

**BIOLOGICAL RESOURCES REPORT
MIRA MESA COMMUNITY PLAN UPDATE
CITY OF SAN DIEGO, SAN DIEGO COUNTY, CALIFORNIA**

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ACRONYMS AND ABBREVIATIONS

Acronym	Definition
3RMP	3Roots Master Plan
BLC	boundary line correction
CCMP	Carroll Canyon Master Plan
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
CPA	Community Plan Amendment
CRPR	California Rare Plant Rank
CWA	Clean Water Act
ESL	Environmentally Sensitive Land
FESA	Federal Endangered Species Act
HU	Hydrologic Unit
MBTA	Migratory Bird Treaty Act
MCAS	Marine Corps Air Station
MHPA	Multi-Habitat Planning Area
MMCP	Mira Mesa Community Plan
MMCPA	Mira Mesa Community Plan area
MMCPU	Mira Mesa Community Plan update
MSCP	Multiple Species Conservation Program
NRMP	Natural Resource Management Plan
PMP	Park’s Master Plan
RWQCB	Regional Water Quality Control Board
SCMP	Stone Creek Master Plan
TNW	Traditional Navigable Waters
U.S.	United States
USACE	U.S. Army Corps of Engineers
USFWS	U.S. Fish and Wildlife Service
VPHCP	Vernal Pool Habitat Conservation Plan

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SECTION 1.0 - INTRODUCTION

The City of San Diego (City) Mira Mesa Community Plan (MMCP) was first adopted by City Council in October 1992 and then amended in April 2011 (City 2011). To inform the MMCP update (MMCPU), this biological resources report provides a summary of the existing biological resources within the MMCP area (MMCPA) and assesses potential impacts to these biological resources that may occur through implementation of the updated MMCP.

The MMCPA includes approximately 10,700 acres in the north-central portion of the City, 16 miles north of downtown San Diego, between the Interstate 805 and Interstate 15 corridors (Figure 1: Regional Location). It is located in United States Geological Survey (USGS) Del Mar and Poway 7.5-minute quadrangles (Figure 2: USGS Topography) (USGS 2022a, 2022b). The MMCPA is bounded to the north by Los Peñasquitos Canyon and the surrounding communities of Torrey Hills, Carmel Valley, and Rancho Peñasquitos; to the east by Interstate 15 as well as Miramar Ranch North and Scripps Miramar Ranch; to the south by United States (U.S.) Marine Corps Air Station (MCAS) Miramar; and on the west by Interstate 805 as well as the University and Torrey Pines communities (Figure 2 and Figure 3: Aerial Photograph).

The MMCP includes the following nine elements – Sensitive Resources and Open Space System, Transportation System, Park and Recreation Facilities, Community Facilities, Residential Land Use, Industrial Land Use, Commercial Land Use, Carroll Canyon Master Plan (CCMP) Area, and Development Criteria. The MMCP elements are updated routinely to reflect current conditions, to support Citywide 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 nine elements is described in detail in the current MMCP and will be updated as part of the MMCPU process.

Within the MMCPA, six additional locally approved documents provide guidance for local development – MCAS Miramar Master Plan, the MCAS Miramar Airport Land Use Compatibility Plan, the Los Peñasquitos Canyon Preserve Master Plan, the San Diego Miramar College Facilities Master Plan Update, the CCMP, and 3Roots Master Plan (3RMP). In addition, the draft final Stone Creek Master Plan (SCMP; February 2022) is expected to received City Council approval in 2022. The MCAS Miramar Master Plan, MCAS Miramar Airport Land Use Compatibility Plan, Los Peñasquitos Canyon Preserve Master Plan, and San Diego Miramar College Facilities Master Plan Update were all captured in previous MMCP updates. However, changes to the CCMP, the 3RMP, and SCMP (pending approval) will be included in the MMCPU.

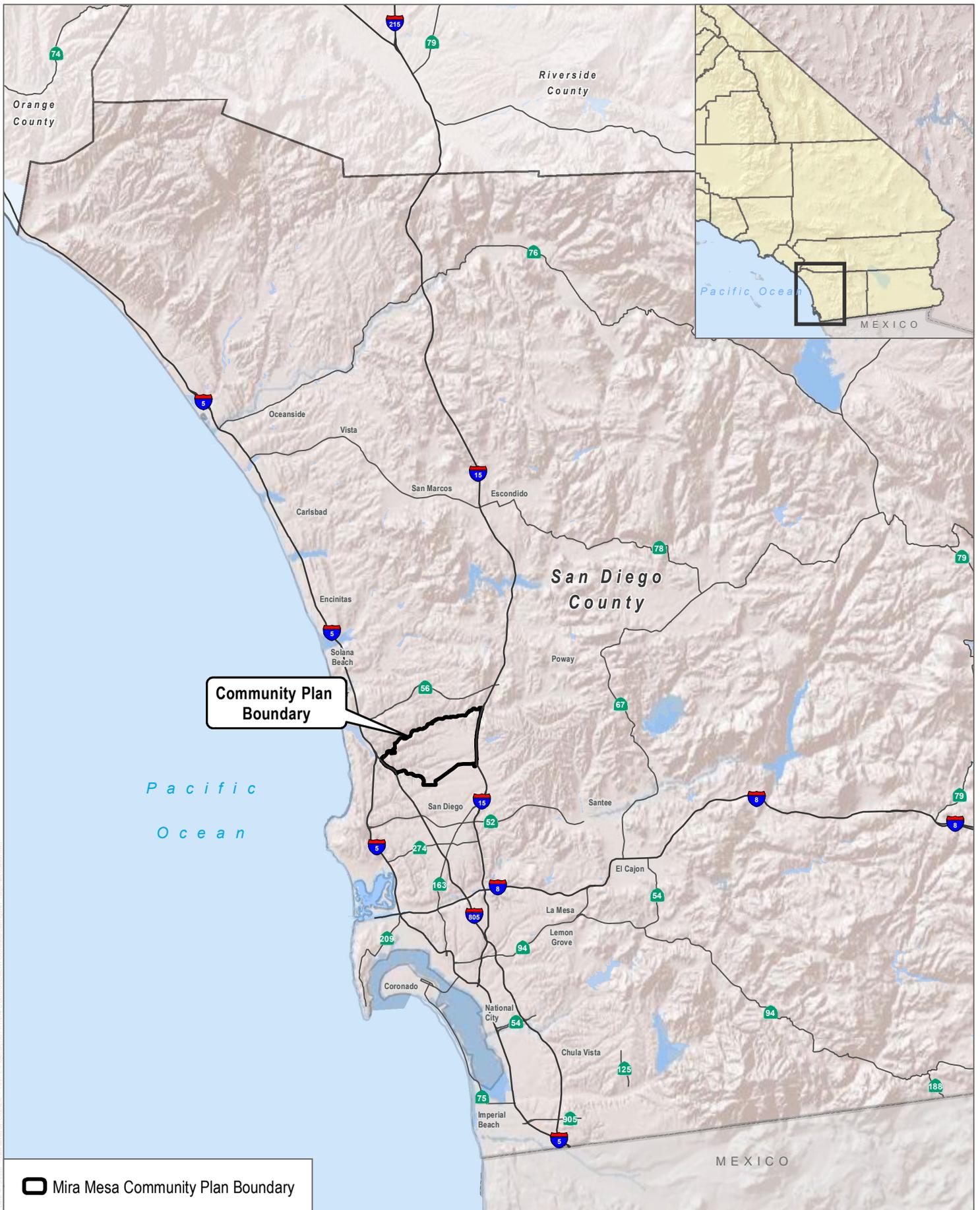
The original CCMP was adopted by City Council in December 1994, with amendments approved in November 1995. The CCMP is located in the southeastern portion of the MMCPA and includes guidance required to convert the current site, which has supported resource extraction operations, to a mixture of industrial, commercial, and residential land use as well as recreational and open space amenities. Phase 1 of the CCMP – the Fenton Carroll Canyon Technology Center – was approved by City Council

in December 2001 and has been constructed. Following Phase I, the CCMP was rescinded and replaced by the 3RMP, which is considered Phase II of the CCMP.

The 3RMP was approved by City Council on September 29, 2020. The 3RMP is located in the southern, central portion of the MMCPA, immediately southwest of the CCMP area (Figure 3). Like the CCMP, the 3RMP provides guidance for the redevelopment of the former Hansen Aggregates gravel mining operation site into open space/park land (including restoration of creek and floodplain features), both commercial and residential uses, an industrial park, and a transit system.

The draft final SCMP is pending adoption by City Council. The SCMP is located in the southeastern portion of the MMCPA and overlaps with the eastern portion of the former CCMP (Figure 3). The SCMP proposes a Community Plan Amendment (CPA) to allow approval of a rezone and subdivision map that will result in redevelop the former Vulcan Materials active mining operation into a mixed-use, transit-oriented development consisting of commercial and residential uses, business and industrial parks, a hotel, and open space/park land.

Biological resources information provided in the CCMP, 3RMP, and SCMP was used to obtain more refined data for these areas during preparation of this biological resources report.



SOURCE: Esri 2020

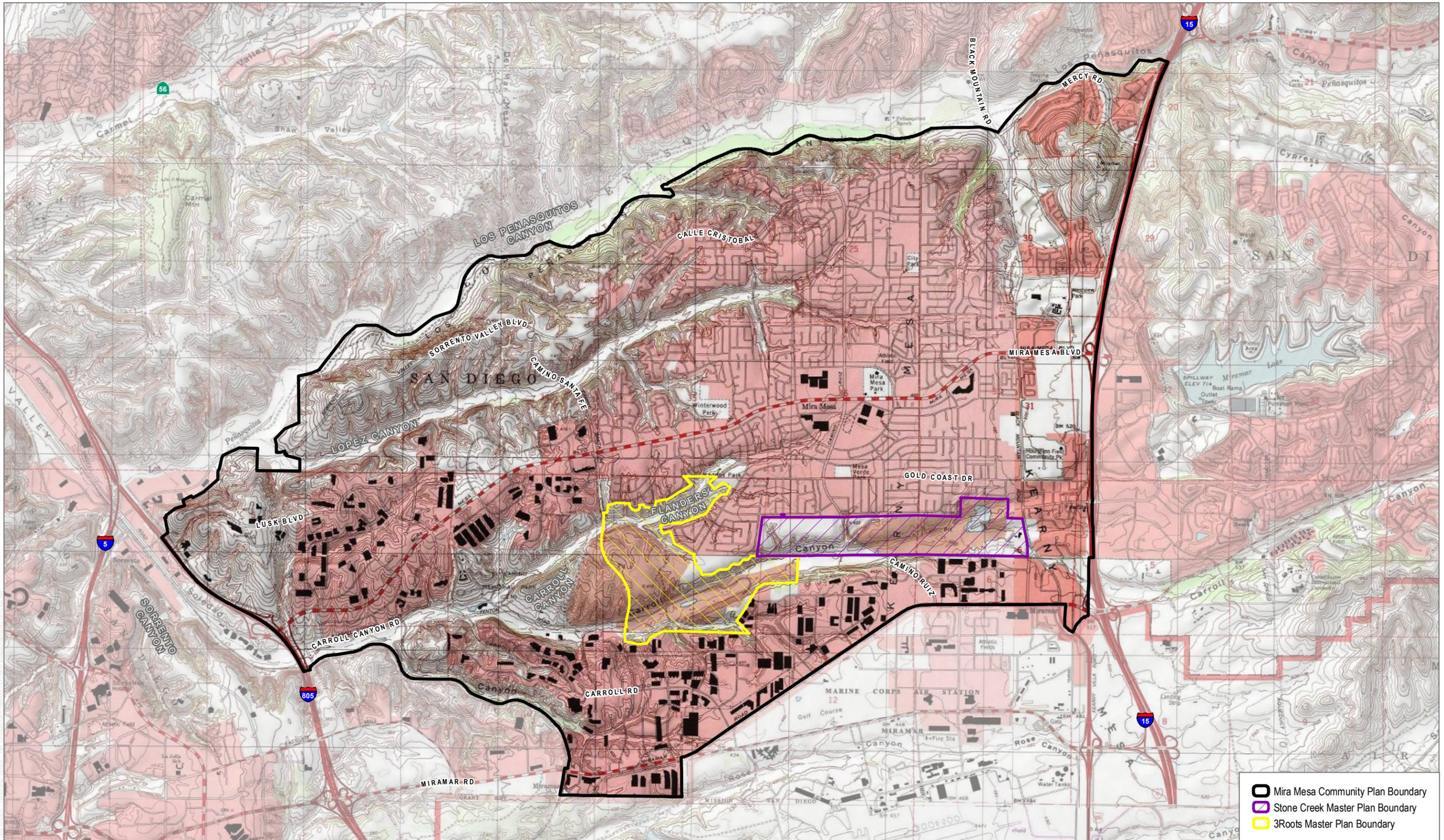


FIGURE 1

Regional Location

Mira Mesa Community Plan Update

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-  Mira Mesa Community Plan Boundary
-  Stone Creek Master Plan Boundary
-  3Roots Master Plan Boundary

SOURCE: USGS 7.5-Minute Series Del Mar and Poway Quadrangles

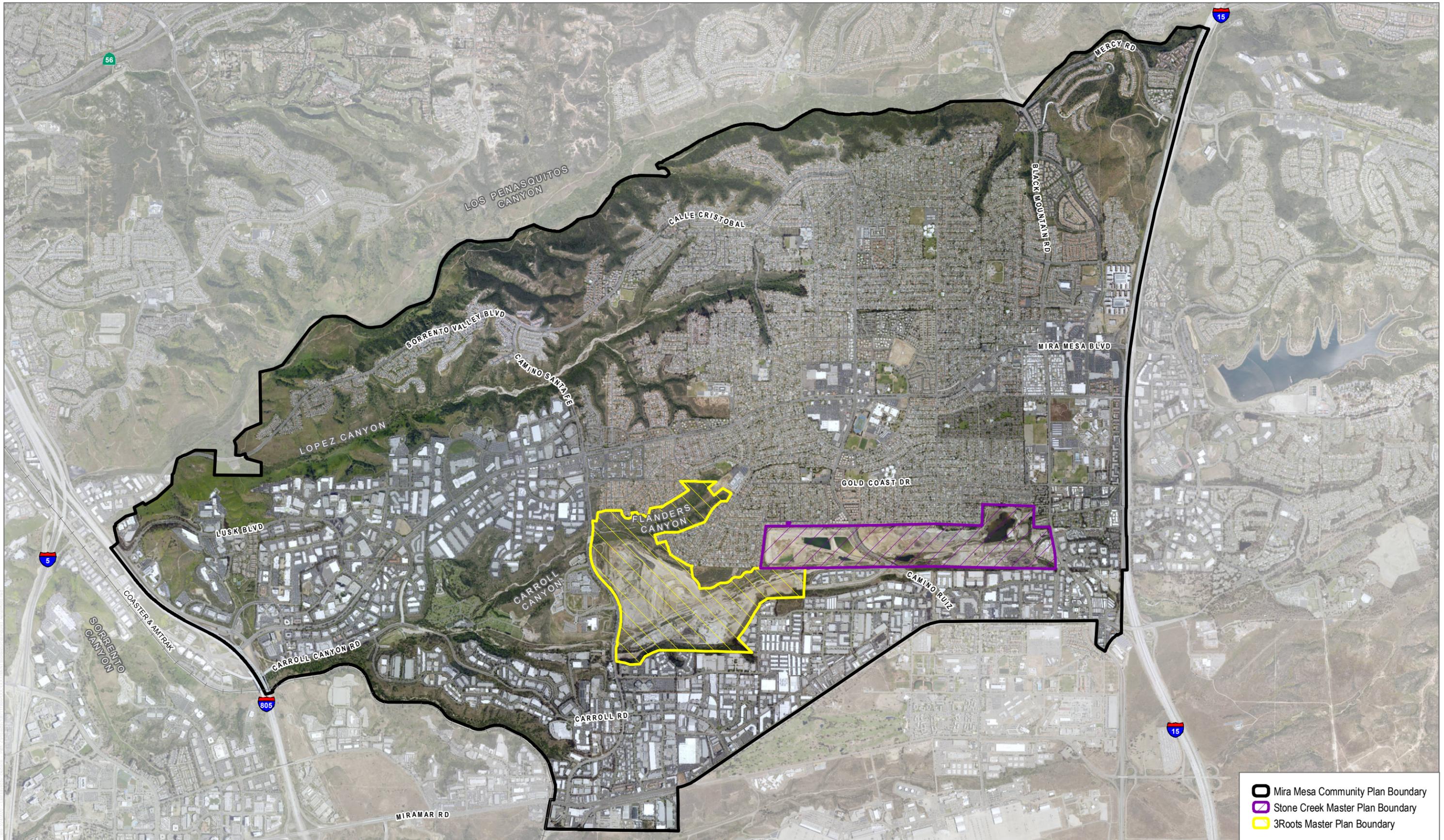


FIGURE 2

USGS Topography

Mira Mesa Community Plan Update

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SOURCE: USGS 7.5-Minute Series Del Mar and Poway Quadrangles

FIGURE 3

Aerial Photograph

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SECTION 2.0 - REGULATORY FRAMEWORK

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

2.1 APPLICABLE FEDERAL REGULATIONS

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

2.1.1 Federal Endangered Species Act

The Federal Endangered Species Act (FESA) is administered by the 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 its Multiple Species Conservation Program (MSCP) Subarea Plan as well as through approval of the Vernal Pool Habitat Conservation Plan (VPHCP; City 2019a).

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

2.1.3 Migratory Bird Treaty Act

All migratory bird species that are native to the U.S. 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 MMCP update area are discussed in this section.

2.2.1 California Environmental Quality Act

The California Environmental Quality Act (CEQA) is a statute 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 may impact 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

CFGF Sections 1600 through 1603 regulate project activities within rivers, streams, lakes, and riparian habitat. CFGF 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.

CFGF 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 CFGF or any regulation made pursuant to the CFGF.

CFGF 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 CFGF or any regulation made pursuant to the CFGF.

CFGF 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 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 U.S. 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

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 MSCP Subarea Plan Implementing Agreement was adopted by USFWS, CDFW, and the City in July 1997 and outlines the implementation of the MSCP 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 MSCP 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 listed in Appendix A of the MSCP Subarea Plan, projects within the City must comply with other MSCP Subarea Plan requirements, which include Boundary Adjustments (MSCP Subarea Plan Section 1.1.1); Compatible Land Uses (MSCP Subarea Plan Section 1.4.1), General Planning Policies and Design Guidelines (MSCP Subarea Plan Section 1.4.2), Land Use Adjacency Guidelines (MSCP Subarea Plan Section 1.4.3), and General Management Goals and Objectives (MSCP Subarea Plan Section 1.5). Other management policies as well as additional local, state, and federal laws and regulations may 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 MMCPA. 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 MSCP Subarea Plan and Implementing Agreement are applicable to proposed development within the MMCPA. Sections of the MSCP Subarea Plan that are applicable to the MMCPA 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 (Figure 4: Conserved Lands and Open Space). 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 percent development is allowed in the least sensitive area (e.g., avoid wetlands, sensitive habitats, MSCP-covered Narrow Endemic Species). If more than 25 percent is required, an MHPA boundary line adjustment would be required for the portion that exceeds the 25 percent 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 (BLC) 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 majority of the MMCPA is within the MSCP Subarea Plan 'Northern Area' (Section 1.2.4), with a small portion in the south in the MSCP Subarea Plan 'Urban Area' (Section 1.2.3). Both Urban Area MHPA and Northern Area MHPA occur in the MMCPA (Figure 4).

Urban Area MHPA

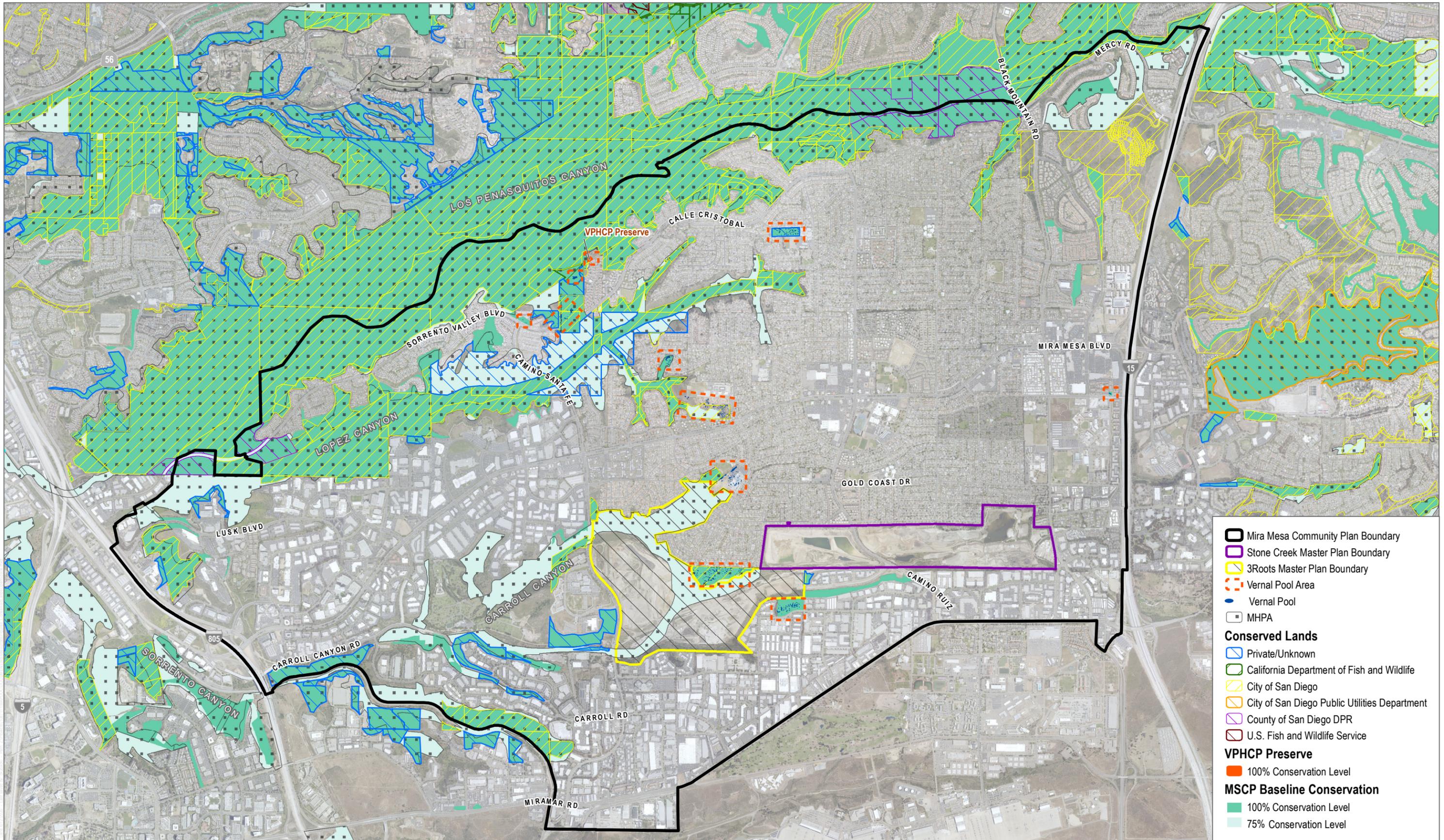
MHPA areas within the portion of the Urban Area that is within the MMCPA mainly consist of undeveloped, urban canyons (i.e., Carroll Canyon, Flanders Canyon) and other undeveloped hillsides that are in relative proximity to other lands designated as MHPA. While these MHPA areas have not been incorporated 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 MSCP 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 MSCP Subarea Plan). Neither B15 nor B16 is located within the MMCPA; therefore, they do not apply to projects within the MMCPA.

