

APPENDIX E BIOLOGICAL RESOURCES TECHNICAL REPORT

Biological Resources Technical Report

City of Del Mar Capital Improvement Program Streamlining Project

Del Mar, California

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1.0 INTRODUCTION

The City of Del Mar (City) is undertaking a comprehensive Programmatic Environmental Impact Report (PEIR) to evaluate the potential environmental effects associated with implementation of its Capital Improvement Program (CIP) Streamlining Project (project). The CIP encompasses a range of infrastructure and facility projects designed to maintain and enhance the City's public services, utilities, and community assets. This biological resources technical report provides an overview of the City's unique coastal setting with a focus on identifying and managing potential impacts to sensitive biological resources.

1.1 Background and Purpose

The City's CIP is a strategic planning and budgeting tool for addressing the City's current and future capital infrastructure and facility needs and is revised over time in noticed public meetings of the City Council in consideration of City Council goals and priorities and funding availability. The CIP outlines plans for capital projects, major maintenance, refurbishments, and substantial equipment purchases. Every year, the City undertakes multiple CIP projects involving work on City properties, within City rights-of-way, and within public easements. The project components analyzed in this report include the typical construction and operation protocols for various types of individual CIP projects. The CIP projects covered under this report have been divided into seven categories: undergrounding program, water infrastructure, wastewater infrastructure, storm water infrastructure, street improvements, facilities, and open space. Most CIP projects are located within developed or highly disturbed areas, such as public rights-of-way, and are not anticipated to occur within open space areas.

The purpose of this biological resources technical report is to support the PEIR by summarizing the existing conditions of natural resources within the City, with a focus on special-status plant and wildlife species, sensitive habitats, and locally significant biological resources. The report synthesizes existing data, literature, and the results of desktop analyses to identify biological constraints and inform the development of mitigation strategies in the PEIR. These strategies are intended to streamline future environmental review and permitting for individual CIP projects, ensuring compliance with the California Environmental Quality Act (CEQA) and other applicable regulations, while protecting the City's valuable natural resources.

1.2 Scope of Analysis and Methods

1.2.1 Project Location

Implementation of the CIP would occur within the majority of the City of Del Mar in northwestern San Diego County, California (Attachment A: Figure 1, Regional Location Map). The project site is mapped within Sections 2, 11, 13, 14, and 23, Township 14 South, Range 4 West, of the US Geological Survey (USGS) Del Mar, California, 7.5-minute topographic quadrangle map (Attachment A: Figure 2, Program Vicinity Map). The City is a coastal community situated along the Pacific Ocean, approximately 20 miles north of downtown San Diego. The project site encompasses approximately 2.2 square miles (1,408 acres) and is bordered by the cities of Solana Beach to the north and San Diego to the south and east, with the Pacific Ocean forming its western boundary (Attachment A: Figure 3, Program Location Map). The project site is characterized by a mix of developed urban land uses, including residential neighborhoods, commercial districts, public facilities, parks, and transportation corridors. Notable features within the City include the

Del Mar Fairgrounds, Powerhouse Park, Seagrove Park, and segments of the San Dieguito River and Lagoon, which provide important ecological and recreational resources.

1.2.2 Project Overview

The project includes a variety of public infrastructure and facility improvements planned to occur throughout the City. The following summaries describe the general activities associated with each CIP category, providing context for the types of work that may occur within the City and informing the scope of biological resources present in areas where these activities may take place.

