2020). However, it has fragmented distribution along the coastal slope of San Diego County and has been recorded as a breeder in or adjacent to the northernmost portion of the UCPU (Unitt 2004).

Table 4. Sensitive Wildlife Species with a Potential to Occur in University Community Plan Update Area

Common Name	Status[1]	Habitat	Potential for Occurrence
least Bell's vireo (*Vireo bellii pusillus*)	FE SE MSCP (nesting)	Migrant. Willow-dominated successional woodland or scrub, Baccharis scrub, mixed oak/willow woodland, and elderberry scrub in riparian habitat. Nests and forages in vegetation along streams and rivers that measures approximately 3 to 6 feet in height and has a dense, stratified canopy.	**Not Expected.** No historical locations are known within the UCPU area (USFWS 2020a; CDFW 2020a; SanGIS 2020; Unitt 2004), and several historical locations are known from the 1-mile buffer, immediately adjacent to the northern UCPU boundary (USFWS 2020a; CDFW 2020a; Unitt 2004); however, this species is only expected to migrate/forage within the UCPU area, and no nesting colonies are anticipated (Unitt 2004).
coastal cactus wren (*Campylorhynchus brunneicapillus sandiegensis*)	CSS MSCP	Rare localized resident. Maritime succulent scrub, coastal sage scrub with Opuntia thickets.	**Low Potential.** Known from one historical occurrence in the northern portion of the UCPU area in Torrey Pines State Reserve (SanGIS 2020); however, this species has not been observed at this location or in any other areas within the UCPU area or 1-mile buffer since before 1997 (Unitt 2004). It could occupy suitable habitat within the UCPU area.
coastal California gnatcatcher (*Polioptila californica californica*)	FT SSC MSCP	Resident. Coastal sage scrub, maritime succulent scrub.	**Present.** Known from many historical locations scattered throughout the UCPU area and 1-mile buffer (USFWS 2020a; CDFW 2020a; SanGIS 2020; Unitt 2004). May occur in other suitable habitat within the UCPU area.
yellow warbler (*Dendroica petechia brewsteri*)	SSC (nesting)	Common resident, with additional migrants. Well-developed riparian	**Potential.** No historical locations are known within the UCPU area or within the 1-mile buffer (USFWS 2020a;

Table 4. Sensitive Wildlife Species with a Potential to Occur in University Community Plan Update Area

Common Name	Status[1]	Habitat	Potential for Occurrence
		habitats, often with mature willows	CDFW 2020a; SanGIS 2020). However, it breeds in riparian corridors along the coastal slope of San Diego County and has been recorded as a breeder in and adjacent to the UCPU area (Unitt 2004). May nest in suitable habitat within the UCPU area.
Southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*)	CDFW WL MSCP	Common resident. Coastal sage scrub, chaparral, grassland. Resident.	**Present.** Known from many historical locations throughout the northern portion of the UCPU area as well as many historical locations in the 1-mile buffer, mainly to the north and west of the UCPU area (CDFW 2020a; SanGIS 2020; Unitt 2004). May occur in other suitable habitat throughout the UCPU area.
grasshopper sparrow (*Ammodramus savannarum*)	CSS (nesting)	Localized summer resident, rare in winter. Tall grass areas.	**Present.** Known from one historical location in the southern portion of the UCPU, in Rose Canyon, as well as from two historical locations in the 1-mile buffer, to the north of the UCPU in Lopez Canyon (SanGIS 2020). Species likely to winter in small numbers, and breeding is probable within the UCPU area (Unitt 2004).
Belding's savannah sparrow (*Passerculus sandwichensis beldingi*)	SE MSCP	Resident. Salt marshes, lagoons, and upstream rivers/tributaries dominated by *Salicornia*.	**Present.** Known from several historical locations within in the Torrey Pines State Reserve along the northern border of the UCPU area as well as from multiple locations within the 1-mile buffer, just north of the Torrey Pines State Reserve (CDFW 2020a; SanGIS 2020; Unitt 2004).