Northern Area MHPA

MHPA areas within the portion of the Northern Area that is included in the MMCPA 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 MMCPA.

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



SOURCE: SANGIS 2017, 2019, 2020; City of San Diego 2017

FIGURE 4
Conserved Lands and Open Space
 Mira Mesa Community Plan Update

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2.3.2.2 MSCP Subarea Plan: Boundary Adjustments

Section 1.1.1 of the MSCP Subarea Plan discusses MHPA boundary line adjustments. Boundary line corrections are also allowable under certain circumstances. See below for an expanded discussion for the MMCPA.

MHPA Boundary Line Adjustments

MHPA boundary line adjustments may be made without the need to amend the MMCP in cases where the new MHPA boundary results in an area of equivalent or higher biological value. The determination of the biological value of a proposed boundary change will be made by the City in accordance with the MSCP Subarea Plan, with the concurrence of the wildlife agencies. If the determination is that the adjustment will result in the same or higher biological value of the MHPA, no further action by the jurisdictions or wildlife agencies shall be required.

Any adjustment to the MHPA boundary will be disclosed in the environmental document (project description) prepared for the specific project. An evaluation of the proposed boundary adjustment will be provided in the biological technical report and summarized in the land use section of the environmental document. An adjustment that does not meet the equivalency test shall require additional documentation and may result in an amendment to the MSCP Subarea Plan.

MHPA Boundary Line Corrections

MHPA boundary line corrections are required when areas that have been included in the MHPA include significant portions of existing development while other areas containing sensitive biological resources were not included. Prior to approval of the MSCP Subarea Plan, a comprehensive, systematic evaluation was conducted in an attempt to remove areas of existing developed land from the MHPA so that only areas with biological resources are included.

During preparation of this MMCPA, the City conducted a broad-scale review of the MMCPA to evaluate areas designated as open space and areas within the MHPA for their contribution to conservation of ESL to determine if any MHPA boundary line corrections were required. No areas requiring MHPA boundary line corrections were identified.

Future projects, however, may identify the need for MHPA boundary line corrections during the more detailed studies conducted during the planning process for these projects. To determine if an MHPA boundary line correction is required, the applicant should review applicable available GIS layers for the project area and should document the existing conditions on the project site. If there appears to be a mapping error, an MHPA boundary line correction may be considered if it would not result in (a) removal of habitat, including wetlands; or (b) impacts to biological buffer areas (e.g., wetland buffers, wildlife corridors).

An MHPA boundary line correction would not prevent the applicant from having to comply with the City's Land Use Adjacency Guidelines, ESL Regulations, and Steep Hillside Regulations, and other applicable regulations as outlined in the MSCP Subarea Plan.

2.3.2.3 MSCP Subarea Plan: Land Use Considerations

Section 1.4 of the MSCP 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 MSCP 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 MSCP 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 MSCP 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 MMCPA.

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 MSCP 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 MSCP 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 State 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 MSCP 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 MSCP Subarea Plan. 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 impactful 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.

2.3.2.4 MSCP Subarea Plan: Framework Management Plan

Section 1.5 of the MSCP 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 MSCP 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 MSCP 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 MSCP 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 MSCP Subarea Plan as funds become available. The directives outlined in Section 1.5.2 of the MSCP Subarea Plan would apply to projects within the MMCPA 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 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. 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. For giant reed removal, the Riverside County multi-jurisdictional management effort and experience should be investigated and relevant techniques used. Similarly, tamarisk removal should use the Nature Conservancy's experience in the Southern California desert regions, while artichoke thistle removal should reference the Nature Conservancy's experience in Irvine. Other relevant knowledge and experience is available from the California Exotic Pest Plant Council and the Friends of Los Peñasquitos Canyon Preserve.
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 MSCP Subarea Plan outline the management policies and directives for Urban Habitat Lands and for the Northern Area, respectively. More specifically, these sections provide the MSCP 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 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.
- 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 MSCP 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 MSCP Subarea Plan does not include any specific management directives for Urban Habitat Lands.

Northern Area

Section 1.5.8 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 MMCPA include:

- San Dieguito River Park Concept Plan (San Dieguito River Park JPA 2002) – While not within the MMCPA, 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 – While both Torrey Pines State Park and Los Peñasquitos Lagoon are located west of and outside of the boundaries of the MMCPA, both may support wildlife that may also utilize the natural habitats within the MMCPA. 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) – Los Peñasquitos Canyon Preserve is managed according to the Los Peñasquitos Canyon Preserve Master Plan, which 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

The specific management directives for the Northern Area that apply to the MMCPA, specifically those areas, at the edges of Los Peñasquitos Canyon and Lopez Canyon, as well as to University City south of Lopez Canyon included the following:

Priority 2:

1. 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.

2.3.3 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; 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 regulations in areas (1) with a natural slope gradient of at least 25 percent (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 percent (200 feet of vertical rise for every 100 feet of horizontal distance) with an increase in elevation of at least 10 feet (City 2004). The vertical elevation must occur generally in the area with the steep hillside and may include some pockets of area with less than 25 percent gradient.

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 MMCPA 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; and San Diego Municipal Code, Land Development Code, Steep Hillside Guidelines (City 2004). 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 (City 2004). Community-specific requirements that would apply to the MMCPA include, but are not limited to:

- Grading over the rim of Los Peñasquitos Canyon shall not be permitted.
- Clustered units, single-story structures, or single-story elements, roofs sloped toward the canyon, or increased setbacks from the canyon rim shall be used to ensure that visibility of new development from Los Peñasquitos Canyon Preserve is minimized. Development shall not be visible from the northern trail in Los Peñasquitos Canyon or the location of the planned trail in Lopez Canyon at the point that is located nearest to the proposed development. Lines-of-sight from the trails to the proposed development shall be submitted by the applicant.
- Fences adjacent to Los Peñasquitos Canyon Preserve shall be constructed of wrought or cast iron, or vinyl-coated chain link with a wooden frame.
- Landscaping adjacent to Los Peñasquitos, Lopez, Carroll, or Rattlesnake canyons shall be predominantly native species.
- Wherever possible, public access to the rim and view of Los Peñasquitos Canyon Preserve should be provided in the form of paths, scenic overlooks, and streets.

2.3.4 Vernal Pool Habitat Conservation Plan

The City VPHCP (City 2019a) 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 MSCP 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 MMCPA 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 MMCPA, vernal pools occur in isolated parcels primarily on mesa tops.

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 VPHMP-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 – Tierra Alta – occurs within the MMCPA. This project includes construction of eight single-family residences on an approximately 4.44-acre site located at the northern terminus of Caminito Rodar on currently undeveloped land adjacent to Los Peñasquitos Canyon Preserve.

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

2.3.5 City of San Diego General Plan

The City's General Plan (City 2008) 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 provided in this section – Open Space and Landform Preservation, Coastal Resources, Water Resources Management, Urban Runoff Management, Biological Diversity, Wetlands, and Urban Forestry.

2.3.5.1 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 MMCPA 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 MSCP 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.

2.3.5.2 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 MMCPA 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.
- 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 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.

2.3.5.3 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 MMCPA 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.

2.3.5.4 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 MMCPA 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. Educate 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.

2.3.5.5 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 MMCPA 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 MSCP 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.

2.3.5.6 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 MMCPA 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.

2.3.5.7 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 MMCPA 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.

2.3.6 City of San Diego Parks Master Plan

The City’s Parks Master Plan (PMP; City 2021) provides the framework for meeting the changing recreational needs and interests of the City’s residents by identifying policies, actions, and partnerships for planning parks, recreation facilities, and programs that will guide the transformation of the City’s parks and recreation resources into a sustainable, flexible, and innovative system. The PMP provides opportunities for residents to recreate citywide within a park system that is relevant, accessible, iconic, diverse, biologically sustainable, and equitable while ensuring the City meets its obligations under existing guiding documents and plans. The PMP is not a stand-alone document and does not supercede any of the existing guiding documents and plans. Instead, it is intended to complement these existing guiding documents and plans and integrate park planning with other Citywide programs.

Future planned parks within the MMCPA will be consistent with the existing guiding documents and plans discussed earlier and later in this section and will be consistent with other park planning documents such as General Development Plans, Park Master Plans, and park precise plans. In addition, all future planned parks should follow the guidance provided in the Consultant’s Guide to Park Design and Development (City 2019b).

2.3.7 Mira Mesa Community Plan Policies

The current MMCP includes a Sensitive Resources and Open Space Systems section. The goals of this section are to provide “a community-wide open space system that:

- Preserves sensitive resources, including plant and animal habitats and wildlife linkages;
- Preserves natural drainage systems;
- Protects the public health and safety by restricting development in areas subject to flooding or high fire risk;
- Provides opportunities for outdoor recreation;
- Guides the form of development by defining boundaries for urban expansion;
- Provides linkages in the regional open space system of interconnected canyons and hillsides.” (City 2011)

The MMCP includes both policies and proposals for the biological resources within the MMCPA. These are discussed in the sections, below.

2.3.7.1 Applicable Mira Mesa Community Plan Policies

The following policies are applicable to the biological resources within the MMCPA and taken directly from the current MMCP:

Policy 1 Open Space Preservation

- a. Sensitive resource areas of community-wide and regional significance shall be preserved as open space.
- b. Discretionary review shall be required for any proposed development in or adjacent to designated open space to ensure the application of the Policies and Proposals in the MMCP.

Policy 2 Trails

- a. Public access in areas of environmentally sensitive habitats shall be limited to low-intensity recreational, scientific, or educational use. Access shall be controlled or confined to designated trails or paths.
- b. Trails or other recreational activities planned for resource areas shall be designed to avoid damaging impacts to the resources. No access shall be approved that would result in significant disruption of habitat.

Policy 3 Wildlife Corridors

Construction or improvements of roadways in sensitive habitat or designated wildlife corridors shall be designed to impact the least amount of sensitive area feasible. Bridges, elevated causeways, or other

mechanisms determined to be appropriate for the safe passage of wildlife by the Planning Director shall be used in place of culverts and fill in order to maintain wildlife crossings and open space connections. Impacts to wildlife crossings shall also be considered in the determination of design speeds for new or realigned roadways. This is especially important for Carroll Canyon Road and Camino Santa Fe – the two remaining major roads to be built in Mira Mesa that will require crossing floodplains and sensitive habitat area – but also for lower classification local roads that will provide interior circulation for development projects.

Policy 4 Resource Management

- a. No rare, threatened, endangered or candidate species, species of concern or those that qualify for federal or state listing shall be disturbed without all necessary City, state and/or federal permit approvals.
- b. No filling, clearing, grubbing or other disturbance of biologically sensitive habitat shall be permitted without all necessary City, state and federal permit approvals and completion of mitigation requirements.
- c. No encroachment shall be permitted into wetlands, including vernal pools. Encroachment into native grasslands, Coastal Sage Scrub and Maritime Chaparral shall be consistent with the RPO. Purchase, creation or enhancement of replacement habitat area shall be required at ratios determined by the RPO or state and federal agencies, as appropriate. In areas of native vegetation that are connected to an open space system, the City shall require that as much native vegetation as possible is preserved as open space.
- d. Habitat area purchased as an open space preserve, as natural open space or open space mitigation should be located adjacent to existing open space or in areas that will ensure viable open space connections.
- e. Sensitive habitat area that is degraded or disturbed by development activity or other human impacts (such as non-permitted grading, clearing or grubbing activity or four-wheel drive activity) shall be restored or enhanced with the appropriate native plant community. This is critically important when the disturbed area is adjacent to other biologically sensitive habitats. Manufactured slopes and graded areas adjacent to sensitive habitat shall be revegetated with the appropriate native plant community, as much as is feasible considering the City's brush management regulations.
- f. Exotic or invasive plant species shall not be planted within or adjacent to existing sensitive habitats.
- g. For all areas that are to be preserved as habitat area, resource management and monitoring plans shall be developed, consistent with the City's Mitigation Monitoring and Reporting Program (MMRP).
- h. Riparian areas:

- 1) Riparian areas within Los Peñasquitos Canyon Preserve.
 - a) Riparian areas within Los Peñasquitos Canyon Preserve shall be preserved in their natural state with a buffer of adjoining upland habitat having a minimum width of 100 feet. The buffer shall start at the outside edge of the defined riparian habitat, or at the outside edge of the 100-year Federal Emergency Management Agency floodplain, whichever is wider or outermost.
 - b) Applicants for coastal development permits for projects located in the watershed of Los Peñasquitos Lagoon shall, in addition to meeting all other requirements of this local coastal program, enter into an agreement with the City and the state Coastal Conservancy as a condition of development approval to pay a Los Peñasquitos watershed restoration and enhancement fee to the Los Peñasquitos Lagoon Fund for restoration of Los Peñasquitos Lagoon and its watershed.
- 2) All other riparian areas should be preserved in their natural state with a buffer of adjoining upland habitat having a minimum width of 100 feet. The buffer shall start at the outside edge of the defined riparian habitat, or at the outside edge of the 100- year Federal Emergency Management Agency floodplain, whichever is wider or outermost.
- 3) Development adjacent to riparian areas shall be designed to avoid erosion, sedimentation and other potentially damaging impacts (such as pollution from urban runoff) which would degrade the quality of the resources in the area (including wildlife habitat, vegetation, water quality or quantity and visual quality).
 - i. Vernal Pools: The remaining vernal pool habitat in the community shall be preserved and shall be protected from vehicular or other human-caused damage, encroachment in their watershed areas
 - j. Oak Woodlands: No loss of natural stands of oaks or oak woodland habitat shall be permitted nor shall grading or other disturbance be permitted within the oak woodland habitat area. Oaks are susceptible to an often fatal fungus resulting from changes in hydrology; therefore, no changes shall be made to the watershed/drainage area of oak woodlands that could affect the surface or subsurface hydrology and no irrigation shall be permitted within 200 feet of the trunk of an oak tree.
 - k. Coastal Sage Scrub: Coastal Sage Scrub shall be protected from grading or impacts from development. Encroachment into this habitat type, or mitigation for any impacts upon it, shall comply with the County of San Diego Resource Protection Ordinance and the USFWS recommendations. If these overlap, the policy that requires the higher degree of protection will take precedence.
 - l. Maritime Chaparral: Maritime Chaparral shall be protected from impacts due to adjacent development, including grading and brush

management, that may cause damage or degradation to the habitat qualities of this resource.

- m. Grasslands: Grasslands that serve as raptor foraging areas or are physically linked to other sensitive habitat shall be preserved in, or restored to, their natural state.

2.3.7.2 Applicable Mira Mesa Community Plan Proposals

The following proposals are applicable to the biological resources within the MMCPA and taken directly from the current MMCP:

Proposal 1 Open Space Preservation

Preserve the floodplain and adjacent slopes of the five major canyon systems that traverse the community – Los Peñasquitos Canyon, Lopez Canyon, Carroll Canyon, Rattlesnake Canyon and Soledad Canyon, and the remaining vernal pool sites – in a natural state as open space.

Proposal 2 Open Space Restoration

Restore Carroll Canyon Creek to function as a linear open space park, between El Camino Memorial Park and Black Mountain Road, as sand and gravel extraction in Carroll Canyon is phased out. General restoration requirements are addressed in the CCMP Element of the MMCP. Specific restoration plans will be required through the master plan development process.

Proposal 3 Trails

Provide a system of pathways or trails throughout Mira Mesa's open space canyons to increase access to open space and provide alternate means of reaching recreational facilities. General locations of proposed trails in Los Peñasquitos, Lopez, Carroll and Rattlesnake canyons are shown in the MMCP. Specific locations will be reviewed by the Resource Management Section of the Planning Department during the project review process. The Plan will defer specific trail locations in Peñasquitos Canyon Preserve to the joint City and County Master Plan for the Preserve.

Proposal 4 Wildlife Corridors

Preserve and maintain the wildlife connections as shown generally in the MMCP in a natural state. Specific linkages necessary for the long-term viability of the resource areas being joined, or for the wildlife using the connections, will be determined through the project review process. The wildlife crossing shown across Camino Santa Fe at Rattlesnake Canyon shall be a bridge, elevated causeway or other method determined to be appropriate for the safe passage of wildlife by the Planning Director.

Proposal 5 Resource Management: Los Peñasquitos and Lopez Canyons

- a. Protect the Lopez Ridge Vernal Pool area from human impacts while maintaining ecological functioning. This area should be fenced, with no trespassing permitted except to allow for organized ecological tours. Signs should be installed that describe the resource and explain why the area is being protected.
- b. Restore all graded and disturbed areas adjacent to Camino Santa Fe at the Lopez Canyon crossing, to the original plant community of the area as the nearby properties develop.
- c. Monitor wildlife corridors to ensure that they are free of obstructions that could reduce their viability as wildlife crossings. Corrective action should be taken as necessary to ensure that they are operating effectively.

Proposal 6 Resource Management: Carroll, Rattlesnake, and Soledad Canyons

Resource management proposals for Carroll Canyon between El Camino Memorial Park and Black Mountain Road are addressed in the CCMP Element.

- a. Preserve (or restore if disturbed) riparian areas in Carroll and Rattlesnake Canyons to the full width of the floodplain. In order to foster conditions that allow for healthy ecological functioning and provide for adequate wildlife movement, upland habitat such as Coastal Sage Scrub, Grasslands and Maritime Chaparral shall be preserved or restored adjacent to the riparian area wherever possible to provide a buffer with a minimum width of 100 feet. The buffer may be reduced in width to accommodate the construction of Carroll Canyon Road and the future trolley alignment.
- b. Prevent and control the runoff of fertilizers, pesticides and other urban pollution into riparian and floodplain areas by using techniques such as storm water drainage basins with filtering systems and non-toxic, organic products in minimal amounts. This is especially important in areas such as El Camino Memorial Park, with large expanses of lawn, or industrial areas with vast parking lots.
- c. If further improvements are made to Nancy Ridge Road near the floodplain crossing at Carroll Canyon Road, require a bridge that allows for wildlife passage as well as floodwater flows, and restoration of riparian and other indigenous vegetation communities in areas disturbed by roadwork.
- d. Restore wildlife connections between Soledad Canyon and Rose Canyon wherever possible. In particular, a connection along the railroad tracks needs to be restored, as well as connections through existing industrial parking areas, with additions of adequate indigenous landscaping.

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SECTION 3.0 - METHODS

This MMCPU biological resources report was prepared using data available obtained from existing environmental documents and database queries. No field surveys were conducted, because this MMCPU biological resources report is intended to provide a broad-scale analysis of biological resources, and all future proposed projects within the MMCPA 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 MMCPU 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 MMCPA. The sources for the literature and database review included but were not limited to the following:

- San Diego Geographic Information Source (SanGIS) Vegetation Information in the San Diego Region (SanGIS 2022)
- CDFW California Natural Diversity Database (CNDDB) (CDFW 2022a)
- California Native Plant Society (CNPS) Inventory of Rare and Endangered Plants (CNPS 2022)
- Calflora: information on wild California plants (Calflora 2022)
- USFWS historical species database (USFWS 2022a)
- USFWS critical habitat database (USFWS 2022b)
- County MSCP (County 1992)
- MSCP Subarea Plan (City 1997)
- U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) Soil Survey Geographic Database (USDA NRCS 2022)
- USFWS National Wetlands Inventory (USFWS 2022c)
- San Diego County Plant Atlas (SDNHM 2022)
- 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 2019a)
- 3Roots San Diego Project Biological Technical Report (Helix 2019)
- Stone Creek Master Plan Biological Technical Report (RECON 2015)

3.2 BOTANICAL RESOURCES

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

3.2.1 Vegetation Communities and Land Cover Types

The majority of the vegetation communities and land cover types documented within the MMCPA were obtained by using the SanGIS database (SanGIS 2022), which maintains a regional geographic information systems (GIS) database that provides public access to data layers for vegetation communities and land cover types that are updated frequently. In addition, other documents that provide more detailed vegetation/land cover mapping (e.g., City 2019a; Helix 2019; RECON 2015) were used to refine the mapping where applicable.

Vegetation community and land cover type classifications within the MMCPA that were obtained from the various data sources referenced for this report lacked consistency between documents and the associated mapping efforts. Therefore, an effort was made to combine like vegetation communities and land cover types into single categories based on the classifications provided in the City's Land Development Manual – Biology Guidelines, with the intent of providing preliminary information required for the MMCPA and a broad-scale representation of the vegetation communities and land cover types within the MMCPA. To the extent possible, the available data were used to classify vegetation communities and land cover types according to Holland (1986) as modified by Oberbauer et al. (2008). Sensitive vegetation communities were determined following the City's Land Development Manual – Biology Guidelines.

3.2.2 Sensitive Plant Species

Sensitive plant species locations were obtained from database queries of the USFWS sensitive species database, CNDDDB (CDFW 2022a), and SanBIOS database (SanGIS 2022). In addition, data obtained from the CNPS online rare plant inventory (CNPS 2022), Calflora website (Calflora 2022), and the San Diego County Plant Atlas (SDNHM 2022) were used to provide additional data on the locations of sensitive plant species within the MMCPA.