- **Undergrounding Program.** The Undergrounding Program consists of removing unsightly utility poles and replacing overhead electricity and telecommunications lines with underground infrastructure. Typical activities include trenching, installation of utility lines and conduit, backfilling, resurfacing pavement, vegetation replacement, installation of utility structures, and removal of utility poles and equipment. Most work is conducted within public rights-of-way, with occasional access to areas containing existing vegetation.
- **Water Infrastructure.** Water infrastructure activities involve improvements, repairs, and rehabilitation of existing or future potable and recycled water pipelines, valves, pressure reducing stations, pressure relief stations, water pumping stations, water meters, backflow preventers, and fire hydrants. Work generally includes trenching, backfilling, and resurfacing activities, and mechanical or electrical upgrades, primarily within public rights-of-way. Some pipeline repairs may be completed without excavation.
- **Wastewater Infrastructure.** Wastewater projects address the maintenance and rehabilitation of gravity and force main pipelines, pump stations, manholes, and cleanouts. Activities typically include trenching, backfilling, resurfacing, and mechanical or electrical improvements, with most work occurring within existing roadways.
- **Storm Water Infrastructure.** Storm water activities include improvements, repairs, and rehabilitation of pipelines, culverts, manholes, cleanouts, inlets, outlets, catch basins, headwalls, open channels, swales, infiltration pits, and low flow diverters. Construction generally involves trenching, excavation, backfilling, and resurfacing, primarily within public rights-of-way.
- **Street Improvements.** Street projects encompass improvement, repairs, and rehabilitation of existing or future public roadways, including pavement, concrete curb and gutter, sidewalks, Americans with Disabilities Act-compliant ramps, bridges, retaining walls, and related infrastructure. Typical activities include excavation, backfill, resurfacing, and installation of irrigation and landscaping, mainly within public rights-of-way.
- **Facilities.** Facilities projects address maintenance needs for the City's public facilities, such as the Public Works facility, fire station, lifeguard towers, and other City-owned structures. Activities may include minor exterior repairs and interior improvements, installation of hardscape features, and, in some cases, reconstruction or elevation of buildings to address flood risks. Work ranges from minor repairs using hand tools to larger construction projects requiring heavy equipment.
- **Open Space.** Open space projects focus on the maintenance, improvements, and repairs of open space amenities, including City parks, trails, beach access points, lifeguard facilities, and other recreational amenities. Activities may include excavation, backfill, resurfacing, irrigation,

landscaping, and minor building repairs. Most work is conducted on City property or within public rights-of-way.

For the purposes of this report, biological resources of concern include special-status and other sensitive resources that may occur within the City of Del Mar and its vicinity. These categories encompass the biological resources that are the focus of this existing conditions report. These resources are defined as follows:

- **Sensitive Natural Communities.** Vegetation types or habitat areas recognized as rare or declining by state or federal agencies, or otherwise considered sensitive due to their ecological value, limited distribution, or vulnerability to disturbance.
- **Special-Status Plant Species.** Plant species that are listed as threatened, endangered, or rare under the federal or California Endangered Species Acts; candidates for listing; or otherwise recognized as sensitive by the California Native Plant Society (CNPS) California Rare Plant Rank (CRPR).
- **Special-Status Wildlife Species.** Wildlife species that are listed as threatened, endangered, or special concern under federal or state law; candidates for listing; or otherwise recognized as sensitive by the California Department of Fish and Wildlife (CDFW) or US Fish and Wildlife Service (USFWS).
- **Regulated Aquatic Resources.** Wetlands, streams, and other aquatic features regulated by the U.S. Army Corps of Engineers (USACE), CDFW, San Diego Regional Water Quality Control Board (RWQCB), and California Coastal Commission (CCC). These resources are subject to permitting and protection under federal Clean Water Act Sections (CWA) 404 and 401, California Fish and Game Code Section 1600 et seq., and the California Coastal Act.
- **Locally Designated Resources.** Areas designated as Environmentally Sensitive Habitat Areas (ESHAs) under the City's Local Coastal Program/Land Use Plan, as well as resources protected by local ordinances, such as overlay zones (e.g., Lagoon Overlay Zone, Bluff, Slope, and Canyon Overlay Zone) and tree protection regulations.

The following sections provide an overview of the regulatory setting and the occurrence, distribution, and ecological context of these resources within the City.