Table 4. Sensitive Wildlife Species with a Potential to Occur in University Community Plan Update Area

Common Name	Status[1]	Habitat	Potential for Occurrence
			May occur in other suitable habitat within the UCPU area.
large-billed savannah sparrow (*Passerculus sandwichensis rostratus*)	CSS MSCP (wintering)	Winters in coastal areas and marshes where it is seldom seen far from the intermediate shoreline, Marshes. Very rare in San Diego County, typically south of Mission Bay.	**Potential.** No historical breeding locations are known within the UCPU area or the 1-mile buffer (USFWS 2020a; CDFW 2020a; SanGIS 2020); however, this species winters along coastal areas of San Diego County and could be expected within the UCPU area (Unitt 2004).
tricolored blackbird (*Agelaius tricolor*)	SSC (nesting colony)	Localized resident. Freshwater marshes agricultural areas, lakeshores, parks. Localized resident. Breeding colonies well documented, inland San Diego County	**Not Expected.** No historical locations are known within the UCPU area or 1-mile buffer (USFWS 2020a; CDFW 2020a; SanGIS 2020; Unitt 2004). Species is only expected to migrate/forage within the UCPU area, and no nesting colonies are anticipated (Unitt 2004).
Mammals			
American badger (*Taxidea taxus*)	SSC MSCP	Grasslands, savannas, meadows, sparse scrublands	**Not Expected.** No historical records occur within the UCPU area (USFWS 2020a; CDFW 2020a; SanGIS 2020; Tremor et al. 2017) and known from only one historical location in the 1-mile buffer, to the west of the UCPU area (CDFW 2020a; SanGIS 2020; Tremor et al. 2017).
northwestern San Diego pocket mouse (*Chaetodipus fallax fallax*)	SSC	San Diego County west of mountains in sparse, disturbed coastal sage scrub or grasslands with sandy soils.	**Present.** Known from multiple historical locations in the northern portion of the UCPU area (CDFW 2020a; SanGIS 2020; Tremor et al. 2017) as well as from multiple historical locations in the 1-mile buffer,

Table 4. Sensitive Wildlife Species with a Potential to Occur in University Community Plan Update Area

Common Name	Status[1]	Habitat	Potential for Occurrence
			mainly to north but one location to the south (SanGIS 2020; Tremor et al. 2017). May occur in other suitable habitat within the UCPU area.
San Diego desert woodrat (*Neotoma lepida intermedia*)	SSC	Coastal sage scrub and chaparral	**Present.** Known from one historical location in western portion of UCPU area along Miramar Road as well as from one historical location in the 1-mile buffer to the north of the central portion of the UCPU area (CDFW 2020a; SanGIS 2020). May occur in other suitable habitat within the UCPU area.
San Diego black-tailed jackrabbit (*Lepus californicus bennettii*)	SSC	Open areas of scrub, grasslands, and agricultural fields.	**Not Expected.** No historical records occur within the UCPU area or within the 1-mile buffer (USFWS 2020a; CDFW 2020a; SanGIS 2020; Tremor et al. 2017).
Mexican long-tongued bat (*Choeronycteris mexicana*)	SSC	Desert and montane riparian and woodlands, desert succulent scrub, desert scrub, and pinyon-juniper habitats. Roosts in caves, buildings, bridges, etc. Sightings in San Diego County very rare. Migratory.	**Not Expected.** No historical locations occur within the UCPU area or the 1-mile buffer (CDFW 2020a; SanGIS 2020; Tremor et al. 2017). In addition, all of the historical locations are located well outside the UCPU area (Tremor et al. 2017).
western mastiff bat (*Eumops perotis californicus*)	SSC	Occurs in many open, semi-arid to arid habitats, including conifer and deciduous woodlands, coastal scrub, grasslands, chaparral, etc.; roosts in crevices in vertical	**Low Potential.** Known from one historical location in 1-mile buffer east of the southeastern portion of the UCPU area (SanGIS 2020; Tremor et al. 2017). May occur in other suitable habitat within the UCPU area.

Table 4. Sensitive Wildlife Species with a Potential to Occur in University Community Plan Update Area

Common Name	Status[1]	Habitat	Potential for Occurrence
		cliff faces, high buildings, trees, and tunnels, and travels widely when foraging.	
pocketed free-tailed bat (*Nyctinomops femorosaccus*)	CSS	Habitat generalist. Forages over many types of vegetation communities. Roosts in crevices and fractures on steep, rocky cliffs and in boulder outcrops. Also found in abandoned quarries.	**Low Potential.** Known from two historical locations in 1-mile buffer east of the southeastern portion of the UCPU area (SanGIS 2020; Tremor et al. 2017). May occur in other suitable habitat within the UCPU area.
big free-tailed bat (*Nyctinomops macrotis*)	SSC	Rugged, rocky terrain. Roost in crevices, buildings, caves, tree holes. Very rare in San Diego County. Colonial, Migratory.	**Present.** Known from one location in the northeastern portion of the UCPU area but no historical locations in the 1-mile buffer (Tremor et al. 2017). May occur in other suitable habitat within the UCPU area.
western red bat (*Lasiurus blossevillii*)	SSC	Roosts in small colonies in the foliage of trees and shrubs in edge areas adjacent to streams and open fields, preferring foraging areas that are distant from human habitation	**Present.** Known from two locations in the UCPU area, one in the north and one in the southeast, but no historical locations in the 1-mile buffer (Tremor et al. 2017). May occur in other suitable habitat within the UCPU area.
Townsend's big-eared bat (*Corynorhinus townsendii*)	SSC	Caves, mines, buildings. Found in a variety of habitats, arid and mesic. Individual or colonial. Extremely sensitive to disturbance.	**Not Expected.** No historical locations occur within the UCPU area or the 1-mile buffer (CDFW 2020a; SanGIS 2020; Tremor et al. 2017). In addition, all of the historical locations are located well outside the UCPU area (Tremor et al. 2017).
spotted bat	SSC	Wide variety of	**Not Expected.** Known from