Common and scientific names for plant species are those presented in the CDFW CNDDDB *State and Federally Listed Endangered, Threatened, and Rare Plants of California* (CDFW 2022b).

3.3 SENSITIVE WILDLIFE

Sensitive wildlife species locations were obtained from database queries of the USFWS sensitive species database, CNDDDB (CDFW 2022a), and SanBIOS database (SanGIS 2022). 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 MMCPA.

Common and scientific names for wildlife species are those presented in the CDFW CNDDDB *State and Federally Listed Endangered and Threatened Animals of California* (CDFW 2022c).

SECTION 4.0 - EXISTING CONDITIONS

The existing conditions within the MMCPA are described below. These existing conditions are based on the results of the literature and database searches conducted during preparation of this document, and such conditions can naturally change over time. BBS did not conduct any field surveys within the survey area; therefore, the lists of plant and wildlife species include species known to occur or with a potential to occur in the vicinity of the MMCPA based on records recorded in the historical sensitive species databases and/or presented in the existing literature for the MMCPA. Because site conditions can change naturally overtime, future projects within the MMCPA should conduct an updated literature and database review to obtain the most current data for the project area. This section presents the existing conditions within the MMCPA at the time this document was prepared.

4.1 PLAN AREA DESCRIPTION

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

4.1.1 Topography

The topography within the MMCPA ranges from the lowest elevation, which is approximately 40 feet above mean sea level and is located in the western portion of Los Peñasquitos Canyon, to the highest elevation, which is approximately 838 feet above mean sea level in the northeast portion of the MMCPA, in Canyon Hills Open Space (Figure 2). The topography varies between flat mesa tops, where much of the current development is concentrated, to steep hillsides associated with the various canyons – Los Peñasquitos, Lopez, Rattlesnake, Carroll, and Soledad canyons – located within the MMCPA.

The entire MMCPA is located in the Los Peñasquitos Creek Hydrologic Unit (HU) (Figure 5: Hydrology). Hydrologic subareas divide HUs into smaller areas of relatively similar topography and land use. Thus, more specifically, the MMCPA is located within the Miramar Reservoir Hydrologic Subarea with small parts extending into the Poway Hydrologic Subarea and Miramar 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 many 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 Interstate 5 and ultimately terminate in the Los Peñasquitos Lagoon. Rose Canyon and San Clemente Canyon merge near Interstate 5 and ultimately feed into Mission Bay. Tecolote Canyon feeds directly into Mission Bay (River Focus 2022).

There are multiple canyons within the Mira Mesa Community, including Lopez Canyon, Flanders Canyon, and Carroll Canyon. Hydrology within these canyons generally flows from east to west. Lopez Canyon is a tributary of the larger Los Peñasquitos Creek. Flanders Canyon is a tributary to Carroll Canyon Creek. Carroll Canyon merges with Los Peñasquitos Creek in Soledad Canyon, ultimately ending in the Los Peñasquitos Lagoon (Figure 5) (River Focus 2022).

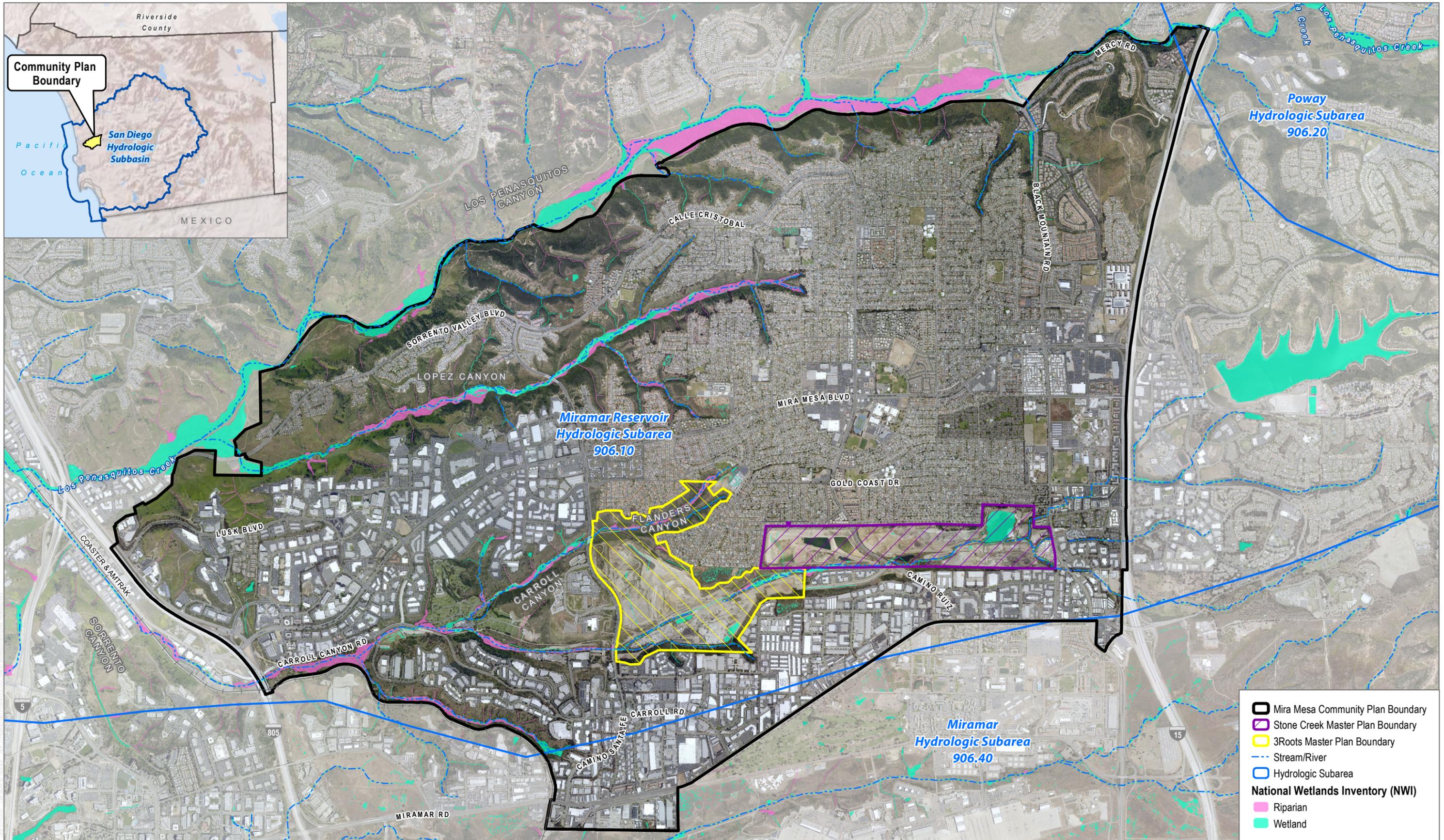
4.1.2 Land Use

The MMCPA currently supports a mix of private, public, and government land uses that include low- to high-density residential developments, small to large industrial and commercial facilities and complexes, educational facilities (i.e., elementary schools, middle schools, high schools, colleges), a large cemetery, and a variety of parks and open space areas as well as transportation and utility infrastructure.

4.1.3 Soils

A query of the USDA NRCS database (USDA NRCS 2022) indicated that 19 soil types have been mapped within the MMCPA. Of these, only one – Chino silt loam (saline, 0 to 2 percent slopes) – is associated only with urban/developed lands but is not associated with native habitats within the MMCPA. Similarly, only one – Corralitos loamy sand (0 to 5 percent slopes) – is associated only with native habitats (i.e., wetlands, native grassland, mixed chaparral) but is not associated with urban/developed lands in the MMCPA. The remaining 17 soil types are associated with both native and urban/developed lands and include:

- Altamont clay (5 to 9, 9 to 15, 15 to 30 [some eroded], and 30 to 50 percent slopes)
- Carlsbad gravelly loamy sand (5 to 9 percent slopes)
- Chesterton fine sandy loam (5 to 9 percent slopes)
- Diablo-Olivenhain complex (9 to 30 percent slopes)
- Gravel pits
- Huerhuero loam (2 to 9, 5 to 9 [eroded], 9 to 15 [eroded], and 15 to 30 [eroded] percent slopes)
- Olivenhain cobbly loam (2 to 9, 9 to 30, and 30 to 50 percent slopes)
- Olivenhain-Urban land complex (9 to 30 percent slopes)
- Redding cobbly loam (9 to 30, 15 to 50 [dissected] percent slopes)
- Redding gravelly loam (2 to 9 percent slopes)
- Redding-Urban land complex (9 to 30 percent slopes)
- Riverwash
- Salinas clay loam (2 to 9 percent slopes)
- San Miguel rocky silt loam (9 to 30 percent slopes)
- San Miguel-Exchequer rocky silt loams (9 to 70 percent slopes)
- Terrace escarpments
- Tujunga sand (0 to 5 percent slopes)



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

FIGURE 5
Hydrology

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4.2 BOTANICAL RESOURCES

The approximately 10,700-acre MMCPA supports a wide variety of vegetation communities and land cover types, because the area not only supports urban/developed areas but also includes open space associated with canyons, parks, and preserves (Figure 6: Vegetation Communities and Land Cover Types). Various data sources were used to obtain the vegetation community and land cover type classifications within the MMCPA; however, the classifications used between data sources were inconsistent and initially resulted in 45 different vegetation community/land cover type classifications.

Because many of these varying classifications referred to the same vegetation communities and land cover types, like vegetation communities and land cover types were combined into single categories based on the classifications provided in the City’s Land Development Manual – Biology Guidelines, with the intent of providing preliminary information required for the MMCPU and a broad-scale representation of the vegetation communities and land over types within the MMCPA.

Following this effort, 21 vegetation communities and land cover classifications were identified within the MMCPA (City 2019a; Helix 2019; RECON 2015), including 12 upland and 9 wetland classifications (Figure 6). These vegetation communities and land cover types are summarized in Table 1 and discussed in more detail later in this section.

Table 1. Vegetation Communities and Land Cover Types in the MMCPA

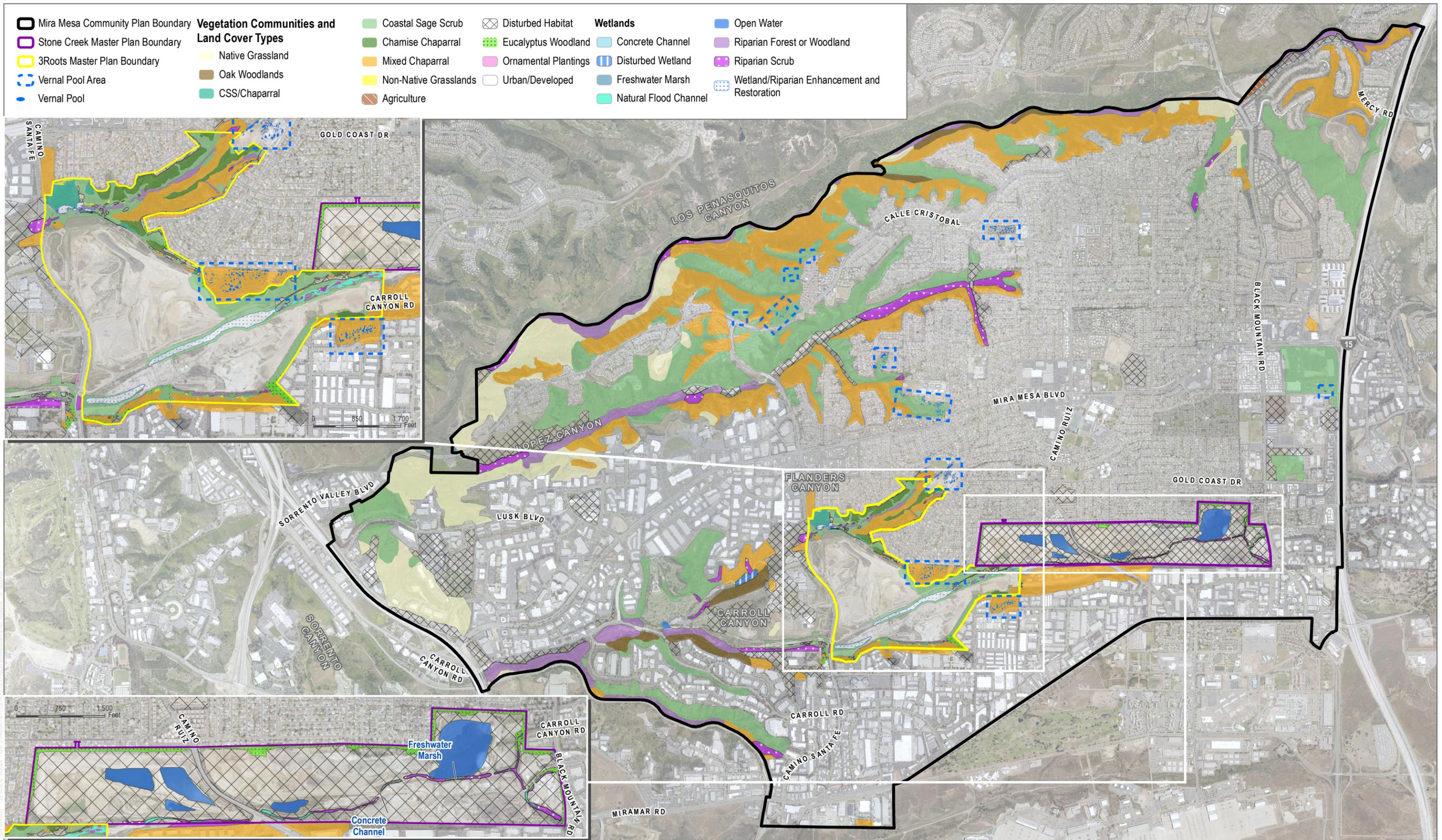
Vegetation Community/Land Cover Type	Approx. Acres
Upland Vegetation Communities	
Native Grassland	400.8
Oak Woodland	59.7
Coastal Sage Scrub	989.2
Coastal Sage Scrub/Chaparral	7.2
Mixed Chaparral	877.8
Chamise Chaparral	22.1
Non-Native Grasslands	1.5
Upland Land Cover Types	
Disturbed Land	657.1
Eucalyptus Woodland	23.8
Ornamental Plantings	1.1
Agriculture	3.6
Urban/Developed	7,352.1
Total Uplands	10,396.1
Wetland Vegetation Communities	
Riparian Forest and Woodland	188.4
Riparian Scrub	87.2
Freshwater Marsh	1.7
Open Water	33.2
Natural Flood Channel	6.2

Table 1. Vegetation Communities and Land Cover Types in the MMCPA

Vegetation Community/Land Cover Type	Approx. Acres
Upland Vegetation Communities	
Disturbed Wetland	3.8
Vernal Pools	5.3
Wetland/Riparian Enhancement/Restoration	12.3
Concrete Channel	0.1
Total Wetlands	338.1

Note: *wetland does not refer to U.S. Army Corps of Engineers wetlands or waters of the U.S.

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



SOURCE: SANGIS 2017, 2019; City of San Diego 2012

FIGURE 6

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4.2.1 Upland Communities

Initially, 22 upland vegetation communities and land cover types were identified within the MMCPA (SanGIS 2022; City 2019a; Helix 2019; RECON 2015). These were categorized into 12 upland vegetation communities and land cover types, including native grassland, oak woodlands, coastal sage scrub, coastal sage scrub/chaparral, mixed chaparral, chamise chaparral, non-native grasslands, Disturbed Land, eucalyptus woodland, ornamental plantings, agriculture, and urban/developed (Figure 6). A brief description of each of these vegetation communities and land cover types is provided below.

4.2.1.1 Native Grassland

The ‘native grassland’ classification includes all areas mapped as valley and foothill grassland (SanGIS 2022). Native grassland is characterized by mid-height (up to 2 feet), relatively low (greater than 20 percent) 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 MMCPA, there are approximately 400.8 acres of native grassland. Native grassland occurs primarily along the northern and northwestern boundaries of the MMCPA, primarily in Los Peñasquitos Canyon Preserve and Lopez Canyon but also within undeveloped land located just east of Vista Sorrento Parkway and south of Lusk Boulevard (Figure 6 and Figure 7: Sensitive Vegetation Communities).

4.2.1.2 Oak Woodland

The ‘oak woodland’ classification includes all areas mapped as coast live oak woodland and dense coast live oak woodland (SanGIS 2022; Helix 2019). Coast live oak woodland is dominated by coast live oak (*Quercus agrifolia*), an evergreen tree that can reach between 20 and 70 feet in height. A poorly developed shrub layer is often found beneath the oak canopy and typically includes plant species associated with native and non-native grasslands, coastal sage scrub, and mixed chaparral, such as poison oak (*Toxicodendron diversilobum*), toyon (*Heteromeles arbutifolia*), currant (*Ribes* spp.) and blue elderberry (*Sambucus nigra* ssp. *caerulea*). The herb component is continuous and dominated by ripgut grass (*Bromus diandrus*) and several other introduced taxa (e.g., Italian thistle [*Carduus pycnocephalus*]). Coast live oak woodland is typically found on north-facing slopes and in shaded ravines and drainages in San Diego County where warm temperatures and hot summers persist.

Within the MMCPA, there are approximately 59.7 acres of oak woodland. Oak woodland occurs within Los Peñasquitos Canyon Preserve along the central northern boundary of the MMCPA as well as in Carroll Canyon and an unnamed adjacent canyon in the southwestern portion of the MMCPA (Figures 6 and 7).

4.2.1.3 Coastal Sage Scrub

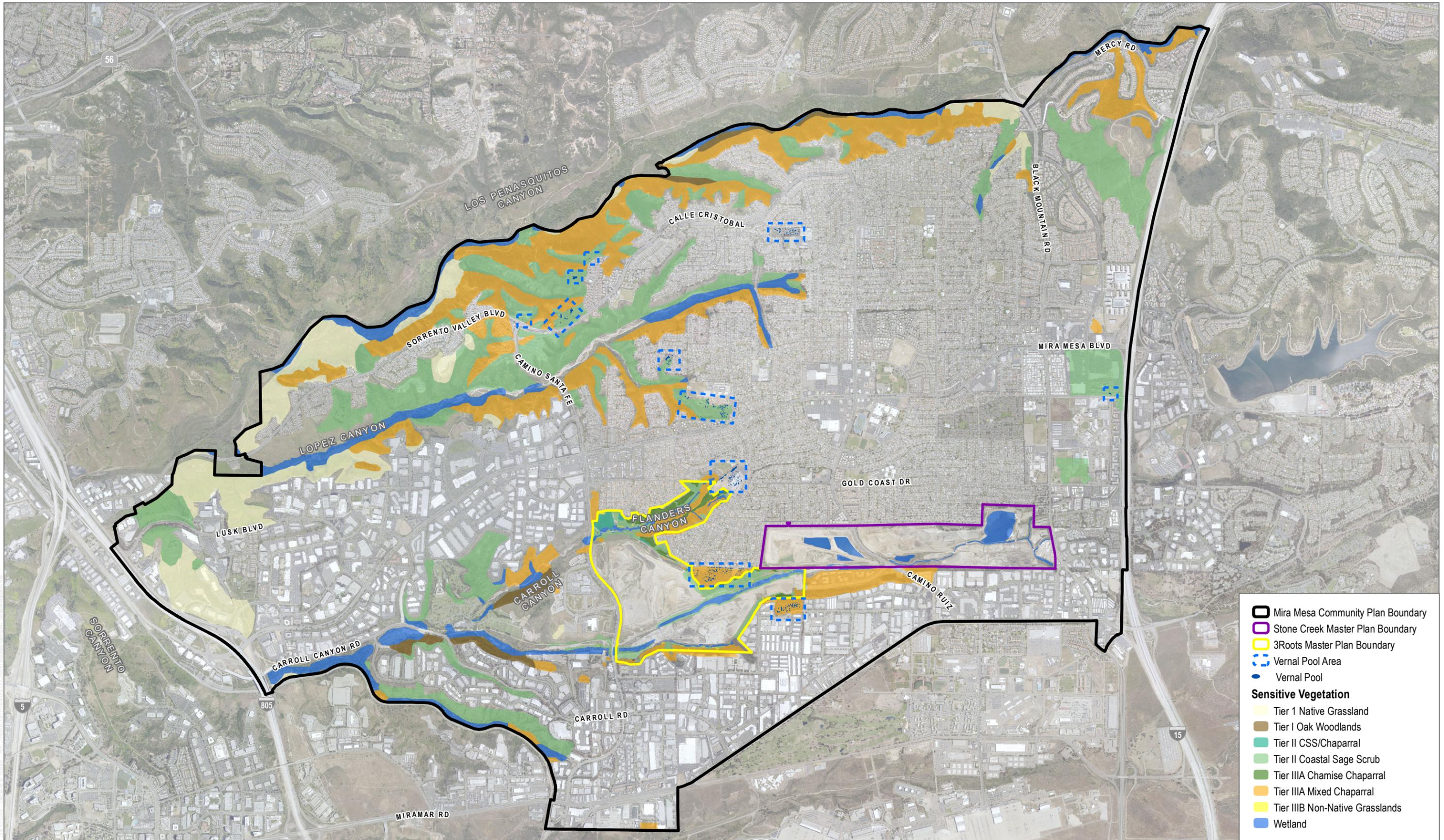
The 'coastal sage scrub' classification includes all areas mapped as Diegan coastal sage scrub, disturbed Diegan coastal sage scrub, baccharis scrub, disturbed baccharis scrub, and upland restoration (City Tier II Habitat) (SanGIS 2022; Helix 2019). These have been presented together under this category based on the requirements for future impact analyses and associated avoidance, minimization, and/or mitigation measures. Each of these vegetation sub-communities is described, below.

Diegan coastal sage scrub (including the disturbed phase) consists mainly of low, soft-woody sub-shrubs (approximately 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 (*Artemisia californica*), 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 (*Encelia californica*), and occasionally live-forevers (*Dudleya* spp.), coast barrel cactus (*Ferocactus viridescens*), and needlegrass (*Stipa* spp.).