1.2.3 Literature and Database Review

The literature and database review served to document the natural resources known to occur or with the potential to occur within the City and regional vicinity. To establish a comprehensive baseline of biological resources, the review focused on the natural resources within the City limits but also included the surrounding region. This regional approach ensured that the analysis captured resources that may be affected by CIP activities, that could expand into the City over time, or that have suitable habitat but have not been recorded within the City limits. The review included searches of federal, state, and local databases, published scientific literature, technical reports, relevant planning documents, and geographic information system (GIS) datasets. The primary objectives of the literature review and database searches were to:

- Identify special-status plant and wildlife species, sensitive natural communities, and other regulated biological resources known to occur or with the potential to occur within the program area;

- Document the locations and habitat associations of these resources based on existing records;
- Evaluate the presence of designated critical habitat, conservation areas, wildlife corridors and linkages, and environmentally sensitive overlay zones;
- Inform the development of a program-level biological constraints map and mitigation strategy for future CIP projects.

The review included the following sources organized by natural resource category:

- **Special-status plants and wildlife:** CDFW's California Natural Diversity Database (CNDDDB 2025a, 2025b, 2025c), the CNPS's Rare Plant Inventory (CNPS, n.d.), and the USFWS's Information for Planning and Consultation (IPaC) tool (USFWS, n.d.-a). Searches were conducted for the nine USGS 7.5-minute quadrangle maps centered on the program area (Encinitas, Rancho Santa Fe, Escondido, Del Mar OE W, Del Mar, Poway, La Jolla OE W, La Jolla, and La Mesa). Other relevant sources included the Crest Canyon Undergrounding District X1A Project biological resources letter report (Busby Biological Services 2024), the City of Del Mar Community Plan (2021), City of San Diego MSCP Subarea Plan (City of San Diego 1997), San Diego Geographic Information Source (SanGIS and SANDAG, n.d.), San Diego County Multiple Species Conservation Program (n.d.), San Diego Association of Governments (SANDAG) *2025 Regional Plan*, San Diego SanBIOS data and habitat models (County of San Diego 2025), Calflora (n.d.), eBird (n.d.), and iNaturalist (n.d.).
- **Vegetation communities and land cover types:** County of San Diego et al. 2021, Oberbauer et al 2008, CDFW 2025a.
- **Wildlife corridors and linkages:** CDFW Biogeographic Information System (BIOS) (CDFW 2025b), SANDAG *2025 Regional Plan* (SANDAG 2025), SanGIS data layers (SanGIS and SANDAG, n.d.), County of San Diego Multiple Species Conservation Program (County of San Diego 1998), California Wildlife Crossings Database (Wildlands Network, n.d.)
- **Watersheds and aquatic resources:** National Wetlands Inventory (USFWS, n.d.-b), US Environmental Protection Agency (USEPA) WATERS GeoViewer (USEPA, n.d.), USGS National Hydrography Dataset (USGS 2023), and National Oceanic and Atmospheric Administration (NOAA) Fisheries Essential Fish Habitat (EFH) Mapper (n.d.).

All resources consulted are included in Section 6.0, References.

1.2.4 Desktop Analysis

Using the results of the literature and database review, a desktop analysis was conducted to characterize existing biological resources within the City. The analysis focused on synthesizing information from a variety of federal, state, regional, and local databases, as well as published literature and technical reports, to identify the locations of special-status species, sensitive habitats, and other regulated biological resources potentially present in the program area. No field surveys or ground-truthing were performed as part of this assessment.

Spatial data layers were compiled and reviewed using GIS software to evaluate the distribution of documented occurrences of special-status plant and wildlife species, sensitive natural communities, designated critical habitat, wetlands, and conservation areas.. The desktop analysis included the following steps:

1. **Compilation of spatial data:** Downloading and organizing GIS layers and database records for special-status species, sensitive habitats, critical habitat, wetlands, and conservation areas within the program area and vicinity.
2. **Review of mapped occurrences:** Overlaying documented species and habitat locations on base maps of the City and vicinity to identify areas of biological sensitivity and potential constraints to CIP implementation.
3. **Assessment of habitat suitability:** Evaluating land cover, vegetation types, hydrology, and proximity to known occurrences to infer the potential for undocumented resources within the program area.
4. **Identification of regulatory overlays:** Mapping environmentally sensitive overlay zones, conservation easements, and other regulatory designations relevant to biological resource protection.
5. **Synthesis of findings:** Summarizing the distribution and types of biological resources identified through the desktop analysis to inform the development of a program-level biological constraints map and mitigation strategy.