Table 4. Sensitive Wildlife Species with a Potential to Occur in University Community Plan Update Area

Common Name	Status[1]	Habitat	Potential for Occurrence
(*Euderma maculatum*)		habitats. Caves, crevices, trees. Audible echolocation signal.	one old historical occurrence within the western portion of the UCPU from 1955 (CDFW 2020a), but no current historical locations are known (Tremor et al. 2017). Known from only four historical locations in San Diego County, only two of which are certain (Tremor et al. 2017).
pallid bat (*Antrozous pallidus*)	SSC	Open scrub, grasslands, shrub lands, woodlands, and forests. Roosts in rock crevices, caves, mines, tree hollows, and buildings. Occurs near water, colonial. Audible echolocation signal.	**Not Expected.** No historical locations occur within the UCPU area or the 1-mile buffer (CDFW 2020a; SanGIS 2020; Tremor et al. 2017). In addition, all of the historical locations are located well outside the UCPU area (Tremor et al. 2017).
southern mule deer (*Odocoileus hemionus*)	MSCP	Requires relatively large, undisturbed tracts of chaparral, coastal sage scrub, and mixed grassland/shrub habitats.	**Present.** Known from many historical locations throughout the UCPU area as well as from many locations scattered in the 1-mile buffer in all directions except west (SanGIS 2020; Tremor et al. 2017).
mountain lion (*Felis concolor*)	MSCP	Typically in remote, hilly or mountainous areas but can occasionally be found in the urban/wild land interface.	**Potential.** No historical locations occur within the UCPU area (CDFW 2020a; SanGIS 2020; Tremor et al. 2017); however, multiple locations occur within the 1-mile buffer, primarily in Los Peñasquitos, Lopez, Rose, and San Clemente Canyons.

Notes: UCPU = University Community Plan Update; MCAS = Marine Corps Air Station; USFWS = U.S. Fish and Wildlife Service.

[1] **STATUS CODES**

Federal
FE = Federal-listed endangered species
FT = Federal-listed threatened species

State
SE = State-listed endangered species
ST = State-listed threatened species

SSC = Species of special concern
SFP = Fully protected species
WL = CDFW watch list species

Other
MSCP = City of San Diego Multiple Species Conservation Program covered species
VPHCP = Vernal Pool Habitat Conservation Plan covered species

4.3.4 Critical Habitat

Under the FESA, USFWS designates certain areas as "critical habitat" if they determine that these geographic areas are essential for the conservation and/or recovery of a federally listed threatened or endangered species, whether or not the species currently occupies the area. Critical habitat areas often require special management and protection to assure they will remain suitable for the federally listed species for which they have been designated. While federally listed species are protected by the FESA whether or not they are in an area that is designated as critical habitat, projects proposed within or adjacent to critical habitat must demonstrate that implementation of the project would not destroy or significantly impact the functions and values of the critical habitat.

Within the UCPU area, USFWS has designated critical habitat for spreading navarretia in the eastern portion of the UCPU area, in a portion of Rose Canyon located immediately west of I-805 and south of Nobel Drive, and for San Diego fairy shrimp in the eastern portion of the UCPU area, along Miramar Road (Figure 8).