Baccharis scrub (including the disturbed phase) is similar to Diegan coastal sage scrub, but it is classified as baccharis scrub because it is dominated by baccharis species, such as broom baccharis and/or coyote brush, and may also include California sagebrush, California buckwheat, black sage, sawtooth goldenbush (*Hazardia squarrosa*), and coastal goldenbush (*Isocoma menziesii*). It often occurs within disturbed Diegan coastal sage scrub and in other areas with nutrient-poor soils but can also be found on upper terraces of river valleys.

Upland restoration (City Tier II Habitat) was used to classify areas that have been reclaimed and restored to native uplands. While this vegetation community includes Diegan coastal sage scrub, southern mixed chaparral, and coastal sage-chaparral transition, it was included within the coastal sage scrub communities because of its classification as Tier II habitat.

Within the MMCPA, there are approximately 989.2 acres of coastal sage scrub. Coastal sage scrub occurs primarily in the western portion of the MMCPA with some scattered locations along the eastern and northeastern MMCPA boundary (Figures 6 and 7).



SOURCE: SANGIS 2017, 2019; City of San Diego 2012

FIGURE 7
 Sensitive Vegetation Communities
 Mira Mesa Community Plan Update

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4.2.1.4 Coastal Sage Scrub/Chaparral

The 'coastal sage scrub/chaparral' classification includes all areas mapped as coastal sage-chaparral transition (Helix 2019). Coastal sage/chaparral is a mixed community including both drought-deciduous sage scrub species and woody chaparral species. This vegetation community includes vegetative cover with roughly equal amounts of both sage scrub and chaparral species. Characteristic dominant species often include chamise (*Adenostoma fasciculatum*), California sagebrush, lilacs (*Ceanothus* spp.), black sage, broom baccharis, laurel sumac, lemonadeberry (*Rhus integrifolia*), and poison oak.

Within the MMCPA, there are approximately 7.2 acres of coastal sage scrub/chaparral. Coastal sage scrub/chaparral occurs in the central portion of the MMCPA, along in the northwestern portion of the 3RMP area (Figures 6 and 7).

4.2.1.5 Mixed Chaparral

The 'mixed chaparral' classification includes all areas mapped as chaparral and southern mixed chaparral (SanGIS 2022; Helix 2019). These have been presented together under this category based on the requirements for future impact analyses and associated avoidance, minimization, and/or mitigation measures. Each of these vegetation sub-communities is described, below.

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 5 and 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. *olivaceus*) but may also include other ceanothus species, such as chaparral whitethorn (*C. leucodermis*) and Orcutt ceanothus (*C. oliganthus*); 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, Eastwood's manzanita (*Arctostaphylos glandulosa*), ceanothus species (*Ceanothus* spp.), toyon, Nuttall's scrub oak (*Quercus dumosa*), laurel sumac, lemonadeberry, spiny redberry (*Rhamnus crocea*), and yucca species (*Yucca* spp.).

Within the MMCPA, there are approximately 877.8 acres of mixed chaparral. Mixed chaparral primarily occurs within the undeveloped canyons located within the MMCPA, including Los Peñasquitos Canyon Preserve, Lopez Canyon, Carroll Canyon, Flanders Canyon, and other small, unnamed canyons, but also occurs in several other scattered locations in the MMCPA (Figures 6 and 7).

4.2.1.6 Chamise Chaparral

The 'chamise chaparral' classification includes all areas mapped as chamise chaparral (Helix 2019). Chamise chaparral is a chaparral community ranging from about 3 to 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 MMCPA, there are approximately 22.1 acres of chamise chaparral. Chamise chaparral occurs in the central portion of the MMCPA, along the northern boundary of the 3RMP boundary (Figures 6 and 7).

4.2.1.7 Non-Native Grassland

The 'non-native grassland' classification includes all areas mapped as non-native grassland (Helix 2019). 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 MMCPA, there are approximately 1.5 acres of non-native grassland. Non-native grassland occurs in the central portion of the MMCPA, along the northern boundary of the 3RMP boundary (Figures 6 and 7).

4.2.1.8 Disturbed Land

The 'disturbed land' classification includes all areas mapped as disturbed and disturbed land (SanGIS 2022; Helix 2019; RECON 2015). 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 MMCPA, there are approximately 657.1 acres of disturbed land. Disturbed land is scattered throughout the MMCPA, both within the open space/canyons as well as within the more urbanized areas (Figure 6).

4.2.1.9 Eucalyptus Woodland

The 'eucalyptus woodland' classification includes all areas mapped as eucalyptus woodland and sparse eucalyptus woodland (Helix 2019; RECON 2015). 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 and, where they form dense, monotypic stands, tend to completely supplant native vegetation, greatly altering community structure and dynamics.

Within the MMCPA, there are approximately 23.8 acres of eucalyptus woodland. Eucalyptus woodland occurs in the southeastern portion of the MMCPA, within and immediately adjacent to the SCMP and 3RMP boundaries (Figure 6).

4.2.1.10 Ornamental Plantings

The 'ornamental plantings' classification includes all areas mapped as non-native vegetation (Helix 2019). Ornamental plantings typically consist of non-native landscape and/or garden plantings that have been planted in association with buildings, roads, or other development. Within the MMCPA, ornamental plantings include species often used in landscaping and include stands of naturalized trees and shrubs, such as acacia (*Acacia* spp.), peppertree (*Schinus* spp.), and myoporum (*Myoporum* sp.).

Within the MMCPA, there are approximately 1.1 acres of ornamental plantings. Ornamental plantings occur within the central portion of the MMCPA, within and immediately adjacent to the northwestern portion of the 3RMP boundary (Figure 6).

4.2.1.11 Agriculture

The 'agriculture' classification includes all areas mapped as intensive agriculture – dairies, nurseries, chicken ranches (SanGIS 2022). This land cover classification refers to open spaces used for livestock, such dairies, nurseries, and chicken ranches. In these areas, there is usually no vegetation present except between animal holdings.

Within the MMCPA, there are approximately 3.6 acres of agriculture. Agriculture occurs in a small area in the northeastern portion of the MMCPA, along the northern boundary of the MMCPA (Figure 6).

4.2.1.12 Urban/Developed

The 'urban/developed' classification includes all areas mapped as developed, development use, and urban/developed (SanGIS 2022; Helix 2019; RECON 2015). 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 human-made materials, such as a recycling plant or quarry.

Within the MMCPA, there are approximately 7,352.1 acres of urban/developed. The majority of the MMCPA is classified as urban/developed (Figure 6).

4.2.2 Wetland Communities

Initially, 23 wetland vegetation communities and land cover types were identified within the MMCPA (SanGIS 2022; City 2019a; Helix 2019; RECON 2015). These were categorized into 9 wetland vegetation communities and land cover types, including riparian forest and woodland, riparian scrub, freshwater marsh, open water, natural flood channel, disturbed wetland, vernal pool, wetland/riparian enhancement/restoration, and concrete channel (Figure 6). A brief description of each of these vegetation communities and land cover types is provided below.

4.2.2.1 Riparian Forest and Woodland

The 'riparian forest and woodland' classification includes all areas mapped as southern riparian forest, southern coast live oak riparian forest, southern sycamore-alder riparian forest, southern riparian woodland, and disturbed southern riparian woodland (SanGIS 2022; Helix 2019). These have been presented together under this category based on the requirements for future impact analyses and associated avoidance, minimization, and/or mitigation measures. Each of these vegetation sub-communities is described, below.

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*).

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, and lemonadeberry, among others. The herb layer often includes California wild rose (*Rosa californica*), California blackberry (*Rubus ursinus*), poison oak, 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.

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.

Southern riparian woodland (including the disturbed phase) is a moderate-density riparian woodland dominated by small trees and shrubs, with scattered taller riparian tree species. It is usually found along river systems and major tributaries, where flood scour occurs. The canopy of this vegetation community often includes mature willows (*Salix* spp.), western sycamore, and Fremont cottonwood (*Populus fremontii*), with an understory of blue elderberry and broom baccharis.

Within the MMCPA, there are approximately 188.4 acres of riparian forest and woodland. Riparian forest and woodland occur primarily in the canyons within the western half of the MMCPA, including Los Peñasquitos Canyon Preserve, Lopez Canyon, Carroll Canyon, Flanders Canyon, and other unnamed canyons (Figures 6 and 7).

4.2.2.2 Riparian Scrub

The 'riparian scrub' classification includes all areas mapped as riparian scrub, southern riparian scrub, southern willow scrub, disturbed southern willow scrub, disturbed willow scrub, mulefat scrub, and sparse mulefat scrub (SanGIS 2022; Helix 2019; RECON 2015). These have been presented together under this category based on the requirements for future impact analyses and associated avoidance, minimization, and/or mitigation measures. Each of these vegetation sub-communities is described, below.

Riparian scrub is a broad-scale vegetation community category and, in San Diego, typically refers to southern riparian scrub. Southern riparian scrub refers to riparian zones that are dominated by small trees or shrubs but 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-leaved, 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.

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. Most southern willow scrub stands are too dense to allow much understory to develop.

Mulefat scrub (including sparse mulefat scrub) is characterized as a depauperate, tall, herbaceous riparian scrub that is found in intermittent stream channels with fairly coarse substrate and a moderate depth to the water table. This vegetation community is dominated by mulefat and is maintained by frequent flooding, without which it would likely develop into a riparian forest or woodland. Other species that may occur within this vegetation community include emergent willow species (*Salix* spp.), poison oak, and stinging nettle.

Within the MMCPA, there are approximately 87.2 acres of riparian scrub. Riparian scrub occurs primarily in the canyons within the western half of the MMCPA, including Los Peñasquitos Canyon Preserve, Lopez Canyon, Carroll Canyon, Flanders Canyon, and other unnamed canyons (Figures 6 and 7).

4.2.2.3 Freshwater Marsh

The ‘freshwater marsh’ classification includes all areas mapped as freshwater marsh and coastal and valley freshwater marsh (SanGIS 2022; RECON 2015). Freshwater marsh is a general vegetation classification that, in San Diego County, is synonymous with coastal and valley freshwater marsh. This vegetation community 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 MMCPA, there are approximately 1.7 acres of freshwater marsh. Freshwater marsh occurs along the northwestern boundary of the MMCPA, where Los Peñasquitos Canyon and Lopez Canyon split, as well as within a small patch in the southeastern portion of the MMCPA, south of the mining pond in the SCMP area (Figures 6 and 7).

4.2.2.4 Open Water

The ‘open water’ classification includes areas mapped as freshwater and open water – mining pond (SanGIS 2022; RECON 2015). Open water is synonymous with areas that

have been mapped as freshwater and open water – mining pond within the MMCPA. Open water includes year-round bodies of fresh water with extremely low salinity and typically includes reservoirs, lakes, ponds, and relatively large sloughs, channels, and rivers or streambeds. Open water includes portions of water bodies that are usually covered by water and contain less than 10 percent vegetative cover.

Within the MMCPA, there are approximately 33.2 acres of open water. Open water occurs primarily within the southeastern portion of the MMCPA, scattered within the SCMP boundary, with a small area also mapped in the southwestern portion of the MMCPA in Carroll Canyon (Figures 6 and 7).

4.2.2.5 Natural Flood Channel

The ‘natural flood channel’ classification includes all areas mapped as natural channel and streambed (Helix 2019; RECON 2015). Natural flood channel includes channels and streambeds, often part larger drainage features that are mostly unvegetated but may have very sparse patches of riparian scrub, riparian forest, and/or riparian woodland communities. Within San Diego County, these include unvegetated portions of rivers, creeks, streams, and other drainage features.

Within the MMCPA, there are approximately 6.2 acres of natural flood channel. Natural flood channel occurs in the southern portion of the MMCPA, in the eastern portion and southern portion of the 3RMP boundary (Figures 6 and 7).

4.2.2.6 Disturbed Wetland

The ‘disturbed wetland’ classification includes all areas mapped as disturbed wetland (SanGIS 2022; Helix 2019). 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 MMCPA, there are approximately 3.8 acres of disturbed wetland. Disturbed wetland occurs within the central portion of the MMCPA, just west of the 3RMP boundary (Figures 6 and 7).

4.2.2.7 Vernal Pool

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 2019a).

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 2019a). 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, depressions that are man-made, such as tire tracks or road ruts, may still be considered vernal pools if they contain at least one indicator 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 human-made road ruts and other seasonal depressions if they contain one or more of the covered species.

Within the MMCPA, the ‘vernal pool’ classification includes areas mapped as vernal pools (City 2019a) and includes approximately 5.3 acres of vernal pools of which 1.6 acres occur in coastal sage scrub, 1.9 acres occur in mixed chaparral, and 1.8 acres occur in urban/developed. The vernal pools are located mainly from the central, northern portion of the MMCPA to the central, southern portion of the MMCPA with one additional complex located along the eastern boundary of the MMCPA (Figures 6 and 7).

4.2.2.8 Wetland/Riparian Enhancement and Restoration

The ‘wetland/riparian enhancement and restoration’ classification includes all areas mapped as wetland/riparian enhancement and wetland/riparian restoration (Helix 2019). These include wetland/riparian resource areas that were previously impacted and that were either enhanced and/or restored to mitigate for those impacts.

Within the MMCPA, there are approximately 12.3 acres of wetland/riparian enhancement/restoration. Wetland/riparian enhancement and restoration occur in the southern portion of the MMCPA, within the 3RMP boundary (Figures 6 and 7).

4.2.2.9 Concrete Channel

The 'concrete channel' classification includes all areas mapped as concrete channel (RECON 2015). Concrete channel refers to areas that were previously part of a natural wetland/riparian system but that have been lined with concrete to stabilize the stream bank, allow for water conveyance, and/or prevent flooding into adjacent areas.

Within the MMCPA, there is approximately 0.1 acre of concrete channel. Concrete channel occurs in the southeastern portion of the MMCPA, in the eastern portion of the SCMP area (Figures 6 and 7).

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. 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 FESA, 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; and/or
6. Lands containing habitats of covered species as listed in the City's Land Development Manual – Biology Guidelines.

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 CNDDDB (CDFW 2022a), and species occurrence records from the vicinity of the MMCPA from other databases (SanGIS 2022; CNPS 2022; USFWS 2022a). No focused surveys were conducted for the MMCPA.

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 MMCPA.

4.3.1 Sensitive Vegetation Communities

Sensitive vegetation communities are vegetation assemblages, associations, or sub-associations 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 MMCPA, there are both sensitive upland vegetation communities and sensitive wetland communities.

Within the City’s Land Development Manual – Biology Guidelines, 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. 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 MMCPA supports 16 sensitive vegetation communities – 7 upland vegetation communities and 9 wetland vegetation communities (Figure 7). These sensitive vegetation communities are summarized in Table 2 and shown on Figure 7.

Table 2. Sensitive Vegetation Communities in the MMCPA

Vegetation Community	Tier
Upland	
Native Grassland	I
Oak Woodland	I
Coastal Sage Scrub	II
Coastal Sage Scrub/Chaparral	II
Mixed Chaparral	IIIA
Chamise Chaparral	IIIA
Non-Native Grassland	IIIB
Wetland*	
Riparian Forest and Woodland	N/A
Riparian Scrub	N/A
Freshwater Marsh	N/A
Open Water	N/A
Natural Flood Channel	N/A

Table 2. Sensitive Vegetation Communities in the MMCPA

Vegetation Community	Tier
Disturbed Wetland	N/A
Vernal Pools	N/A
Wetland/Riparian Enhancement/Restoration	N/A
Concrete Channel	N/A

Note: *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 Rank (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 2022); 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 2022) 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 MMCP update. 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 CNDDDB (CDFW 2022a; Helix 2019; RECON 2015), and species occurrence records from the vicinity of the MMCPA from other databases (SanGIS 2022; CNPS 2022; USFWS 2022a). Based on this data, 34 sensitive plant species are known from the vicinity of the MMCPA and include the following:

- **San Diego thorn-mint** (*Acanthomintha ilicifolia*; federally threatened, state endangered, CRPR 1B.1, MSCP-covered Narrow Endemic Species)
- **California adolphia** (*Adolphia californica*; CRPR 2B.1)
- **San Diego ambrosia** (*Ambrosia pumila*; federally endangered, CRPR 1B.1, MSCP-covered Narrow Endemic Species)
- **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 Species)
- **Encinitas baccharis** (*Baccharis vanessae*; federally threatened, state endangered, CRPR 1B.1, MSCP-covered Narrow Endemic Species)
- **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)
- **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)
- **snake cholla** (*Cylindropuntia californica* var. *californica*; CRPR 1B.1, MSCP-covered Narrow Endemic Species)
- **short-leaved dudleya** (*Dudleya brevifolia*; state endangered, CRPR 1B.1, MSCP-covered Narrow Endemic Species)
- **variegated dudleya** (*Dudleya variegata*; CRPR 1B.2, MSCP-covered Narrow Endemic Species)
- **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 Species, VPHCP-covered species)
- **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)
- **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 Species, VPHCP-covered species)
- **California Orcutt grass** (*Orcuttia californica*; federally endangered, state endangered, CRPR 1B.1, MSCP-covered Narrow Endemic Species, VPHCP-covered species)
- **San Diego mesa mint** (*Pogogyne abramsii*; federally endangered, state endangered, CRPR 1B.1, MSCP-covered Narrow Endemic Species, 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 34 sensitive plant species, 14 are present within the MMCPA while 8 have a potential to occur and 12 are not expected to occur. The sensitivity status, species information, and potential for occurrence for each of these 34 plant species are summarized in Table 3. The explanation for the 'Status' abbreviations can be found in Appendix A.

Table 3. Sensitive Plant Species with a Potential to Occur within the MMCPA

Species	Status	Description	Potential For Occurrence
San Diego thorn-mint (<i>Acanthomintha ilicifolia</i>)	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 165-2,920ft. (Calflora 2022)	Potential. May occur in suitable habitat within the MMCPA. Two historical populations in the eastern MMCPA, along Black Mountain Road, are thought to have been extirpated; however, populations occur within the 1-mile buffer, north and northeast of the MMCPA in Los Peñasquitos Canyon. (CDFW 2022a)
California adolphia (<i>Adolphia californica</i>)	CRPR 2B.1	Deciduous shrub. Blooms Dec-May. Chaparral, coastal sage scrub, grassland. Elev 15-1,115ft. (Calflora 2022)	Present. Known from many populations in the northern portion of the MMCPA and may occur in other suitable habitat within the MMCPA. In addition, many populations occur within the 1-mile buffer, northwest, north, and northeast of the MMCPA. (CDFW 2022a)
San Diego ambrosia (<i>Ambrosia pumila</i>)	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 15-1,705ft. (Calflora 2022)	Low Potential. May occur in suitable habitat in MMCPA. No populations are known from the MMCPA; however, three transplanted populations occur within the 1-mile buffer, just north of the MMCPA, in Los Peñasquitos Canyon. (CDFW 2022a)
Del Mar manzanita (<i>Arctostaphylos glandulosa</i> ssp. <i>crassifolia</i>)	FE CRPR 1B.1 MSCP	Evergreen shrub. Blooms Dec-Jun. Sandy soils in maritime chaparral. Elev 165-690ft. (Calflora 2022)	Potential. May occur in suitable habitat. One known population occurs in the northern MMCPA in Los Peñasquitos Canyon. In addition, several other populations occur within the 1-mile buffer, just north of the MMCPA, also in Los Peñasquitos Canyon. (CDFW 2022a)
coastal dunes milk-vetch (<i>Astragalus tener</i> var. <i>titi</i>)	FE SE CRPR 1B.1 MSCP NE	Annual herb. Blooms Mar-May. Vernal mesic areas in coastal dunes, coastal bluff scrub, coastal prairie. Elev 0-15ft. (Calflora 2022)	Not Expected. No historical records occur within the MMCPA. One historical species record occurs within the 1-mile buffer, northwest of the MMCPA; however, the species restricted to the immediate coast, and no suitable habitat occurs within the MMCPA. (CDFW 2022a)
Encinitas baccharis (<i>Baccharis vanessae</i>)	FT SE CRPR 1B.1 MSCP NE	Deciduous shrub. Blooms Aug-Nov. Maritime chaparral. Elev 280-2,985ft. (Calflora 2022)	Not Expected. Limited suitable habitat is present in the MMCPA. This species is extremely rare, and its distribution is well documented. The single reported historical occurrence along Black Mountain Road is reported to have been extirpated. (CDFW 2022a)

Table 3. Sensitive Plant Species with a Potential to Occur within the MMCPA

Species	Status	Description	Potential For Occurrence
San Diego goldenstar (<i>Bloomeria clevelandii</i>)	CRPR 1B.1 MSCP	Perennial, bulbiferous herb. Blooms Apr-May. Typically clay soils in vernal pools in chaparral, coastal sage scrub, grassland. Elev 100-5,710ft. (Calflora 2022)	Present. Known from several populations in the central portion of the MMCPA and may occur in other suitable habitat within the MMCPA. In addition, several populations occur within the 1-mile buffer, both north and south of the MMCPA. (CDFW 2022a)
Orcutt's brodiaea (<i>Brodiaea orcuttii</i>)	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 35-5,250ft. (Calflora 2022)	Present. Known from several populations in the central portion of the MMCPA and may occur in other suitable habitat within the MMCPA. In addition, several populations occur within the 1-mile buffer, both north and south of the MMCPA. (CDFW 2022a)
Lakeside ceanothus (<i>Ceanothus cyaneus</i>)	CRPR 1B.2 MSCP	Shrub. Blooms Apr-Jul. Typically well-drained, granitic soil in chaparral, closed-cone pine forest. Elev 1,085-5,215ft. (Calflora 2022)	Not Expected. One historical species record occurs northwest of the MMCPA outside of the 1-mile buffer at the Torrey Pines Preserve; however, the MMCPA is outside the known range for this species, which typically occurs much farther east. (CDFW 2022a)
wart-stemmed ceanothus (<i>Ceanothus verrucosus</i>)	CRPR 2B.2 MSCP	Evergreen shrub. Blooms Jan-Apr. Chaparral. Elev 0-1,180ft. (Calflora 2022)	Present. Known from one, historical population within the MMCPA and may occur in other suitable habitat within the MMCPA. In addition, several populations occur within the 1-mile buffer, northwest and southwest of the MMCPA. (CDFW 2022a)
southern tarplant (<i>Centromadia parryi</i> ssp. <i>australis</i>)	1B.1	Annual herb. Blooms May-Nov. Vernal pools, along the margins of marshes, in vernal mesic areas within grassland. Elev 0-1,015ft. (Calflora 2022)	Low Potential. No historical records occur within the MMCPA (CDFW 2022a); however, one historical record occurs within the 1-mile buffer, to the north of the MMCPA (Calflora 2022).
long-spined spineflower (<i>Chorizanthe polygonoides</i> var. <i>longispina</i>)	CRPR 1B.2	Annual herb. Blooms Apr-Jul. Clay soils, vernal pools in chaparral, coastal sage scrub, grassland. Elev 0-4,460ft. (Calflora 2022)	Present. Known from three locations within the MMCPA and may occur in other suitable habitat within the MMCPA. In addition, several populations occur within the 1-mile buffer, north of the MMCPA. (CDFW 2022a)