All data sources and mapping tools used in the desktop analysis are listed in Section 6.0, References. The results of the desktop analysis are presented in the following sections, including tables and maps of documented and potential biological resources within the program area.

The potential for special-status species to occur was evaluated based on each species' known geographic distribution and elevation range; species-specific habitat requirements (e.g., vegetation communities/land covers, soils, hydrology, slope/aspect, and other requirements); life history traits (e.g., disturbance tolerance); current and historical records; and Michael Baker biologists' expertise, knowledge, and best professional judgement. The potential to occur categories used in this analysis are defined as follows:

- **Expected:** The program area is within the known geographic distribution and elevation range of the species; suitable habitat (considering vegetation, soils, and other factors) is present; and there is viable landscape connectivity to a local, known extant population(s) or sighting(s).
- **Moderate:** The program area is within the known geographic distribution and elevation range of the species; however, habitat within the program area (considering vegetation, soils, and other factors) is marginal or limited and landscape connectivity to a local, known, extant population or detection is compromised or nonexistent.
- **Not Expected:** The species is not expected to occur within the program area due to the lack of suitable habitat; the location of the program area is outside of the species' elevation range or known geographic distribution; or there is no connectivity to known, extant populations.

1.2.5 Biological Resources Sensitivity Analysis

A sensitivity analysis was conducted to classify areas within the City into low, medium, and high biological sensitivity based on the presence or potential occurrence of sensitive biological resources. This analysis relied exclusively on desktop data sources identified in Section 1.2.2 and did not include field verification or ground-truthing.

Step 1: Data Compilation

Spatial datasets for special-status species, sensitive habitats, critical habitat, wetlands, wildlife corridors, and other regulated resources were compiled from federal, state, regional, and local sources (e.g., CNDDDB, CNPS, USFWS IPaC, SanGIS, San Diego County Multiple Species Conservation Program [MSCP], National Wetlands Inventory, National Hydrography Dataset, EFH Mapper). These layers were organized in a GIS environment for spatial analysis.

Step 2: Sensitivity Criteria

Sensitivity categories were assigned qualitatively based on:

- **Regulatory status:** Federal or state listing, critical habitat designation, or ESHA designation.
- **Ecological rarity and function:** Habitat types with limited distribution or high ecological value (e.g., wetlands, riparian corridors, coastal bluffs).
- **Vulnerability to disturbance:** Resources highly susceptible to CIP-related impacts such as grading, vegetation removal, or hydrologic alteration.
- **Potential for occurrence:** Based on special-status plant and animal species' habitat suitability and the program area's proximity to documented occurrences.

Certain resources were automatically classified as high sensitivity, including:

- Habitats supporting federally or state-listed species
- Wetlands and riparian areas
- ESHAs and City-designated overlays (e.g., coastal bluffs)

Other areas, such as developed parcels or urban landscapes with isolated trees that could support nesting birds, were generally classified as low sensitivity, unless additional sensitive features were present.

Step 3: GIS Overlay Analysis

Spatial layers were overlaid to identify areas where sensitive resources occur or are likely to occur. The sensitivity map was developed as a categorical layer, assigning each area to a single sensitivity category based on the highest sensitivity resource present.

Step 4: Sensitivity Category Definitions

- **High Sensitivity:** Areas supporting federally or state-listed plant or animal species, USFWS designated critical habitat, CDFW sensitive natural communities, wetlands, riparian zones, or City-designated sensitive overlays such as ESHAs or coastal bluffs.
- **Moderate Sensitivity:** Areas within a 100-foot buffer of High Sensitivity areas.
- **Low Sensitivity:** All other areas of the city (e.g., developed or otherwise disturbed areas) with minimal biological resource value.