4.4 JURISDICTIONAL RESOURCES

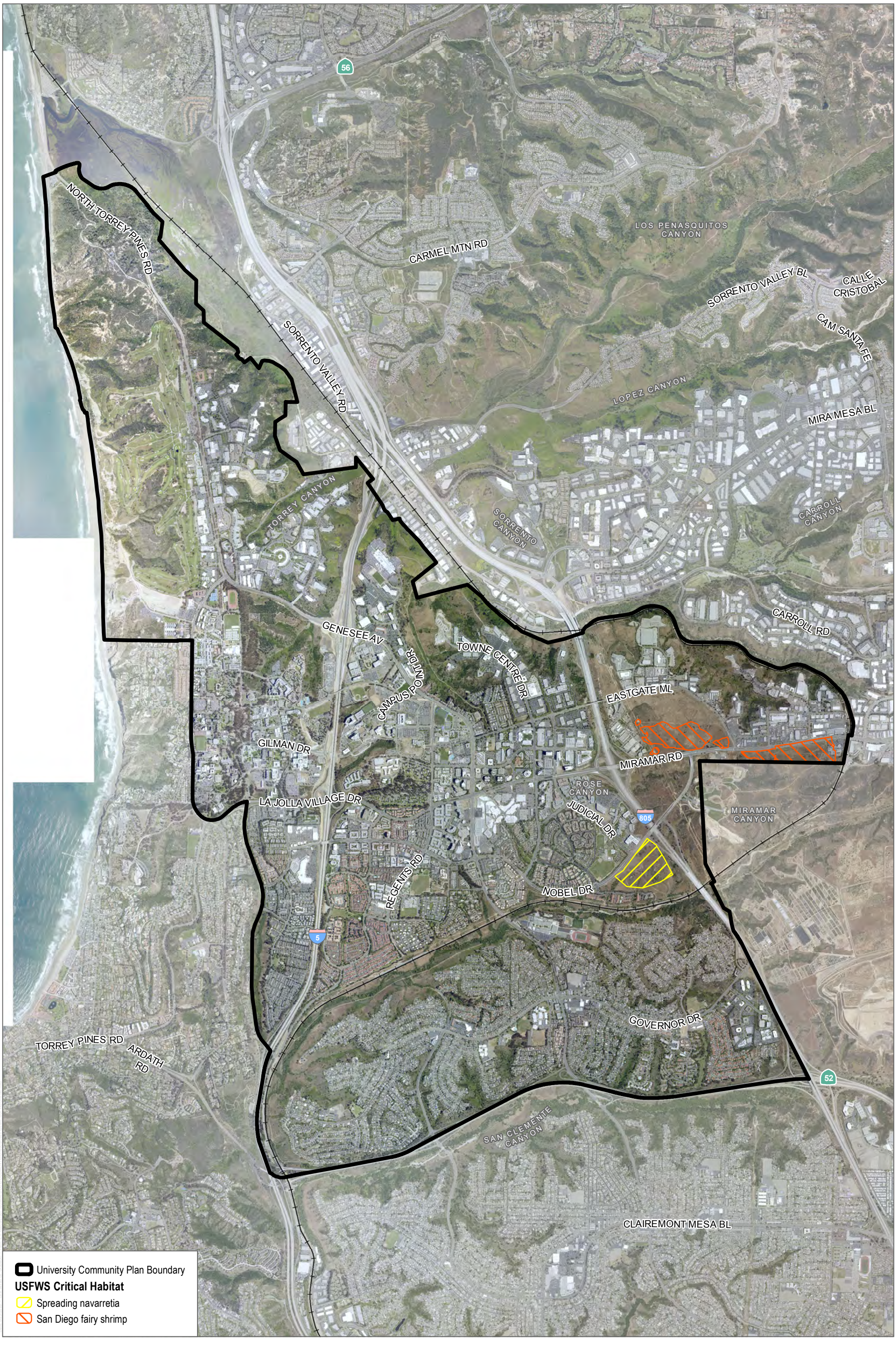
Jurisdictional resources are considered sensitive biological resources and are regulated by USACE, San Diego RWQCB, CDFW, CCC, and/or the City pursuant to federal, state, and local regulations, outlined below.

4.4.1 U.S. Army Corps of Engineers Jurisdiction

USACE regulates the discharge of dredged and/or fill material, both temporary and permanent, into wetland and non-wetland waters of the United States, pursuant to Section 404 of the CWA. USACE non-wetland waters of the United States are delineated by the lateral and upstream/downstream extent of the ordinary high water mark. USACE wetland waters of the United States are areas that contain wetland hydrology, hydric soils, and hydrophytic vegetation. Swales and erosional features (e.g., gullies; small washes characterized by low volume, infrequent, and short duration flow) are generally not considered waters of the United States because they are not tributaries or they do not have a significant nexus to downstream TNWs.

4.4.2 State Regional Water Quality Control Board Jurisdiction

RWQCB regulates wastewater discharge, dredged and/or fill material, or other alterations of wetland and non-wetland waters of the state, including isolated waters such as vernal pools and other waters showing lack of connectivity to a TNW, pursuant to Section 401 of the CWA and Section 13000 et seq. of the California Water Code under the Porter-Cologne Water Quality Control Act.