Table 3. Sensitive Plant Species with a Potential to Occur within the MMCPA

Species	Status	Description	Potential For Occurrence
summer-holly (<i>Comarostaphylis diversifolia</i> ssp. <i>diversifolia</i>)	CRPR 1B.2	Evergreen shrub. Blooms Apr-Jun. Chaparral. Elev 115-2,360ft. (Calflora 2022)	Present. Known from many locations mainly along the north-central boundary of the MMCPA but with two additional locations in the southern portion of the MMCPA and may occur in other suitable habitat within the MMCPA. In addition, many populations occur within the 1-mile buffer to the north of the MMCPA and two populations occur within the 1-mile buffer to the south of the MMCPA. (CDFW 2022a)
San Diego sand aster (<i>Corethrogyne filaginifolia</i> var. <i>incana</i>)	CRPR 1B.1 MSCP	Perennial herb. Blooms Jun-Sep. Coastal sage scrub. Elev 15-2,360ft. (Calflora 2022)	Potential. May occur in suitable habitat within MMCPA. Known from several populations within the 1-mile buffer, northwest of the MMCPA in Los Peñasquitos Canyon. (CDFW 2022a)
snake cholla (<i>Cylindropuntia californica</i> var. <i>californica</i>)	CRPR 1B.1 MSCP NE	Stem succulent. Blooms Apr-Jul. Sandy soils or sandy loam soils in chaparral and coastal sage scrub. Elev 165-1,015ft. (Calflora 2022)	Not expected. No historical records exist within the MMCPA. Only one historical population has been reported within the 1-mile buffer, west of the MMCPA. (CDFW 2022a)
short-leaved dudleya (<i>Dudleya brevifolia</i>)	SE CRPR 1B.1 MSCP NE	Perennial herb. Blooms Apr-May. Sandstone, openings in chaparral, coastal sage scrub. Elev 330-460ft. (Calflora 2022)	Not expected. This species is very rare and well documented with no historical records within the MMCPA. Only two historical populations have been reported within the 1-mile buffer, west of the MMCPA, and both are reported to have been extirpated. (CDFW 2022a)
variegated dudleya (<i>Dudleya variegata</i>)	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 180-785ft. (Calflora 2022)	Low Potential. Species is very rare but may occur in suitable habitat in MMCPA. No populations are known from the MMCPA; however, populations occur within the 1-mile buffer, several just outside of the northern MMCPA boundary in Los Peñasquitos Canyon and one to the southwest of the MMCPA. (CDFW 2022a)
sessile-leaved yerba santa (<i>Eriodictyon sessilifolium</i>)	CRPR 2B.1	Shrub. Blooms Apr-Jun. Slopes and ridges in grassland, chaparral. Elev 82-2,887ft. (Jepson Flora Project 2022)	Present. Known from one location near the eastern MMCPU boundary and may occur in other suitable habitat within the MMCPA. (CDFW 2022a)
San Diego button-celery (<i>Eryngium aristulatum</i> var. <i>parishii</i>)	FE SE CRPR 1B.1 MSCP NE	Annual/perennial herb. Blooms Apr-Jun. Vernal pools in coastal sage scrub, grassland. Elev	Present. Known from many locations mainly within the central portion of the MMCPA and may occur in other suitable habitat within the MMCPA

Table 3. Sensitive Plant Species with a Potential to Occur within the MMCPA

Species	Status	Description	Potential For Occurrence
	VPHCP	230-2,065ft. (Calflora 2022)	(CDFW 2022a). In addition, many populations occur within the 1-mile buffer, north and south of the MMCPA (USFWS 2022a; CDFW 2022a).
San Diego barrel cactus (<i>Ferocactus viridescens</i>)	CRPR 2B.1 MSCP	Stem succulent. Blooms May-Jun. Found in sandy or gravelly soils in chaparral, coastal sage scrub, grassland. Elev 15-1,085ft. (Calflora 2022)	Present. Known from many locations scattered across the MMCPA and may occur in other suitable habitat within the MMCPA. In addition, many populations occur within the 1-mile buffer, west, north, and east of the MMCPA. (CDFW 2022a)
Campbell's liverwort (<i>Geothallus tuberosus</i>)	CRPR 1B.1	Bryophyte/liverwort. Wet soil in coastal sage scrub. (NatureServe 2022)	Present. Known from three locations in the MMCPA, one in the northeast and two in the north, and may occur in other suitable habitat within the MMCPA. In addition, known from two populations within the 1-mile buffer, west of the MMCPA. (CDFW 2022a)
beach goldenaster (<i>Heterotheca sessiliflora</i> ssp. <i>sessiliflora</i>)	CRPR 1B.1	Perennial herb. Blooms Mar-Dec. Coastal dunes, beaches. Elev 0-245ft. (Calflora 2022)	Not Expected. One historical species record occurs northwest of the MMCPA, outside of the 1-mile buffer at the Torrey Pines Preserve; however, no suitable habitat is present in the MMCPA (CDFW 2022a)
decumbent goldenbush (<i>Isocoma menziesii</i> var. <i>decumbens</i>)	CRPR 1B.2	Shrub. Blooms Apr-Nov. Sandy, often disturbed, areas in coastal sage scrub. Elev 65-1,640ft. (Calflora 2022)	Low Potential. No historical species records occur within the MMCPA; however, several populations occur, scattered outside of the MMCPA but within the 1-mile buffer. (CDFW 2022a)
San Diego marsh-elder (<i>Iva hayesiana</i>)	CRPR 2B.2	Perennial herb. Blooms Apr-Oct. Marshes, playas. Elev 0-655ft. (Calflora 2022)	Present. Known from several locations in the center of the MMCPA and may occur in other suitable habitat within the MMCPA. In addition, known from many populations within the 1-mile buffer, north and east of the MMCPA. (CDFW 2022a)
Coulter's goldfields (<i>Lasthenia glabrata</i> ssp. <i>coulteri</i>)	CRPR 1B.1	Annual herb. Blooms Feb-Jun. Coastal salt marsh, playas, vernal pools. Elev 0-2,295ft. (Calflora 2022)	Not Expected. No historical records occur within the MMCPA. Only one historical species record occurs within the 1-mile buffer, southwest of the MMCPA. (CDFW 2022a)

Table 3. Sensitive Plant Species with a Potential to Occur within the MMCPA

Species	Status	Description	Potential For Occurrence
willowy monardella (<i>Monardella viminea</i>)	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 180-2,920ft. (Calflora 2022)	Present. Known from several locations in the center of the MMCPA, most of which occur in Lopez Canyon, and may occur in other suitable habitat within the MMCPA. In addition, known from several populations within the 1-mile buffer, southeast of the MMCPA mainly along Pomerado Road; however, these populations may have been extirpated. (CDFW 2022a)
spreading navarretia (<i>Navarretia fossalis</i>)	FT CRPR 1B.1 MSCP NE VPHCP	Annual herb. Blooms Apr-Jun. Clay soils associated with marshes, playas, vernal pools. Elev 310-4,690ft. (Calflora 2022)	Low Potential. The single historical population within the MMCPA is thought to have been extirpated; however, several extant populations are known from within the 1-mile buffer, to the southwest of the MMCPA. (CDFW 2022a)
California Orcutt grass (<i>Orcuttia californica</i>)	FE SE CRPR 1B.1 MSCP NE VPHCP	Annual grass. Blooms Apr-Aug. Vernal pools. Elev 460-2,200ft. (Calflora 2022)	Not Expected. No historical records occur within the MMCPA. Only a few populations occur within the 1-mile buffer, two to the northwest/north and one south of the MMCPA. (USFWS 2022a; CDFW 2022a)
San Diego mesa mint (<i>Pogogyne abramsii</i>)	FE SE CRPR 1B.1 MSCP NE VPHCP	Annual herb. Blooms Mar-Jul. Vernal pools in chaparral and coastal sage scrub. Elev 360-4,005ft. (Calflora 2022)	Present. Known from many locations in the center of the MMCPA and may occur in other suitable habitat within the MMCPA. In addition, known from many locations within the 1-mile buffer, both north and south of the MMCPA. (CDFW 2022a)
Nuttall's scrub oak (<i>Quercus dumosa</i>)	CRPR 1B.1	Evergreen shrub. Blooms Feb-Mar. Sandy or clay loam soils associated with chaparral and coastal sage scrub. Elev 0-4,530ft. (Calflora 2022)	Present. Known from many locations, mainly in north central portion of the MMCPA and may occur in other suitable habitat within the MMCPA. In addition, known from many locations within the 1-mile buffer, northeast, north, northwest, and southwest of the MMCPA. (CDFW 2022a)
chaparral ragwort (<i>Senecio aphanactis</i>)	CRPR 2B.2	Annual herb. Blooms Jan-Apr. Alkaline flats, dry open rocky areas in coastal sage scrub and foothill woodlands. Elev 130-2,135ft. (Calflora 2022)	Not Expected. No historical populations known from the MMCPA. Two historical locations known from the 1-mile buffer, one extant population in Del Mar Mesa to the north and one to the south on MCAS Miramar likely extirpated. (CDFW 2022a)
salt spring checkerbloom (<i>Sidalcea neomexicana</i>)	CRPR 2B.2	Perennial herb. Blooms Mar-Jul. Wetlands in	Not Expected. No historical populations known from the MMCPA.

Table 3. Sensitive Plant Species with a Potential to Occur within the MMCPA

Species	Status	Description	Potential For Occurrence
		chaparral, coastal sage scrub, and other scrub communities. Elev 1,805-7,810ft. (Calflora 2022)	One historical population known from the 1-mile buffer, southwest of the MMCPA along Miramar Road. (CDFW 2022a)
bottle liverwort (<i>Sphaerocarpos drewei</i>)	CRPR 1B.1	Bryophyte/liverwort. Shady spots in coastal sage scrub. Elev 290-1,970 ft. (Calflora 2022; CNPS 2022)	Not Expected. No historical populations known from the MMCPA. One historical population known from the 1-mile buffer, southwest of the MMCPA, north of Miramar Road. (CDFW 2022a)
purple stemodia (<i>Stemodia durantifolia</i>)	CRPR 2B.1	Perennial herb. Blooms year round. Wetland, riparian. Elev 0-1,575ft. (Calflora 2022)	Not Expected. No historical populations known from the MMCPA. One historical location known from the 1-mile buffer, south of the MMCPA on MCAS Miramar. (CDFW 2022a)

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 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 MMCP update. 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 2022a), and species occurrence records from the vicinity of the MMCPA from other databases (SanGIS 2022; USFWS 2022a; Unitt 2004; Tremor et al. 2017). Based on this data, 37 sensitive wildlife species are known to occur within the vicinity to the MMCPA 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 hammondi*; 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 hammondi*; California Species of Special Concern)
- **coast patch-nosed snake** (*Salvadora hexalepis virgultea*; 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)
- **Cooper's hawk** (*Accipiter cooperii*; CDFW Watch List Species [nesting], MSCP-covered)
- **American peregrine falcon** (*Falco peregrinus anatum*; state fully protected [nesting], MSCP-covered)
- **light-footed Ridgway's rail** (*Rallus obsoletus levipes*; federally endangered, state endangered, state fully protected, 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 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)
- **tricolored blackbird** (*Agelaius tricolor*; California Species of Special Concern [nesting colony])
- **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)
- **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 37 sensitive wildlife species, 20 are present within the MMCPA while 10 have a potential to occur and 7 are not expected to occur. The sensitivity status, species information, and potential for occurrence for each of these 37 wildlife species are summarized in Table 4. The explanation for the 'Status' abbreviations can be found in Appendix A.

Table 4. Sensitive Wildlife Species with a Potential to Occur in MMCPA

Common Name	Status	Habitat	Potential for Occurrence
Invertebrates			
San Diego fairy shrimp (<i>Branchinecta sandiegonensis</i>)	FE MSCP VPHCP	Vernal pools, swales, ditches, road ruts. Adult emerge typically mid-December to early May.	Present. Known from multiple historical locations throughout the MMCPA and may occur in other suitable habitat within the MMCPA. Also known from many historical locations within the 1-mile buffer, both north and south of the MMCPA. (USFWS 2022a; SanGIS 2022)
Riverside fairy shrimp (<i>Streptocephalus woottoni</i>)	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 MMCPA (USFWS 2022a; CDFW 2022a; SanGIS 2022). Two historical locations occur within the 1-mile buffer to the southeast of the MMCPA (CDFW 2022a); however, only limited suitable habitat is present within the MMCPA.
Quino checkerspot butterfly (<i>Euphydryas editha quino</i>)	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.	Potential. Several historical locations within the MMCPA have been extirpated. Only a few potential extant historical locations are known within the 1-mile buffer, to the south and southeast of the MMCPA (USFWS 2022a; SanGIS 2022). However, the MMCPA occurs within the USFWS Recommended Quino Survey Area, and the species may occur in suitable habitat within the MMCPA.

Table 4. Sensitive Wildlife Species with a Potential to Occur in MMCPA

Common Name	Status	Habitat	Potential for Occurrence
Amphibians			
western spadefoot (<i>Spea hammondi</i>)	SSC	Washes, river 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.	Present. One historical location in MMCPA has been extirpated (SanGIS 2022); however, two extant historical locations within the MMCPA remain (CDFW 2022a), and this species may occur in other suitable habitat within the MMCPA. Also known from multiple historical locations in the 1-mile buffer to the north, south, and southeast of the MMCPA. (CDFW 2022a; SanGIS 2022)
Reptiles			
southwestern pond turtle (<i>Emys marmorata</i>)	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 5,900ft above mean sea level. Breeding occurs from December to May in ponds and streams.	Present. Known from two historical locations along northern boundary of the MMCPA, one in the west and one in the east, and may occur in other suitable habitat within the MMCPA. Also known from two historical locations within the 1-mile buffer, to the northeast of the MMCPA. (SanGIS 2022)
Southern California legless lizard (<i>Anniella stebbinsi</i>)	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 one historical location on the southern boundary of the MMCPA (CDFW 2022a) and may occur in other suitable habitat within the MMCPA. Also known from one historical location within the 1-mile buffer, to the south of the MMCPA. (SanGIS 2022; CDFW 2022a)
coast horned lizard (<i>Phrynosoma blainvillii</i>)	SSC MSCP	Open chaparral, coastal sage scrub with sandy, loose soil. Partially dependent on harvester ants for forage.	Present. Known from one historical location in the southwest portion of the MMCPA (CDFW 2022a) and may occur in other suitable habitat within the MMCPA. Also known from several historical locations in the 1-mile buffer, to the north and southeast of the MMCPA. (SanGIS 2022; CDFW 2022a)

Table 4. Sensitive Wildlife Species with a Potential to Occur in MMCPA

Common Name	Status	Habitat	Potential for Occurrence
Belding’s orange-throated whiptail (<i>Aspidoscelis hyperythra beldingi</i>)	WL MSCP	Pristine open coastal sage scrub, chaparral, and streamside growth with loose sandy soils, revegetation sites.	Present. Known from one historical location in the MMCPA that has been extirpated (SanGIS 2022); however, also known from one extant historical location within the MMCPA (CDFW 2022a), and this species may occur in other suitable habitat within the MMCPA. Also many historical locations occur in the 1-mile buffer to the north, northeast, southeast, south, and southwest of the MMCPA. (SanGIS 2022; CDFW 2022a)
coastal whiptail (<i>Aspidoscelis tigris stejnegeri</i>)	SSC	Arid areas with sparse, open foliage in forests, woodland, chaparral, riparian areas.	Potential. No historical locations have been reported within the MMCPA (USFWS 2022a; CDFW 2022a; SanGIS 2022), and only two historical locations have been reported within the 1-mile buffer, one to west and one to southwest of the MMCPA (CDFW 2022a). However, suitable habitat for this species occurs in multiple, natural locations within the MMCPA.
two-striped garter snake (<i>Thamnophis hammondi</i>)	SSC	Permanent fresh water, inhabiting streams, ponds, vernal pools. Occupies adjacent coastal sage scrub and grasslands during the winter.	Potential. While the single historical location reported within the MMCPA has been extirpated (SanGIS 2022), there is one extant location known from just inside the 1-mile buffer, to the southeast of the MMCPA (CDFW 2022a), and suitable habitat for this species occurs in multiple, natural locations within the MMCPA.
coast patch-nosed snake (<i>Salvadora hexalepis virgultea</i>)	SSC	Chaparral and semi-arid areas with brushy or shrubby vegetation in canyons, plains and rocky hillsides.	Potential. While there are no historical records for this species (USFWS 2022a; CDFW 2022a; SanGIS 2022), suitable habitat for this species occurs in multiple, natural locations within the MMCPA.
red diamond rattlesnake (<i>Crotalus ruber</i>)	SSC	Coastal sage scrub, open chaparral, woodland, grassland, and cultivated areas.	Present. The single historical location within the MMCPA has been extirpated; however, this species has been observed frequently in Los Peñasquitos Canyon, and it may occur in suitable habitat within the MMCPA. Also several historical locations occur in the 1-mile buffer to the south of the MMCPA. (SanGIS 2022)

Table 4. Sensitive Wildlife Species with a Potential to Occur in MMCPA

Common Name	Status	Habitat	Potential for Occurrence
Birds			
white-tailed kite (<i>Elanus leucurus</i>)	SFP (nesting)	Resident. Nest in riparian woodland, oaks, sycamores. Forage in open, grassy areas.	Present. Multiple historical locations occur within the northwestern portion of the MMCPA (SanGIS 2022), and this species may occur in other suitable habitat within the MMCPA. Also several historical locations are scattered in the 1-mile buffer to the north (SanGIS 2022; CDFW 2022a). In addition, this species occurs in San Diego County year round and is widespread over the coastal slope of San Diego County, and breeding has been confirmed within the MMCPA (Unitt 2004).
northern harrier (<i>Circus cyaneus</i>)	SSC MSCP (nesting)	Uncommon resident with additional winter visitors. Coastal lowland, marshes, grassland, agricultural fields.	Present. Only a single historical location is known along the northwestern boundary of the MMCPA and several historical locations are known in the 1-mile buffer to the northwest and southwest of the MMCPA (SanGIS 2022); however, this species is found year round in grassland and marsh habitats in San Diego County and nesting possible within the MMCPA in suitable habitat (Unitt 2004).
Cooper's hawk (<i>Accipiter cooperii</i>)	WL MSCP (nesting)	Resident with additional winter visitors. Mature forest, open woodlands, wood edges, river groves. Parks and residential areas.	Present. Only a single historical location is known within the western portion of the MMCPA and a couple historical locations in the 1-mile buffer to the northeast of the MMCPA (SanGIS 2022); 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 MMCPA.
American peregrine falcon (<i>Falco peregrinus anatum</i>)	SFP MSCP (nesting)	Rare resident with additional winter visitors. Nests on cliff ledges, old raptor or raven nests, and manufactured structures. Forages in open coastal areas, mud flats. Rare inland. Rare fall and winter resident, casual in late spring and early summer.	Low Potential. No historical locations are known within the MMCPA (USFWS 2022a; CDFW 2022a; SanGIS 2022; Unitt 2004), and only one historical location occurs in the 1-mile buffer to the west of the MMCPA (SanGIS 2022). Nesting is not expected within the MMCPA (Unitt 2004); however, the species may occur in suitable habitat within the MMCPA.

Table 4. Sensitive Wildlife Species with a Potential to Occur in MMCPA

Common Name	Status	Habitat	Potential for Occurrence
light-footed Ridgway's rail (<i>Rallus obsoletus levipes</i>)	FE SE SFP MSCP	Salt marshes primarily dominated marshes by cordgrass. Localized resident.	Not Expected. Several historical locations are known from just northwest of the MMCPA (USFWS 2022a); however, no historical locations are known within the MMCPA (USFWS 2022a; CDFW 2022a; SanGIS 2022; Unitt 2004), and no suitable habitat is present within the MMCPA.
burrowing owl (<i>Athene cunicularia</i>)	SSC MSCP (burrow sites and some winter sites)	Rare, localized resident, with additional winter visitors. Grassland, agricultural land, coastal dunes. Declining resident.	Not Expected. No historical records for this species occur within the MMCPA or within the 1-mile buffer (USFWS 2022a; CDFW 2022a; SanGIS 2022; Unitt 2004). This species is currently known from only five locations in San Diego County and has not been seen in the vicinity of the MMCPA since before 1997 (Unitt 2004).
southwestern willow flycatcher (<i>Empidonax traillii extimus</i>)	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 records for this species occur within the MMCPA or within the 1-mile buffer (USFWS 2022a; CDFW 2022a; SanGIS 2022; Unitt 2004). This species is currently known from only two colonies and a few additional scattered pairs in San Diego County and has not been recorded as a breeding species from the vicinity of the MMCPA since before 1997 (Unitt 2004).
loggerhead shrike (<i>Lanius ludovicianus</i>)	SSC (nesting)	Uncommon resident. Open country with short vegetation such as pastures with fencerows, agricultural fields and open woodlands.	Potential. No historical records for this species occur within the MMCPA or within the 1-mile buffer (USFWS 2022a; CDFW 2022a; SanGIS 2022). However, it has fragmented distribution along the coastal slope of San Diego County and has been recorded as a possible breeder in and adjacent to the MMCPA (Unitt 2004).