Step 5: Map Development

The resulting sensitivity map was generated in GIS and used to inform the program-level biological constraints map and mitigation strategy for future CIP projects.

2.0 REGULATORY SETTING

Implementation of the CIP is subject to a comprehensive framework of federal, state, and local laws and policies designed to protect natural resources and regulate development activities. This section summarizes the key regulatory requirements applicable to CIP projects within the City of Del Mar. Compliance with these regulations ensures that CIP projects are planned and implemented in a manner that avoids, minimizes, or otherwise mitigates impacts to sensitive habitats, special-status species, and other protected natural resources.

2.1 Federal

2.1.1 Endangered Species Act (16 United States Code [USC] § 1531 et seq.)

The federal Endangered Species Act (ESA) provides the legal framework for the listing and protection of species (and their habitats) identified as being endangered or threatened with extinction. Actions that jeopardize endangered or threatened species and the habitats upon which they rely are considered a “take” under the ESA. Take of a federally listed threatened or endangered species is prohibited without a special permit. The ESA allows for take of a threatened or endangered species incidental to development activities once a habitat conservation plan has been prepared to the satisfaction of the USFWS and an incidental take permit has been issued. The ESA also allows for the take of threatened or endangered species after consultation has deemed that development activities will not jeopardize the continued existence of the species. Consultation may occur through Section 7 of the ESA when a federal permit is required, such as a Clean Water Act Section 404 permit, or through Section 10 of the ESA when there is no federal nexus.

2.1.2 Migratory Bird Treaty Act (16 USC §§ 703-712)

The Migratory Bird Treaty Act implements international treaties between the United States and other nations devised to protect migratory birds, their parts, eggs, and nests from activities such as hunting, pursuing, capturing, killing, selling, and shipping, unless expressly authorized in the regulations or by permit. The State of California has incorporated the protection of birds, including birds of prey in California Fish and Game Code Sections 3503, 3503.5, 3513, and 3800. These laws prohibit the take, possession, or destruction of birds, their nests, and eggs, and align with federal protections for migratory birds.

2.1.3 Bald and Golden Eagle Protection Act (16 USC §§ 668-668(d); 50 Code of Federal Regulations [CFR] Part 22)

The Bald and Golden Eagle Protection Act, enacted in 1940 and amended several times since, aims to protect bald and golden eagles by prohibiting the taking of these birds, including their parts, nests, or eggs, without a permit issued by the Secretary of the Interior. The term “taking” encompasses actions such as pursuing, shooting, poisoning, wounding, killing, capturing, trapping, collecting, molesting, or disturbing the eagles. The act is administered by the USFWS, which issues permits for activities that might affect these protected birds.

2.1.4 Clean Water Act (33 USC § 1251 et seq.)

Section 401 of the federal CWA requires any applicant for a federal license or permit that is conducting any activity that may result in a discharge of a pollutant into waters of the United States to obtain a

certification that the discharge will comply with the applicable effluent limitations and water quality standards. The appropriate RWQCB regulates Section 401 requirements.

CWA Section 404 prohibits the discharge of dredged or fill material into waters of the United States without a permit from the USACE. The USACE and the USEPA administer the act. In addition to streams with a defined bed and bank, the definition of waters of the United States includes wetland areas “that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions” (33 CFR 328.3 7b). The lateral extent of non-tidal waters is determined by delineating the ordinary high-water mark (33 CFR Section 328.4[c][1]).

Substantial impacts to jurisdictional wetlands may require an individual permit. Small-scale projects may require a nationwide permit, which typically has an expedited process compared to the individual permit process. Mitigation of wetland impacts is required as a condition of the 404 permit and may include on-site preservation, restoration, and/or enhancement and/or off-site restoration or enhancement. The characteristics of restored or enhanced wetlands must be equal to or better than those of the affected wetlands to achieve no net loss of wetlands.