SOURCE: SANGIS 2017, 2019; USFWS 2020

DUDEK

0 1,400 2,800 Feet

FIGURE 8

USFWS Critical Habitat

University Community Plan Update

4.4.3 California Department of Fish and Wildlife Jurisdiction

CDFW regulates activities that would substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake, pursuant to CFGC Section 1600 et seq. CDFW typically extends its jurisdictional limit to the top of a stream, the bank of a lake, or the outer edge of the riparian vegetation, whichever is wider. CDFW Streambeds include watercourses having a surface or subsurface flow that supports riparian vegetation. In addition, CDFW asserts jurisdiction over vernal pools when California state threatened and/or endangered species are present.

4.4.4 California Coastal Commission Jurisdiction

CCC regulates all wetlands (isolated or non-isolated) in the coastal zone and areas designated as ESHAs. The CCC defines a wetland as land "which may be covered periodically or permanently with shallow water and include saltwater marshes, freshwater marshes, open or closed brackish water marshes, swamps, mudflats, and fens." The absence of hydrophytic vegetation or hydric soils is not enough to exclude an area from jurisdiction.

4.4.5 City of San Diego Jurisdiction

Wetlands (and other sensitive vegetation communities) are classified as ESLs and are regulated by the City pursuant to the San Diego Municipal Code, Chapter 14, Division 1, Section 143.0101. Naturally occurring wetland vegetation communities dominated by hydrophytic plant species are typically considered by the City to be characteristic of wetland areas. Areas lacking naturally occurring wetland vegetation communities are considered to be wetlands when (a) hydric soil or wetland hydrology are present and (b) either past human activities have occurred to remove the historical vegetation, or catastrophic or recurring natural events preclude the establishment of wetland vegetation. The City does not regulate areas that contain wetland vegetation, soils, or hydrology created by human activities in historically non-wetland areas unless they have been delineated as wetlands by the USACE and/or the CDFW.

Within the UCPU area, City wetlands include the following ten (10) habitats that are presented in Table 2 and shown on Figures 5-1, 5-2, 7-1, and 7-2: southern riparian forest, southern coast live oak riparian forest, southern sycamore-alder riparian forest, southern riparian scrub, southern willow scrub, southern coastal salt marsh, coastal and valley freshwater marsh, freshwater seep, vernal pools, and disturbed wetland. Beach, subtidal ocean, and non-vegetated channel or floodway do not qualify as City wetlands but would be under the jurisdiction of other resource agencies.

4.5 WILDLIFE MOVEMENT CORRIDORS

Wildlife corridors are essential to maintain populations of healthy and genetically diverse plant and wildlife species. Wildlife corridors are considered sensitive by municipal, state, and federal resource conservation agencies. These corridors allow wildlife to move between adjoining open space areas that are becoming increasingly isolated due to

habitat fragmentation urbanization, rugged terrain, and/or changes in vegetation (Beier and Loe 1992).

Wildlife corridors can be classified as either regional corridors or local corridors. Regional corridors are defined as those linking two or more large areas of natural open space, and local corridors are defined as those allowing resident animals to access critical resources (e.g., food, cover, water) in a smaller area that might otherwise be isolated by some form of urban development (e.g., roads, housing tracts).

Within these wildlife corridors, wildlife movement activities typically fall into one of three movement categories: (1) dispersal (i.e., juvenile animals from natal areas or individuals extending range distributions), (2) seasonal migration, and (3) movement related to home range activities (e.g., foraging for food or water, defending territories, searching for mates).

Both regional and local wildlife corridors exist within the UCPU area (Figure 3) and are important to maintain healthy plant and wildlife populations in the highly urbanized UCPU area. Torrey Pines State Reserve and Los Peñasquitos Lagoon, located within and adjacent to the northernmost portion of the UCPU area provide both local and regional wildlife movement opportunities. The habitats found within these areas allows local wildlife movement and provides connectivity from the Pacific Ocean and coastal region to inland open space, which includes – but is not limited to – Torrey, Los Peñasquitos, Lopez, Sorrento, and Carroll canyons as well as open space located farther inland. In addition, San Clemente Canyon, along the southern boundary of the UCPU area, and Rose Canyon, just north of San Clemente Canyon, both also serve as regional and local wildlife movement corridors, allowing movement not only within the canyons themselves but also from the coast, including the Pacific Ocean and Mission Bay, to the open space areas to the east of the UCPU area.

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