Table 4. Sensitive Wildlife Species with a Potential to Occur in MMCPA

Common Name	Status	Habitat	Potential for Occurrence
least Bell's vireo (<i>Vireo bellii pusillus</i>)	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.	Potential. Multiple historical locations occur along the northwest border of the MMCPA, and one historical location occurs just north of the eastern boundary of the MMCPA (USFWS 2022a; CDFW 2022a). This species may occur in suitable habitat within the MMCPA. Also two additional historical locations occur immediately to the northwest of the MMCPA boundary (CDFW 2022a).
coastal California gnatcatcher (<i>Polioptila californica californica</i>)	FT SSC MSCP	Resident. Coastal sage scrub, maritime succulent scrub.	Present. Many historical locations occur within the MMCPA, mainly in the central, western, and northeastern portions, and this species likely occurs in other suitable habitat in the MMCPA. Also multiple historical locations occur in the 1-mile buffer, scattered in all directions (USFWS 2022a; CDFW 2022a; SanGIS 2022; Unitt 2004)
yellow warbler (<i>Dendroica petechia brewsteri</i>)	SSC (nesting)	Common resident, with additional migrants. Well-developed riparian habitats, often with mature willows	Potential. No historical records for this species occur within the MMCPA or within the 1-mile buffer (USFWS 2022a; CDFW 2022a; SanGIS 2022). However, it breeds in riparian corridors along the coastal slope of San Diego County and has been recorded as a probable breeder in and adjacent to the MMCPA (Unitt 2004). May occur in suitable habitat within the MMCPA.
Southern California rufous-crowned sparrow (<i>Aimophila ruficeps canescens</i>)	WL MSCP	Common resident. Coastal sage scrub, chaparral, grassland. Resident.	Present. Known from multiple historical locations inside the MMCPA, mainly in in the western portion (SanGIS 2022) with one location in northeastern corner of the MMCPA (CDFW 2022a), and it may occur in other suitable habitat within the MMCPA. Also known from many locations in the 1-mile buffer, to north, northeast, and east of the MMCPA (SanGIS 2022; CDFW 2022a) and is known to breed within and adjacent to the MMCPA (Unitt 2004).

Table 4. Sensitive Wildlife Species with a Potential to Occur in MMCPA

Common Name	Status	Habitat	Potential for Occurrence
tricolored blackbird (<i>Agelaius tricolor</i>)	SSC (nesting colony)	Localized resident. Freshwater marshes agricultural areas, lakeshores, parks. Localized resident. Breeding colonies well documented, inland San Diego County	Not Expected. Known from two historical locations within the MMCPA that have both been extirpated (SanGIS 2022). No other historical locations are known from within the MMCPA (CDFW 2022a; Unitt 2004). Known from 20 to 30 breeding colonies in San Diego, with one possible breeding location at Lake Miramar. However, breeding colonies are well documented and not historically present in the MMCPA.
Mammals			
northwestern San Diego pocket mouse (<i>Chaetodipus fallax fallax</i>)	SSC	San Diego County west of mountains in sparse, disturbed coastal sage scrub or grasslands with sandy soils.	Present. Known from multiple historical locations along the northern boundary of the MMCPA (Tremor et al. 2017) as well as from multiple historical locations in the 1-mile buffer to north and northeast of the MMCPA (SanGIS 2022; Tremor et al. 2017). In addition, known from multiple other historical locations in the vicinity of the MMCPA (Tremor et al. 2017). May occur in other suitable habitat within the MMCPA.
San Diego desert woodrat (<i>Neotoma lepida intermedia</i>)	SSC	Coastal sage scrub and chaparral	Present. Known from one historical location in far western portion of MMCPA as well as from one historical location in the 1-mile buffer to the southwest and several historical locations in the 1-mile buffer to the north of the eastern portion of MMCPA (SanGIS 2022; CDFW 2022a). May occur in other suitable habitat within the MMCPA.
San Diego black-tailed jackrabbit (<i>Lepus californicus bennettii</i>)	SSC	Open areas of scrub, grasslands, agricultural fields.	Present. Known from one location within the far northeastern corner of the MMCPA (SanGIS 2022; CDFW 2022a; Tremor et al. 2017) as well as another location northwest and adjacent to the MMCPA (Tremor et al. 2017). This species is now rare in coastal San Diego County but is more common in the desert region; however, it may be found in suitable habitat in the MMCPA.

Table 4. Sensitive Wildlife Species with a Potential to Occur in MMCPA

Common Name	Status	Habitat	Potential for Occurrence
Mexican long-tongued bat (<i>Choeronycteris mexicana</i>)	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 or adjacent to the MMCPA (USFWS 2022a; CDFW 2022a; SanGIS 2022). In addition, the majority of the historical locations are located south of the MMCPA (Tremor et al. 2017).
western mastiff bat (<i>Eumops perotis californicus</i>)	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 cliff faces, high buildings, trees, and tunnels, and travels widely when foraging.	Present. Known from one location on central northern border of MMCPA (SanGIS 2022; CDFW 2022a; Tremor et al. 2017). May also occur in other areas within the MMCPA with suitable habitat, as multiple historical locations occur in the vicinity of the MMCPA (Tremor et al. 2017).
big free-tailed bat (<i>Nyctinomops macrotis</i>)	SSC	Rugged, rocky terrain. Roost in crevices, buildings, caves, tree holes. Very rare in San Diego County. Colonial, Migratory.	Low Potential. Known from one location in 1-mile buffer north of the eastern portion of the MMCPA (SanGIS 2022; CDFW 2022a) and one location west of the MMCPA (Tremor et al. 2017). May occur in other suitable habitat within the MMCPA.
western red bat (<i>Lasiurus blossevillii</i>)	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 multiple locations along the northern boundary of the MMCPA (SanGIS 2022; CDFW 2022a; Tremor et al. 2017) and from one location within the MMCPA (Tremor et al. 2017). May occur in other suitable habitat within the MMCPA.
Townsend's big-eared bat (<i>Corynorhinus townsendii</i>)	SSC	Caves, mines, buildings. Found in a variety of habitats, arid and mesic. Individual or colonial. Extremely sensitive to disturbance.	Present. Known from one location in the eastern portion of the MMCPA (Tremor et al. 2017). May occur in other suitable habitat within the MMCPA.
spotted bat (<i>Euderma maculatum</i>)	SSC	Wide variety of habitats. Caves, crevices, trees. Audible echolocation signal.	Not Expected. No historical locations within or adjacent to the MMCPA (USFWS 2022a; CDFW 2022a; SanGIS 2022; Tremor et al. 2017). Known from only four historical locations in San Diego County, only two of which are certain (Tremor et al. 2017).

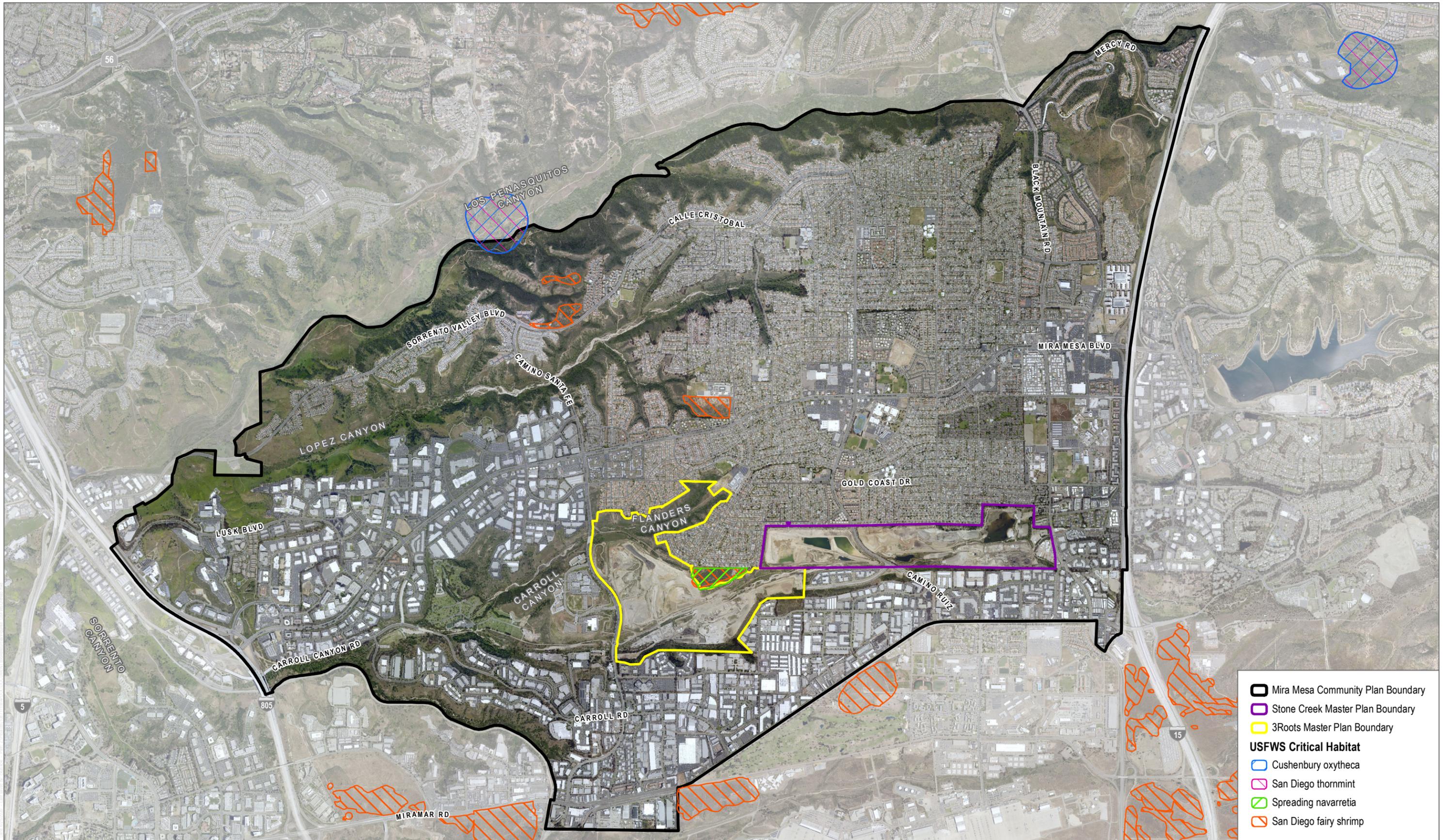
Table 4. Sensitive Wildlife Species with a Potential to Occur in MMCPA

Common Name	Status	Habitat	Potential for Occurrence
pallid bat (<i>Antrozous pallidus</i>)	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 within or adjacent to the MMCPA (USFWS 2022a; CDFW 2022a; SanGIS 2022; Tremor et al. 2017). Known from many locations around San Diego County; however, none are in the vicinity of the MMCPA (Tremor et al. 2017).
southern mule deer (<i>Odocoileus hemionus</i>)	MSCP	Requires relatively large, undisturbed tracts of chaparral, coastal sage scrub, and mixed grassland/shrub habitats.	Present. Known from many historical locations within the western portion of MMCPA as well as from many locations scattered in the 1-mile buffer in all directions except east (SanGIS 2022; Tremor et al. 2017).
mountain lion (<i>Felis concolor</i>)	MSCP	Typically in remote, hilly or mountainous areas but can occasionally be found in the urban/wild land interface	Present. Known from one historical location in the MMCPA in Lopez Canyon. Also known from multiple historical locations within the 1-mile buffer, primarily in Los Peñasquitos and Rose. (SanGIS 2022; Tremor et al. 2017)

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 MMCPA, USFWS has designated critical habitat for the following species – Cushenberry oxytheca (*Acanthoscyphus parishii* var. *goodmaniana*), San Diego thornmint (*Acanthomintha ilicifolia*), spreading navarretia, and San Diego fairy shrimp (Figure 8: USFWS Critical Habitat).



SOURCE: SANGIS 2017, 2019; USFWS 2019

FIGURE 8
USFWS Critical Habitat
 Mira Mesa Community Plan Update

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4.3.5 Jurisdictional Resources

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

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 U.S., pursuant to Section 404 of the CWA. USACE non-wetland waters of the U.S. are delineated by the lateral and upstream/downstream extent of the ordinary high watermark. USACE wetland waters of the U.S. 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 U.S. because they are not tributaries or they do not have a significant nexus to downstream TNWs.

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.

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.

City of San Diego Jurisdiction

The City regulates ESLs, including wetlands (and other sensitive vegetation communities), under 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 MMCPA, City wetlands include the following six habitats that are presented in Table 2 and shown on Figures 6 and 7: riparian forest and woodland (includes southern riparian forest, southern coast live oak riparian forest, southern sycamore-alder riparian forest, and southern riparian woodland [including the disturbed phase]), riparian scrub (includes riparian scrub, southern riparian scrub, southern willow scrub [including the disturbed phase], and mulefat scrub [including the disturbed phase]), freshwater marsh, disturbed wetland, vernal pools, and wetland/riparian enhancement/restoration.

4.3.6 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 MMCPA and are important to maintain healthy plant and wildlife populations in the highly urbanized MMCPA (Figure 4). Los Peñasquitos Canyon serves as both a regional and local wildlife movement corridor, allowing movement not only within Los Peñasquitos Canyon itself but also into the Del Mar Mesa Preserve to the north of the MMCPA, Lopez Canyon (a local wildlife corridor) within the northwestern portion of the MMCPA, and additional open space areas to the east of the MMCPA. In addition, Carroll Canyon and Flanders Canyon, both located in the southwest portion of the MMCPA, serve as additional local wildlife corridors allowing movement within the MMCPA. All of these canyons provide critical resources to wildlife species and are important both locally and regionally, especially as urbanization within the MMCPA and vicinity continues.

SECTION 5.0 - IMPACTS

For future projects within the MMCPA that may affect sensitive biological resources, potential impacts to such sensitive biological resources must be assessed to determine if they are significant and if avoidance, minimization, and/or mitigation measures are required. The approach to identify and define impacts as well as to determine their significance, as described below, is based on current existing programs, plans, and regulations pertaining to the MMCPA. Future projects within the MMCPA should conduct an updated literature review and database search to obtain current information for applicable existing programs, plans, and regulations, as they documents are revised frequently to address changing environmental conditions.

5.1 IMPACT IDENTIFICATION

Impacts associated with future projects in the MMCPA should be clearly identified and defined. Impact definitions along with impact identification quantification guidelines are provided below.

5.1.1 Impact Definitions

Biological resources may be either directly or indirectly impacted by a project. Direct and indirect impacts may furthermore be either permanent, temporary, and/or cumulative in nature. Future projects within the MMCPA should define potential project impacts according to these CEQA impact definitions, which are as follows:

- **Direct Impacts** are defined as any direct alteration, disturbance, or destruction of biological resources that would result from project-related activities such as clearing, grubbing, and grading. Examples include clearing vegetation, encroaching into wetlands, and diverting surface water flows.
- **Indirect Impacts** are defined as any project-related impacts that occur outside of the project footprint (i.e., direct impact area) or that occur later in time. Examples include elevated noise levels in adjacent habitat, nighttime lighting, soil compaction, increased human activity, decreased water quality, the introduction of invasive wildlife (i.e., domestic cats and dogs) and plants, disruptions in local movement patterns for wildlife, and elevated fugitive dust levels that reduce plant photosynthesis, growth, and reproduction.
- **Permanent Impacts** include all project-related impacts that result in the irreversible removal of biological resources. Examples include constructing a building or permanent road on an area containing biological resources.
- **Temporary Impacts** include project-related impacts that are considered to have reversible effects on biological resources. Examples include nighttime lighting, increased human activity, the generation of fugitive dust during construction, or the removal of vegetation for construction activities and subsequently restoring the area or allowing the natural vegetation to recolonize the impact area.
- **Cumulative Impacts** result from the combined effects of the project plus all past, present, and reasonably foreseeable future projects or activities within the project vicinity. Examples include the cumulative changes associated with urban

development that result in habitat fragmentation; increased traffic, runoff, and noise levels; alteration of natural landscapes; wildlife movement restrictions; and introduction of invasive species.

5.1.2 Impact Identification and Quantification

All future projects in the MMCPA that may result in significant impacts to sensitive biological resources will be required to adequately identify and quantify potential project impacts. To comply with the City's Land Development Manual – Biology Guidelines, a Biological Survey Report is required for all proposed development projects which are subject to ESL, and/or where the CEQA review has determined that there may be a significant impact on other biological resources considered sensitive under CEQA.

Table 1 of the City's Land Development Manual – Biology Guidelines outlines the survey requirements for various biological resources inside and outside the MHPA.

The Biological Survey Report must identify and map biological resources present on the site, including any portions of the site identified as part of the MHPA and any species considered sensitive pursuant to CEQA (see Table 1 – Summary of Biological Survey Requirements in the City's Land Development Manual – Biology Guidelines) and in accordance with the Guidelines for Conducting Biological Surveys (Appendix II of the City's Land Development Manual – Biology Guidelines). Each vegetation community type should be categorized into either wetlands or one of four upland Tiers. City staff will confirm the adequacy of all maps during the CEQA environmental review process.

The location and extent of each resource must be clearly identified on a map of an appropriate scale (same scale as development drawings), on which the acreage of each vegetation community must be provided. Individual sensitive species must be depicted on the map and territories identified where they have been determined. It is expected that the mapping scale will vary with size and type of project proposed.

The minimum mapping units should be clearly identified in the text of the report, and should be based on the mapping scale and the vegetation community. A minimum mapping unit for uplands of approximately 0.25 acre is generally considered acceptable for the 1"=200' scale.

Surveys for state-listed or federally listed sensitive or MSCP- and VPHCP-covered species older than 24 months must be updated, as appropriate, to accurately reflect resources on site. Surveys should be done at the appropriate time of year to detect presence/absence of sensitive species. If surveys are not done at the appropriate time of year, and the potential for occurrence is moderate to high (based on historical knowledge, site records, determination by the biologist, etc.), then it will be concluded that their presence exists within the project area. In cases where there is a low potential to impact sensitive species, justification should be provided to determine whether additional focused surveys are warranted. Biological surveys that are over 24 months would require that the survey and report be updated to reflect the most current conditions affecting the

project site. USFWS and CDFW (e.g., Wildlife Agencies) may require updated survey data during their review of projects.

5.2 IMPACT ANALYSIS

All future projects within the MMCPA must identify all potential project impacts from the development (both on-site impacts and off-site impacts such as roads, water and sewer lines, etc.) to sensitive biological resources and to other significant biological resources as determined by the CEQA process (i.e., sensitive, non-covered species), as described above. These impacts should be presented in the Biological Survey Report. This report also should analyze the significance of these impacts, including an analysis of direct impacts, indirect impacts, and cumulative impacts. The CEQA Significance Determination Thresholds (City 2020) should be used as a reference. The CEQA Significance Determination Thresholds as well as the significance determination process are described below.

5.2.1 Significance Determination Thresholds

The City CEQA Significance Determination Thresholds (City 2020) are used to determine if impacts on biological resources are significant. The City CEQA Significance Determination Thresholds were developed in accordance with Appendix G of the CEQA Guidelines and state that a project may have a significant effect on biological resources if it would:

- Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations or by the CDFG or the USFWS,
- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by the CDFG or the USFWS,
- Have a substantial adverse effect on state or federally protected wetlands as defined by USACE, CDFG, RWQCB, or California Coastal Commission, including but not limited to marsh, coastal, etc., through direct removal, filling, hydrological interruption or other means,
- Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors or impede the use of native wildlife nursery sites,
- Conflict with any local policies or ordinances protecting biological resources such as a tree preservation policy or ordinance, and/or
- Conflict with the provisions of any adopted Habitat Conservation Plan (HCP), Natural Community Conservation Plan, or other approved local, regional, or state HCP.

An evaluation of whether an impact on biological resources would be substantial must consider both the resource itself and how that resource fits into a regional or local context. A substantial impact is an impact that diminishes, or results in the loss of, a

sensitive biological resource or that significantly conflicts with local, state, or federal resource conservation plans, goals, and/or regulations. Sometimes impacts can be locally adverse, but not significant. In such a case, the impacts may result in an adverse alteration of a local biological resource, but they may not substantially diminish or result in the permanent loss of an important resource on a population- or region-wide basis.

5.2.2 Significance Determination

Potential impacts resulting from future projects within the MMCPA should be analyzed for their significance to determine if avoidance, minimization, and/or mitigation measures are required for the project. This analysis should follow the City's Land Development Manual – Biology Guidelines and should be consistent with applicable portions of the MSCP Subarea Plan, VPHCP, and other City programs and regulations.

Significance determinations for impacts to biological resources resulting from future projects in the MMCPA will be evaluated by City staff through the CEQA review process using the City CEQA Significance Determination Thresholds (City 2020) described above. Each impact will be considered in the context of the project to assure all potentially significant impacts are identified and avoided to the extent feasible or, for unavoidable impacts, that appropriate mitigation is implemented to reduce the impact to below a level of significance. This review process is intended to demonstrate the project's consistency with the MSCP Subarea Plan and with all other applicable federal, state, and local programs, regulations, and documents. In general, the review process will include an evaluation of impacts, as described below and taken directly (and verbatim when possible) from the City CEQA Significance Determination Thresholds (City 2020).

5.2.2.1 Significance Determination for Direct Impacts

The first step in making a significance determination for direct impacts is to identify the nature of the impacts and the extent and degree of the direct impacts to biological resources.

To determine the extent of impacts, the acreage of each upland and wetland vegetation community and/or land cover type to be impacted directly should be quantified. Each upland vegetation community/land cover type should be categorized into one of the four Tier categories (Tiers I, II, IIIA/IIIB, or IV), which are listed on Table 3 of the City's Land Development Manual – Biology Guidelines. Each wetland community should be categorized per Table 2 of the City's Land Development Manual – Biology Guidelines. In addition, any proposed encroachment into the MHPA should be quantified. Where possible, the extent or number of individuals of sensitive plant and wildlife species to be taken or harassed should also be quantified. To determine the degree of the impact, fragmentation of habitat, loss of foraging area for sensitive species, and other factors should be considered.

The MSCP Subarea Plan permits 'take' of MSCP-covered species based on the concept that 90 percent of lands within the MHPA will be preserved. Any encroachment into the MHPA (in excess of the allowable encroachment by a project) would be considered significant and require a MHPA boundary line adjustment (MSCP Subarea

Plan Section 1.1.1, as described in Section 2.3.2.2 above), which would include a habitat equivalency assessment to ensure that what will be added to the MHPA is equivalent or of a higher biological value to what would be removed.

In addition, lands containing Tier I, II, IIIA, and IIIB vegetation communities and all wetlands are considered sensitive and declining habitats (City 2018). As such, impacts to these resources may be considered significant. Lands designated as Tier IV are not considered to have significant habitat value; therefore, impacts to Tier IV lands would not be considered significant.

Impacts to individual sensitive plant and wildlife species, outside of any impacts to habitat, may also be considered significant based upon the rarity and extent of impacts. Impacts to federally or state-listed species and all Narrow Endemic Species should be considered significant. Certain species covered by the MSCP and other species not covered by the MSCP, may be considered significant on a project-by-project basis taking into consideration all pertinent information regarding distribution, rarity, and the level of habitat conservation afforded by the MSCP.

The following are a few important notes for determining the significance of direct impacts:

- Total upland impacts to Tiers I, II, IIIA, and IIIB less than 0.1 acre are not considered significant and do not require mitigation. (See below for additional information on cumulative impacts to native grasslands).
- Impacts to non-native grasslands totaling less than 1.0 acre which are completely surrounded by existing urban developments are not considered significant and do not require mitigation. Examples may include urban infill lots.
- Total wetland impacts less than 0.01 acre are not considered significant and do not require mitigation. This does not apply to vernal pools or wetlands within the Coastal Zone.
- Brush management Zone 2 thinning activities, while having the potential to adversely affect biological resources, are not considered potentially significant inside the MHPA or, to the extent that non-covered species are not impacted, outside the MHPA, because of the implementation of the MSCP. Brush management Zone 2 thinning outside the MHPA which affects non-covered species is potentially significant. Brush management not conducted in accordance with brush management regulations, regardless of where it is located, is also potentially significant.
- Mitigation is not required for impacts to non-native grassland habitat when impacted for the purpose of wetland or other native habitat creation.
- Habitat mitigation is not required for impacts to manufactured slopes or areas that have been planted with native species for the purpose of erosion control. For example, to qualify for this exception, substantiation of previous permits and mitigation must be provided.
 - Noise mitigation, however may be required for significant noise impacts to certain avian species during their breeding season depending upon the location of the slope (such as adjacent to an MHPA) and what birds may

be present in the area such as the coastal California gnatcatcher, least Bell's vireo, southwestern willow flycatcher, least tern, cactus wren, tricolored blackbird, or western snowy plover. If these avian species (except for the coastal California gnatcatcher) are present, then mitigation will be required if construction or operational noise levels would exceed 60 decibels hourly average (db[A]), or the existing ambient noise level if already above 60dB(A) during the breeding season. For occupied coastal California gnatcatcher habitat within the MHPA, construction or operational noise levels exceeding 60 dB(A) (or exceeding the existing ambient noise level if already above 60 dB[A]) during the breeding season is considered significant. There are no restrictions for the gnatcatcher outside the MHPA anytime of the year.

- In addition, inside the MHPA, impact avoidance areas are required for Cooper's hawk, northern harrier, golden eagle, burrowing owl, and southwestern pond turtle. See the current City's Land Development Manual – Biology Guidelines for additional guidance.
- Removal/control of non-native plants is not considered to constitute a significant habitat impact for which compensatory habitat acquisition, preservation, or creation for the area impacted is required. Mitigation for indirect impacts such as erosion control or off-site infestation by non-native species may be needed.

5.2.2.2 Significance Determination for Indirect Impacts

As with direct impacts, the first step in making a significance determination for indirect impacts is to identify the nature of the impacts and the extent and degree of the indirect impacts to biological resources. Some impacts may be considered indirect impacts in some circumstances and direct impacts under other circumstances. Indirect impacts include but are not limited to, the introduction of urban meso-predators into a biological system; the introduction of urban runoff into a biological system; the introduction of invasive exotic plant species into a biological system; noise and lighting impacts (note: consider both construction/demolition and operational phases of the project); and alteration of a dynamic portion of a system, such as stream flow characteristics or fire cycles; and loss of a wetland buffer that includes no environmentally sensitive lands.

To evaluate the significance of an indirect impact that may be caused by the project, consider the following:

- If a direct impact in turn causes another physical change in the environment, then the secondary changes are considered indirect impacts. For example, the dust from heavy equipment that would result from grading could settle on nearby vegetation and interfere with photosynthetic processes and/or the construction equipment noise levels could interrupt reproductive behavior within adjacent sensitive avian breeding habitats during the breeding season.
- An indirect physical change is to be considered only if that change is a reasonably foreseeable impact which may be caused by the project. A change which is speculative or unlikely to occur is not reasonably foreseeable.

Depending on the circumstances, indirect impacts of a project may be as significant as the direct impacts. In general, however, indirect impacts are easier to mitigate than direct impacts.

5.2.2.3 Significance Determination for Cumulative Impacts

The MSCP was designed to compensate for the regional loss of biological resources throughout the region. Projects that conform with the MSCP as specified by the MSCP Subarea Plan and other City programs and regulations are not expected to result in a significant cumulative impact for those biological resources adequately covered by the MSCP. These resources include the vegetation communities identified as Tier I through IV and the MSCP-covered species. However, the following would be considered significant cumulative impacts:

- All direct impacts to vernal pools are significant and cumulatively significant. Impacts to vernal pools may be mitigated in accordance with the criteria in the City's Land Development Manual – Biology Guidelines and the VPHCP.
- Direct impacts to perennial native grasslands that are greater than 0.1 acre are significant and cumulatively significant. Direct impacts to this habitat type are mitigated via Tier I per City's Land Development Manual – Biology Guidelines. Cumulative impacts may be mitigated only via creation at a 1:1 ratio or greater with the feasibility of creation to be evaluated on a case-by-case basis.
- Impacts to species covered by the MSCP (see Appendix A of MSCP Subarea Plan) would not generally be considered cumulatively significant, provided the project is in full compliance with the MSCP conditions of coverage and its implementing regulations. Impacts to state- or federally listed species not covered by the MSCP may be considered cumulatively significant. Each project will be evaluated on a case-by-case basis.

It is expected that many other sensitive species not analyzed for coverage under the MSCP will be adequately conserved through the MSCP's habitat-based mitigation plan. A rare circumstance may arise, however, where impacts to a particular species may still result in a cumulatively significant impact. For future projects within the MMCPA, the project-specific Biological Survey Report would identify those species and describe why a cumulative impact still exists in light of the habitat level of protection provided by the MSCP. Depending on the size of the impact and the sensitivity of the species, certain non-covered species might be considered rare enough to conclude cumulatively significant impacts and may require additional avoidance, minimization, and/or mitigation measures to reduce these impacts to below a level of significance.

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SECTION 6.0 – AVOIDANCE, MINIMIZATION, AND MITIGATION

For future projects within the MMCPA, avoidance, minimization, and/or mitigation will be determined on a project by project basis. Avoidance and minimization measures are intended to guide projects to avoid impacts to sensitive biological resources during the planning process through incorporation of project design features and minimization measures. Mitigation refers to actions to help sustain the viability and persistence of biological resources. Mitigation will consist of actions that either compensate for impacts by replacing or providing substitute habitats, or rectify the impact by restoring the affected habitats. The requirements of the mitigation will be based on the type and location of the impacted habitat, and additionally for uplands, on the location of the mitigation site. The Mitigation Element will consist of a discussion of the amount (e.g., quantity) and the type (e.g., method) of mitigation.

For each project, the Biological Survey Report will include appropriate avoidance and minimization measures. If impacts to biological resources cannot be avoided, then the project will include a mitigation program which identifies a plan of action to reduce significant impacts to below a level of significance. Each of these are described in this section.

6.1 AVOIDANCE AND MINIMIZATION MEASURES

Future projects within the MMPA should be designed to include the following measures to avoid or minimize potential project impacts to sensitive biological resources to the maximum extent feasible. In addition, future projects within the MMPA must show that they have been designed in conformance with the MHPA Land Use Adjacency Guidelines (MSCP Subarea Plan Section 1.4.3, as described above in Section 2.3.2.3); the VPHCP (as described above in Section 2.3.4); and other applicable City documents and programs. Prior to issuance of a Notice To Proceed (NTP), the Development Services Department (DSD) Environmental Designee (ED) shall review and approve all construction documents (plans, specifications, details, etc.) to ensure these requirements are incorporated as Conditions of Approval for all future projects within the MMPA.

6.1.1 Pre-Construction Measures

The following avoidance and minimization measures should be incorporated prior to construction.

6.1.1.1 Biologist Verification

The owner/permittee shall provide a letter to the City Mitigation Monitoring Coordination (MMC) section stating that a Project Biologist (Qualified Biologist), as defined in the City's Land Development Manual – Biology Guidelines, has been retained to implement the project's biological monitoring program. The letter shall include the names and contact information of all persons involved in the biological monitoring of the project.

6.1.1.2 Pre-Construction Meeting

The Qualified Biologist shall attend the pre-construction meeting, discuss the project's biological monitoring program, and arrange to perform any follow up mitigation measures and reporting, including site-specific monitoring, restoration or revegetation, and additional fauna/flora surveys/salvage.

6.1.1.3 Biological Documents

The Qualified Biologist shall submit all required documentation to MMC verifying that any special mitigation reports, including but not limited to maps, plans, surveys, survey timelines, or buffers are completed or scheduled per City's Land Development Manual – Biology Guidelines, MSCP Subarea Plan, ESL Ordinance, project permit conditions, CEQA, ESAs, and/or other local, state, or federal requirements.

6.1.1.4 Biological Construction Mitigation/Monitoring Exhibit

The Qualified Biologist shall present a Biological Construction Mitigation/Monitoring Exhibit (BCME), which includes the biological documents mentioned above. In addition, it shall include: (1) resource delineation, (2) avian construction avoidance areas/noise buffers/barriers, (3) other impact avoidance areas (e.g., avoidance of vegetation removal, limit access to vegetation trampling and trimming), and (4) any subsequent biological monitoring requirements determined by the Qualified Biologist and the City Assistant Deputy Director (ADD)/MMC necessary to assure impact avoidance. The BCME shall include a site plan, written and graphic depiction of the project's biological mitigation/monitoring program, and a schedule. The BCME shall be approved by MMC and referenced in the construction documents.

Avian Protection Requirements

To avoid any direct impacts to coastal California gnatcatcher or any species identified as listed, candidate, sensitive, or special status in the MSCP, removal of habitat that supports active nests in the proposed area of disturbance should occur outside of the breeding season for these species (February 1 to September 15). If removal of habitat in the proposed area of disturbance must occur during the breeding season, the Qualified Biologist shall conduct a pre-construction survey to determine the presence or absence of nesting for sensitive bird species in the proposed area of disturbance. The pre-construction survey shall be conducted within 10 calendar days prior to the start of construction activities (including removal of vegetation). The applicant shall submit the results of the pre-construction survey to the City's DSD for review and approval prior to initiating any construction activities.

If nesting activities for any sensitive bird species are detected, a letter report or mitigation plan in conformance with the City's Land Development Manual – Biology Guidelines and applicable state and federal laws (i.e., appropriate follow up surveys, monitoring schedules, construction and noise barriers/buffers) shall be prepared and include proposed measures to be implemented to ensure that take of birds or eggs or

disturbance of breeding activities is avoided. The report or mitigation plan shall be submitted to the City for review and approval and implemented to the satisfaction of the City. The City's MMC Section or Resident Engineer and Biologist shall verify and approve that all measures identified in the report or mitigation plan are in place prior to and/or during construction.

Resource Delineation

Prior to construction activities, the Qualified Biologist shall supervise the placement of orange construction fencing or equivalent along the limits of disturbance adjacent to sensitive biological habitats and verify compliance with any other project conditions as shown on the BCME. This phase shall include flagging plant specimens and delimiting buffers to protect sensitive biological resources (e.g., habitats/flora and fauna species, including nesting birds) during construction. Appropriate steps/care should be taken to minimize attraction of nest predators to the site.

Education

Prior to commencement of construction activities, the Qualified Biologist shall meet with the owner/permittee or designee and the construction crew to conduct an on-site educational session regarding the need to avoid impacts outside of the approved construction area and to protect sensitive flora and fauna (e.g., explain the avian and wetland buffers, flag system for removal of invasive species or retention of sensitive plants, clarify acceptable access routes/methods and staging areas).

6.1.2 Construction Measures

The following avoidance and minimization measures should be incorporated during construction.

6.1.2.1 Monitoring

All construction activities (including access/staging areas) shall be restricted to areas previously identified, proposed for development/staging, or previously disturbed as shown on the construction drawings and/or the BCME. The Qualified Biologist shall monitor construction activities as needed to ensure that construction activities do not encroach into biologically sensitive areas, or cause other similar damage, and that the work plan has been amended to accommodate any sensitive species located during the pre-construction surveys. In addition, the Qualified Biologist shall document field activity via the Consultant Site Visit Record (CSV). The CSV shall be e-mailed to MMC on the first day of monitoring, the first week of each month, the last day of monitoring, and immediately in the case of any undocumented condition or discovery.

6.1.2.2 Subsequent Resource Identification

The Qualified Biologist shall note/act to prevent any new disturbances to habitat, flora, and/or fauna on site (e.g., flag plant specimens for avoidance during access). If active nests or other previously unknown sensitive resources are detected, all project activities that directly impact the resource shall be delayed until species specific local, state, or federal regulations have been determined and applied by the Qualified Biologist.

6.1.3 Post-Construction Measures

The following avoidance and minimization measures should be completed following construction.

6.1.3.1 Impact Verification

In the event that impacts exceed previously allowed amounts, additional impacts shall be mitigated in accordance with City's Land Development Manual – Biology Guidelines, ESL and MSCP Subarea Plan, CEQA, and other applicable local, state, and federal laws.

6.1.3.2 Final BCME and Biological Monitoring Report

The Qualified Biologist shall submit a final BCME and final biological monitoring report to the satisfaction of the City ADD/MMC within 30 days of construction completion.

6.2 MITIGATION PROGRAM

If impacts to biological resources cannot be avoided through implementation of the measures described in Section 6.1, above, then the project will include a Mitigation Program which identifies a plan of action to reduce significant impacts to below a level of significance. The Mitigation Program will consist of three required elements: (1) Mitigation Element, (2) Protection and Notice Element, and (3) Management Element. Each element is further described below. This mitigation program must be incorporated in the permit conditions and/or subdivision map and the construction specifications for public projects, and shown on the construction plans as appropriate. The Biological Survey Report must also provide evidence that the nature and extent of the mitigation proposed is reasonably related (nexus) and proportional to the adverse biological impacts of the proposed development.

6.2.1 Mitigation Element

The following guidelines are provided in the City's Land Development Manual – Biology Guidelines to achieve consistency and equity among projects. Mitigation for specific projects may differ depending on site-specific conditions as supported by the project-level analysis. This section describes the mitigation requirements for upland and wetland habitats, mitigation methods, and species-specific mitigation requirements.

6.2.1.1 Mitigation for Upland Impacts

The MSCP Subarea Plan identifies the conservation and management of a City-wide system of interconnected open space. The habitat based level of protection afforded by the implementation of the MHPA is intended to meet the mitigation obligations of MSCP-covered species and most likely the majority of species determined to be sensitive pursuant to the CEQA review process.

The City has adopted a policy that development should be conserved. While this would result in the depletion (net loss) of the existing inventory of sensitive biological resources, the successful implementation of the MSCP would retain the long-term viability and avoid further extirpation of many of San Diego’s sensitive species. Therefore, for upland habitats, measures that contribute towards overall implementation of the MSCP may be considered as mitigation, even when a net loss of the existing inventory of sensitive biological resources occurs.

Upland Impacts Within the MHPA (Outside the Coastal Overlay Zone)

Where the MHPA covers more than 75 percent of a premise, development will be limited to the amount necessary to achieve a development area of 25 percent of the premise, based upon the development area regulations of the Open Space Residential Zone (OR-1-2 Zone). No mitigation will be required for the direct impacts to uplands associated with this development area.

City linear utility projects (i.e., sewer and water pipelines) are exempt from the development area limitation but need to mitigate all direct impacts in accordance with Table 5, below. Likewise, all projects processed through a deviation would need to provide mitigation in accordance with Table 5 for impacts beyond the allowable development area of the OR-1-2 Zone.

Table 5. Upland Mitigation Ratios*

Tier	Habitat Type	Mitigation Ratios																
Tier I (Rare Uplands)	Southern Foredunes	<table border="1"> <tr> <td colspan="2" rowspan="2">Tier I Mitigation Ratios</td> <td colspan="2">Location of Preservation</td> </tr> <tr> <td>Inside MHPA</td> <td>Outside MHPA</td> </tr> <tr> <td rowspan="2">Location of Impact</td> <td>Inside MHPA</td> <td>2:1</td> <td>3:1</td> </tr> <tr> <td>Outside MHPA</td> <td>1:1</td> <td>2:1</td> </tr> </table>				Tier I Mitigation Ratios		Location of Preservation		Inside MHPA	Outside MHPA	Location of Impact	Inside MHPA	2:1	3:1	Outside MHPA	1:1	2:1
	Tier I Mitigation Ratios							Location of Preservation										
						Inside MHPA	Outside MHPA											
	Location of Impact					Inside MHPA	2:1	3:1										
						Outside MHPA	1:1	2:1										
	Torrey Pines Forest																	
	Coastal Bluff Scrub																	
	Maritime Succulent Scrub																	
Maritime Chaparral																		
Scrub Oak Chaparral																		
Native Grassland																		
Oak Woodlands																		

Table 5. Upland Mitigation Ratios*

Tier	Habitat Type	Mitigation Ratios			
Tier II (Uncommon Uplands)	Coastal Sage Scrub	Tier I Mitigation Ratios		Location of Preservation	
	CSS/Chaparral			Inside MHPA	Outside MHPA
		Location of Impact	Inside MHPA	1:1	2:1
			Outside MHPA	1:1	1.5:1
Tier IIIA (Common Uplands)	Mixed Chaparral	Tier I Mitigation Ratios		Location of Preservation	
	Chamise Chaparral			Inside MHPA	Outside MHPA
		Location of Impact	Inside MHPA	1:1	1.5:1
			Outside MHPA	0.5:1	1:1
Tier IIIB (Common Uplands)	Non-native Grasslands	Tier I Mitigation Ratios		Location of Preservation	
				Inside MHPA	Outside MHPA
		Location of Impact	Inside MHPA	1:1	1.5:1
			Outside MHPA	0.5:1	1:1
Tier IV (Other Uplands)	Disturbed Land	Tier I Mitigation Ratios		Location of Preservation	
	Agriculture			Inside MHPA	Outside MHPA
	Eucalyptus Woodland	Location of Impact	Inside MHPA	0:1	0:1
	Ornamental Plantings		Outside MHPA	0:1	0:1

*No mitigation would be required for impacts within the base development area (25 percent) occurring inside the MHPA. Mitigation for any impacts from development in excess of the 25 percent base development area for community plan public facilities or for projects processed through the deviation process would be required at the indicated ratios.

For upland impacts summarized in Table 5, these additional notes apply:

- For all Tier I impacts, the mitigation could (1) occur within the MHPA portion of Tier I (in Tier) or (2) occur outside of the MHPA within the affected habitat type (in-kind).
- For impacts to Tier II, III,A and IIIB habitats, the mitigation could (1) occur within the MHPA portion of Tiers I through III (out-of-kind) or (2) occur outside of the MHPA within the affected habitat type (in-kind).

- Mitigation for impacts to occupied burrowing owl habitat (at the MSCP Subarea Plan specified ratio) must be through the conservation of occupied burrowing owl habitat or conservation of lands appropriate for restoration, management, and enhancement of burrowing owl nesting and foraging requirements.

Upland Impacts Outside of the MHPA (Outside the Coastal Overlay Zone)

Where the MHPA covers less than 75 percent of a premise, no development will be allowed within the MHPA. Upland mitigation, based upon the ratios set forth in Table 5, above, will be required for all significant biological impacts. These ratios are based upon the rarity of the upland resources as characterized by one of the four Tiers listed in the table. Due to the critical nature and high biological value of the MHPA, mitigation should be directed to the MHPA. Thus, a lower mitigation ratio may be applied for projects that propose to mitigate inside of the MHPA. Lands outside the MHPA containing Narrow Endemic Species will be treated as if the land was inside the MHPA for purposes of mitigation.

The mitigation requirement would be evaluated against any portion of the premise within the MHPA that is left undeveloped as a condition of the permit. If the portion of the premise containing the MHPA is equal to or greater than the mitigation requirement, then no further mitigation would be required. Any acreage of the mitigation requirement not satisfied on-site will be required to be mitigated off-site.

Mitigation located inside the MHPA for all Tier I impacts must be in-tier but may be out-of-kind. For impacts to Tier II, IIIA, or IIIB habitats (excluding occupied burrowing owl habitat), the mitigation could (1) include any Tier I, II, IIIA, or IIIB habitats (out-of-kind) within the MHPA or (2) occur outside of the MHPA within the affected habitat type (in-kind). Mitigation for impacts to occupied burrowing owl habitat (at the subarea plan specified ratio/Table 5 of the Biology Guidelines) must be through the conservation of occupied burrowing owl habitat or conservation of lands appropriate for restoration, management, and enhancement of burrowing owl nesting and foraging requirements.

Upland Impacts Within the Coastal Overlay Zone

Within the Coastal Overlay Zone, encroachment into steep hillsides containing sensitive biological resources shall be avoided to the maximum extent possible, and permitted only when in conformance with the encroachment limitations set forth in the City's ESL Regulation, under the San Diego Municipal Code, Chapter 14, Division 1, Section Section 143.0142(a)(4). Mitigation for permitted impacts shall be required as described above.

6.2.1.2 Mitigation for Wetlands Impacts

ESL requires that impacts to wetlands be avoided, unless approved through the deviation process. Unavoidable impacts should be minimized to the maximum extent practicable and mitigated to below a level of significance.

As part of the project-specific environmental review pursuant to CEQA, the project design will be evaluated to determine if it is an Essential Public Projects (EPP) Option, and Economic Viability Option, or a Biologically Superior Option (see Section III.A.2.ii.A through C of the City’s Land Development Manual – Biology Guidelines), all unavoidable wetlands impacts (both temporary and permanent) will be analyzed, and mitigation will be required in accordance with Table 6 and/or Table 7, below; mitigation should be based on the impacted type of wetland habitat and project design. Mitigation should prevent any net loss of wetland functions and values of the impacted wetland.

Table 6. Standard Wetland Mitigation Ratios for Biologically Superior Design

Habitat Type	Mitigation Ratio
Coastal Wetlands	
Salt Marsh	4:1
Salt Panne	4:1
Riparian Habitats	
Oak Riparian Forest	3:1
Riparian Forest or Woodland	3:1
Riparian Scrub	2:1
Riparian Scrub in the Coastal Overlay Zone	3:1
Freshwater Marsh	2:1
Freshwater Marsh in the Coastal Overlay Zone	4:1
Natural Flood Channel	2:1
Disturbed Wetland	2:1
Vernal Pools	2:1 to 4:1*
Marine Habitats	2:1
Eelgrass Beds	2:1

*Mitigation for vernal pool impacts consistent with the VPHCP shall be 2:1 for listed fairy shrimp or when no listed plant species are present, 3:1 for San Diego button celery, and 4:1 when listed species with very limited distributions (e.g., *Spreading navarretia*, *San Diego mesa mint*, *California Orcutt grass*, and *Otay mesa mint*) are present. While the ratio is applied to the basin area, the mitigation site must include appropriate watershed to support restored and/or enhanced basins.

Table 7. Extraordinary Wetland Mitigation Ratios for Non-Biologically Superior Design

Habitat Type	Mitigation Ratio
Coastal Wetlands (Salt Marsh, Salt Panne)	8:1
Riparian Forest or Woodland (oak, sycamore, or willow)	6:1
Riparain Scrub	4:1
Freshwater Marsh	4:1
Natural Flood Channel*	4:1
Disturbed Wetland*	4:1
Vernal Pools	4:1to 8:1

* Preference for these habitats is out-of-kind mitigation with better habitat. In-kind could be considered where it would clearly benefit sensitive species and result in a biologically superior alternative.

For the Biologically Superior Option, the project and proposed mitigation shall include avoidance, minimization, and compensatory measures which would result in a

biologically superior net gain in overall function and values of (a) the type of wetland resource being impacted and/or (b) the biological resources to be conserved; and the Biologically Superior Option mitigation shall include either:

- Standard mitigation per Table 6 including wetland creation or restoration of the same type of wetland resource that is being impacted that results in high quality wetlands; AND a biologically superior project design whose avoided area(s):
 - is in a configuration or alignment that optimizes the potential long-term biological viability of the on-site sensitive biological resources, and/or
 - conserves the rarest and highest quality on-site biological resources
- For a project not consistent with the Biologically Superior Option described above, extraordinary mitigation per Table 7 is required. Examples of increased function and value include, but are not limited to, an increase in the availability of habitat for native fauna, an increase in native flora diversity, a decrease in invasive species, an increase in ground water recharge, water quality improvements and sedimentation deposition rates. Success criteria using the best currently available information for the particular mitigation habitat shall be required as part of the restoration or creation plan.

Additional Requirements for Vernal Pool or VPHCP Covered Species Mitigation

Mitigation for projects impacting vernal pools or VPHCP-covered species shall conform to the VPHCP, including salvage of sensitive species from vernal pools to be impacted, introduction of salvaged material into restored vernal pool habitat where appropriate (e.g., same vernal pool series), and maintenance of salvaged material pending successful restoration of the vernal pools. Salvaged material shall not be introduced to existing vernal pools containing the same species outside the vernal pool series absent consultation with and endorsement by vernal pool species experts not associated with the project (e.g., independent expert). The mitigation sites shall include preservation of the entire vernal pool watershed and a buffer based on functions and values; however, if such an analysis is not conducted, there shall be a default of a 100-foot buffer from the watershed.

Types of Wetland Mitigation

The following list provides operational definitions of the four types of activities that constitute wetland mitigation under ESL:

- **Wetland creation** is an activity that results in the formation of new wetlands in an upland area. An example is excavation of uplands adjacent to existing wetlands and the establishment of native wetland vegetation.
- **Wetland restoration** is an activity that re-establishes the habitat functions of a former wetland. An example is the excavation of agricultural fill from historic wetlands and the re-establishment of native wetland vegetation.

- **Wetland enhancement** is an activity that improves the self-sustaining habitat functions of an existing wetland. An example is removal of exotic species from existing riparian habitat.
- **Wetland acquisition** may be considered in combination with any of the three mitigation activities above.

Wetland enhancement and wetland acquisition focus on the preservation or the improvement of existing wetland habitat functions and values and do not result in an increase in wetland area; therefore, a net loss of wetland may result. As such, acquisition and/or enhancement of existing wetlands may be considered as partial mitigation only for any balance of the remaining mitigation requirement after restoration or creation if wetland acreage is provided at a minimum of a 1:1 ratio.

For permanent wetland impacts that are unavoidable and minimized to the maximum extent feasible, mitigation shall consist of creation of new, in-kind habitat to the fullest extent possible and at the appropriate ratios. In addition, unavoidable impacts to wetlands located within the Coastal Overlay Zone shall be mitigated on-site, if feasible. If on-site mitigation is not feasible, then mitigation shall occur within the same watershed. All mitigation for unavoidable wetland impacts within the Coastal Overlay Zone shall occur within the Coastal Overlay Zone.

Restoration of illegally filled historical wetland areas will not be considered for mitigation and may result in code enforcement actions and/or may require restoration as a condition of project approval. All restoration proposals should evaluate the reason for the historical wetland loss (e.g., placement of fill, changes in upstream or groundwater hydrology), the approximate date of the loss, and to the maximum extent possible, provide a determination as to whether the historical loss was legally conducted based upon the regulatory requirements at the time of the loss and the property ownership at the time of the loss.

The wetland mitigation ratios, set forth in Tables 6 and 7, above, in combination with the requirements for no-net-loss of functions and values and in-kind mitigation, are adequate to achieve the conservation goals of the MSCP Subarea Plan for wetland habitats and the MSCP-covered species which utilize those habitats.

Wetland mitigation required as part of any federal (USACE 404 permit) or state (CDFW 1601/1603 SAA) wetland permit will supersede and will not be in addition to any mitigation identified in the CEQA document for those wetland areas covered under any federal or state wetland permit. Wetland habitat outside the jurisdiction of the federal and state permits will be mitigated in accordance with the CEQA document. Wetland habitat outside the jurisdiction of the federal and state permits will be mitigated in accordance with the CEQA document.

6.2.1.3 Mitigation Methods

Mitigation requirements may be satisfied by one, or a combination, of the following methods, or other methods determined on a case-by-case basis to reduce impacts to below a level of significance. These methods, described below, allow for greater flexibility in mitigation methodology, including off-site acquisition, on-site preservation, habitat restoration, and in limited cases, monetary compensation.

In all cases, mitigation sites must have long-term viability. Viability will be assessed by the connectivity of the site to larger planned open space, surrounding land uses, and sensitivity of the MHPA resources to environmental change. In general, areas within the MHPA are considered to have long-term viability. Areas outside of the MHPA proposed for mitigation may require additional biological studies to support the determination of long-term viability.

Off-Site Acquisition

The purchase or dedication of land with equal or greater habitat value can be considered as a method of mitigation. Impacts within the City must be mitigated within the City's jurisdiction, preferably in the MHPA.

"Mitigation Banks" are privately or publicly held lands that sell mitigation credits instead of fee title for habitat areas on which a conservation easement has been placed. Under this method, a large site can be acquired over time by multiple projects requiring small mitigation needs. Purchase of areas of "credits" from an established bank can be acceptable, as long as the required acreage is subtracted from the remaining credits in the bank and is not available for future projects. All banks must have provisions approved for long-term management, can be part of a regional habitat preserve system, and upon request can provide an updated record of the areas (credits) purchased from the bank and those that are remaining.

New mitigation banks must be established pursuant to the "Official Policy on Conservation Banks" (California Resource Agencies 1995) and the "Supplemental Policy Regarding Conservation Banks within the NCCP Area of Southern California" (USFWS 1996). In general, the purchase of credits from mitigation banks located outside of the City's jurisdiction will not be allowed.

On-Site Preservation

The following provides guidance for evaluating the acceptability of on-site preservation as mitigation with respect to the long-term viability of the site.

- Inside the MHPA: For premises that straddle the MHPA, the on-site preservation of lands inside the MHPA, outside of brush management zones, are considered to have long-term viability due to their connectivity to larger planned open space and their contribution toward regional biodiversity preservation. Areas containing brush management Zone 2 will be considered impact neutral (not considered an

impact and not considered acceptable as a mitigation area). Lands inside the MHPA, outside of brush management zones, will be considered acceptable as mitigation, and no additional studies to support this determination will be required. (Note: Lands outside the MHPA containing Narrow Endemic Species would be considered acceptable as mitigation and would be treated as if the land was inside the MHPA for purposes of mitigation).

- Outside the MHPA: The on-site preservation of lands outside the MHPA may be considered acceptable as mitigation provided they have long-term biological value. Long-term biological value should be assessed in terms of connectivity to larger areas of planned open space, and any potential current or future indirect impacts associated with the urban interface. As indicated above, areas containing brush management Zone 2 will be considered “impact neutral” (not considered an impact and not considered as acceptable as a mitigation area).
 - Connectivity: Isolated habitat patches have been shown to lack the diversity and resilience of connected systems (Noss 1983, Soule et al. 1988, Temple 1983, Wright and Hubbell 1983 as referenced in the City’s Land Development Manual – Biology Guidelines). In most cases, the species first to extirpate (disappear) from these isolated areas are rare species that do not adapt well to human influenced environments. Unfortunately, these species are those targeted for conservation by the MSCP.
 - Areas preserved on-site, but outside of the MHPA, will generally be considered to be acceptable as mitigation only if connected to the MHPA. As a general guideline, areas completely surrounded by development and areas connected by native vegetation of less than 400 feet wide or greater than 500 feet long will be considered isolated, and will not count as mitigation.
 - Site-specific studies with field observations which incorporate the best available scientific information and methods would be necessary to provide a basis for any modification to these standards at the project level. Other factors, such as topography (steep slopes), major road systems, or other large public facility and habitat patch size, will also be considered in assessing potential isolation of a site.

Isolated areas may, on a case-by-case basis, be considered for use as mitigation where it can be reasonably demonstrated that the resource can persist in isolation (e.g., Narrow Endemic Species or unique habitats such as vernal pools) or act as “stepping stones” for wildlife movement between portions of the MHPA.
 - Urban Interface: The interface (edge) between native plant communities and human-modified areas are considered to be adverse to many native species. Many wildlife species decrease along the edge of habitat due to detrimental conditions, such as increased parasitism (by species such as the brown-headed cowbird), increased nest predation (by species such as jays, raccoons, opossums, and domestic cats and dogs), and increased competition for nesting areas (by starlings and other non-native exotic species) (Brettingham and Temple 1983, Gates and Gysel 1978, Noss 1993, Temple 1987 as referenced in the City’s Land Development Manual – Biology Guidelines). Invasion by exotic plants (such as escaped

ornamental landscaping) and off-road vehicles also increases along habitat edges (Noss 1983, Alberts et al 1993, Sauvajot and Buechner 1993, Scott 1993 as referenced in the City's Land Development Manual – Biology Guidelines). Other factors such as increased noise and night-time lighting may also contribute to the adverse conditions. These conditions are collectively called "edge effects."

Few studies have attempted to quantify the distance of edge effects. The MSCP indicated that edge conditions range from 200 to 600 feet (61 to 183 meters) depending on adjacent land uses. A 1994 article on avian nest success indicates that the most conclusive studies suggest that edge effects are most predominantly documented within 164 feet (50 meters) of an edge (Patron 1994 as referenced in the City's Land Development Manual – Biology Guidelines).

Habitat Restoration

The restoration of degraded habitat may be considered as mitigation. Habitat restoration may include creation of habitat that was previously converted by human activities and/or the enhancement of existing degraded habitat, where the proposed enhancement increases the habitat quality and biological function of the site.

Decompaction and revegetation of existing roads and trails, removal of exotic invasive species in conjunction with the establishment of native species, and the conversion of agricultural and disturbed lands back to native habitat are examples of acceptable restoration efforts. The removal of trash from a site does not constitute restoration in and of itself but may be a component of the restoration. Any area that will continue to be subjected to periodic clearing (e.g., pipeline maintenance) would not be considered as mitigation. Areas proposed for restoration must contain the appropriate site conditions (e.g., hydrology, slope aspect, soils) for the proposed habitat.

All restoration will be required to have a restoration plan that outlines specific species for planting/hydroseeding; timing; irrigation and grading requirements (if any); a long-term maintenance, monitoring, and reporting program; and criteria for success as well as contingency measures in case of failure. It is expected that monitoring of the restoration would be no less than 5 years but could be completed earlier if the 5-year success criteria were met.

The restoration plan will establish appropriate monitoring and reporting periods. In general, it is expected that quarterly reports will be prepared by the applicant's consultant for the first year and annual reports thereafter to document the status of the restoration effort until deemed complete by the City Manager or designee. These reports will identify any necessary remedial measures to be implemented by the applicant upon approval by the City.

A surety bond is required to assure implementation of all restoration efforts. The surety bond can be structured to return certain portions of the bond after demonstrating the

successful completion of major restoration milestones (e.g., meeting the success criteria for year three).

The restoration plan should clearly identify the milestones. Further details on CEQA mitigation monitoring can be obtained from the City's MMRP.

Monetary Compensation

In some cases, developments with small impacts may compensate by payment into a fund used to acquire, maintain, and administer the preservation of sensitive biological resources. This fund is intended to be used only for the mitigation of impacts to small, isolated sites with lower long-term conservation value. For purposes of this fund, small is generally considered less than 5 acres, but could, in some cases, be considered up to 10 acres.

Mitigation monies will be deposited in the City's Habitat Acquisition Fund (Fund #10571), as established by City Council Resolution R-275129, adopted on February 12, 1990.

Monetary compensation must also include an amount equal to 10 percent of the total administrative costs.

Administration of the fund is the responsibility of the City's DSD, with cooperation from other City departments, including Park and Recreation (for maintenance), Auditor (for accounting), and Real Estate Assets (for estimates of land cost). Staff costs will not be charged to the fund except to cover appraisal and administrative expenses (from the 10 percent administrative fee).

The process for utilizing this type of mitigation is as follows. Staff members from the DSD will request from the Real Estate Assets Department an estimate of average land costs of the focused acquisition area closest to the project site. Focused acquisition areas have been identified by the MSCP as large areas of habitat critical for biodiversity preservation and the success of the MSCP (e.g., Carmel Mountain, Del Mar Mesa, East Elliott, Western Otay Mesa). The Real Estate Assets Department will base the estimate on previous appraisals and comparable land costs of lands within the focused acquisition area. The applicant will be required to contribute the estimated average per acre land cost multiplied by the mitigation ratio plus the additional amount for administration.

A \$2,000,000 "cap" has been placed on the amount of money that may accumulate in the Habitat Acquisition Fund. The purpose of this cap is to insure that funds are spent in a timely manner. After the cap has been reached, no other funds may be accepted until the money is expended.

6.2.1.4 Species Specific Mitigation

In general, it is accepted that securing comparable habitat at the required ratio will mitigate for the direct impact to most sensitive species. While this is true for species with wide geographic distributions and/or large territory sizes, species with very limited geographic ranges (Narrow Endemic Species) would require additional efforts designed

to protect these species. A list of Narrow Endemic Species is provided in Section I of City's Land Development Manual – Biology Guidelines, and those with a potential to occur in the MMCPA are discussed in Section 4.3.2, above.

The specific actions necessary to protect Narrow Endemic Species must be determined on a case-by-case basis. Transplantation and/or soil salvage are examples of acceptable mitigation methods for some of these species. Fencing, signage, and management are other examples of mitigation. The Mitigation Program discussion in the Biological Survey Report should identify all specific actions related to the mitigation of these Narrow Endemic Species in addition to any other requirements necessary for the mitigation of their habitats.

In addition to the protection of Narrow Endemic Species required by the MSCP, certain species are only considered adequately conserved as part of the MSCP (e.g., MSCP-covered species) only if translocation/restoration of the species is provided at the project-level (see Table 3-5 of MSCP Plan and Section 1.3 of the City's Subarea Plan). These species are wart-stemmed ceanothus, snake cholla, and burrowing owl. This also applies to the restoration/transplantation of any impacted habitat of coastal cactus wren. The first two of these species are plants and may be transplanted or incorporated into any revegetation plan proposed for the site.

Restoration of impacted coastal cactus wren habitat shall include salvage and transplantation of snake cholla, coast cholla (*Cylindropuntia prolifera*), live-forevers (*Dudleya* spp.), coast barrel cactus, fish-hook cactus (*Mammillaria dioica*), coastal prickly pear (*Opuntia littoralis*), chaparral prickly pear (*Opuntia oricola*), our Lord's candle (*Yucca whipplei*), and Mojave yucca (*Yucca schidigera*) to an on-site or off-site restoration site or a receiver site approved by the City.

Within the MHPA, impacts to burrowing owls must be avoided; outside the MHPA, any impacted individuals must be relocated out of the impact area using passive or active methodologies approved by the Wildlife Agencies.

Impacts to road pools supporting listed fairy shrimp outside the MHPA are authorized provided they are mitigated at a 2:1 ratio consistent with the VPHCP. Within the MHPA, road pools supporting listed fairy shrimp must be avoided, unless a deviation (e.g., Biologically Superior Option as defined in Section III.A.2.ii.C of the City's Land Development Manual – Biology Guidelines) is approved by the City and Wildlife Agencies. Impacts will be mitigated at a 2:1 ratio consistent with the VPHCP.

Species specific analysis for sensitive species not covered by the MSCP may be required as part of the CEQA process. It is expected that the majority of CEQA sensitive species not covered by the MSCP will be adequately mitigated through the habitat based mitigation described in Section III of the City's Land Development Manual – Biology Guidelines. A rare circumstance may arise, however, when mitigation actions specific to a particular species may be required. The project-level Biological Survey Report will justify why such actions are necessary in light of the habitat level protection provided by the MSCP.

6.2.2 Protection and Notice Element

The Mitigation Program must provide assurances that areas offered for mitigation or remainder areas in the OR-1-2 Zone not developed but indirectly impacted by the proposed development will be adequately protected from future development. Additionally, adequate notice must be recorded against the title of the property to memorialize the status of mitigation and remainder areas. The Protection and Notice Element will identify the specific actions incorporated into the project to protect any areas offered as mitigation. Dedication and Covenant of Easement are considered to adequately protect mitigation and remainder areas and are discussed in further detail below.

6.2.2.1 Dedication

Dedication in fee title to the City is the preferred method of protecting mitigation areas. It is the City's policy to accept lands being offered for dedication unless certain circumstances prohibit the acceptance, such as the presence of hazardous materials, title problems, unpaid taxes, or unacceptable encumbrances including liens. The City Manager or designee must recommend, and the City Council must accept, all proposed dedications on a case-by-case basis. Dedication of mitigation sites to other conservation entities (e.g., USFWS, Nature Conservancy, Trust for Public Lands) may also be permissible, if acceptable to the City Manager or designee.

For vernal pool properties that are dedicated to the City as part of the VPHCP, a deed restriction consistent with California Civil Code section 815, et seq. and acceptable to the Wildlife Agencies will be recorded over the mitigation areas.

6.2.2.2 Covenant of Easement

In lieu of dedication in fee title, or granting of a conservation easement, where a project has utilized all of its development area potential as allowed under the OR-1-2 Zone, then as a condition of permit approval, a Covenant of Easement would be required to be recorded against the title of the property for the remainder area, with USFWS and CDFW named as third party beneficiaries. A Covenant of Easement is a legally binding promise made by the property owner with respect to future use of the land. Identification of those permissible passive activities and other conditions of the permit would be incorporated into the Covenant of Easement. The Covenant of Easement would be recorded against the title of the property and would run with the land. The applicant will allow the City limited right of entry to the remainder area to monitor the applicant's management of the area.

6.2.3 Management Element

The Mitigation Program must provide assurances that the mitigation or remainder areas in the OR-1-2 Zone will be adequately managed and monitored in a manner consistent with Preserve Management (Section 1.5 of the City's MSCP Subarea Plan and/or Section 5.3.2 and Chapter 7 of the VPHCP), as appropriate. The Mitigation Program should identify how the objectives of the City's MSCP and VPHCP Preserve

Management recommendations will be met for the area as well as provide any additional management recommendations resulting from site- specific information (area specific management directives). The plan must also identify the responsible entity and funding source for the long-term maintenance and management.

6.2.3.1 Management by the City

In general, the entity that holds the fee title or is granted a conservation easement will be responsible for the management of the mitigation area. If the City is the responsible party, then upon acceptance of the property, the area will be managed in accordance with the MSCP Framework Management Plan as modified by the area specific management directives and the Vernal Pool Management and Monitoring Plan, as appropriate. The project applicant would not be responsible for future monitoring reports or maintenance activities.

For all wetland mitigation sites, funding must be provided to cover the costs of the in-perpetuity management and monitoring. Funding may be provided by a variety of means including, but not limited to, the establishment of an endowment or Community Facilities District. The amount of funding shall be calculated through the use of a Property Analysis Record (PAR) or other similar method. For properties that are deeded to the City in fee title, the PAR or equivalent shall be approved by the Park and Recreation Department prior to City's acceptance of the land.

In no case will the City be required to accept any brush management functions that are made a condition of a discretionary project. It is expected that a homeowners association or similar group will be established for any brush management responsibilities.

6.2.3.2 Private Party Management

If the City does not hold fee title, or a Covenant of Easement is not granted, then the project applicant must provide for the management of the mitigation area. For properties that remain in private ownership or that would be managed by a third party, DSD shall approve the managing entity and the PAR or equivalent to ensure adequate funding for the long-term management and monitoring of the site. The Mitigation Program must include documentation on how the project would implement the objectives of the MSCP Preserve Management and the area specific management directives. The Mitigation Program must identify the responsible entity for long-term maintenance and management, the requirements for future management and monitoring reports, and a secure funding source to pay for the management in perpetuity.

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Appendix A

**APPENDIX A
EXPLANATION OF STATUS CODES FOR SENSITIVE SPECIES**

STATUS CODES FOR SENSITIVE PLANTS (TABLE 2)

Federal

FT Federally listed threatened 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

STATUS CODES FOR SENSITIVE WILDLIFE (TABLE 4)

Federal

- FE Federally listed endangered species
- FT Federally 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