2.1.5 Fish and Wildlife Coordination Act (16 USC §§ 661-666)

The Fish and Wildlife Coordination Act, enacted in 1934, is designed to ensure that wildlife conservation is considered in water resource development projects. This act directs the USFWS to investigate and report on proposed federal actions that affect any stream or other body of water and to provide recommendations to minimize impacts on fish and wildlife resources. The Fish and Wildlife Coordination Act requires federal agencies to consult with the USFWS and NOAA Fisheries before undertaking or authorizing projects that control or modify any body of water.

2.1.6 Magnuson-Stevens Fishery Conservation and Management Act (16 USC § 1801 et seq.)

The Magnuson-Stevens Fishery Conservation and Management Act was passed in 1976 and governs the management of marine fisheries within U.S. federal waters up to 200 miles from shore, with a focus on preventing overfishing, rebuilding depleted stocks, and protecting fish habitat. The Sustainable Fisheries Act of 1996 established requirements related to the protection, conservation, and enhancement of EFH. The act is primarily applicable to projects that directly affect marine or estuarine environments or require federal consultation under EFH provisions.

2.1.7 Marine Mammal Protection Act (16 USC § 1361 et seq.)

The Marine Mammal Protection Act, enacted in 1972, is a foundational U.S. law that prohibits the “take” of marine mammals—including whales, dolphins, seals, and sea lions—in U.S. waters and by U.S. citizens on the high seas, unless specifically authorized. The act defines “take” broadly to include harassment, hunting, capturing, or killing, and it establishes a moratorium on these activities to prevent population declines and promote ecosystem health. It mandates scientific assessments of marine mammal stocks, regulates incidental bycatch in commercial fisheries, and allows for limited exemptions such as subsistence use by Alaska Natives and permitted research. The Marine Mammal Protection Act is jointly administered by NOAA Fisheries and the USFWS, with oversight from the Marine Mammal Commission, and remains a cornerstone of marine conservation policy in the United States.

2.1.8 Executive Order 13112 – Invasive Species

Executive Order 13112 – Invasive Species, signed on February 3, 1999, establishes federal policy for the prevention, control, and eradication of invasive species that threaten native ecosystems, agriculture, and public health. The order defines invasive species as non-native organisms whose introduction causes or is likely to cause economic or environmental harm or harm to human health. It mandates that federal agencies identify actions that may affect invasive species and implement measures to avoid or mitigate their spread. The order also created the National Invasive Species Council, tasked with coordinating interagency efforts, developing a national management plan, and promoting research, education, and international cooperation. Agencies are required to use science-based approaches and collaborate with state, tribal, and local governments to address invasive species impacts. Executive Order 13112 was later amended by Executive Order 13751 in 2016 to strengthen coordination and expand the scope of federal response.

2.1.9 Coastal Zone Management Act (16 USC §§ 1451–1466)

The Coastal Zone Management Act of 1972 establishes a national framework for managing and protecting U.S. coastal resources through a cooperative federal-state partnership. Administered by NOAA, the act enables states and territories to develop coastal management programs tailored to local priorities, which must be approved by the Secretary of Commerce. Once approved, these programs become eligible for federal funding and gain authority to conduct consistency reviews of federal actions affecting coastal zones. Under Section 307, federal activities, permits, and funding that may impact coastal uses or resources must be consistent with enforceable policies of the state's coastal management program. This includes offshore energy development, infrastructure projects, and environmental restoration efforts. The act also supports the National Estuarine Research Reserve System and provides technical and financial assistance to enhance coastal resilience, habitat conservation, and sustainable development.

2.2 State

2.2.1 California Environmental Quality Act (CEQA) – Public Resources Code §§ 21000–21189

CEQA requires public agencies to evaluate and disclose the potential environmental impacts of proposed projects prior to approval. For projects within the coastal zone, such as those in the City of Del Mar, CEQA review must consider sensitive biological resources including coastal habitats, special-status species, and jurisdictional wetlands, in coordination with the California Coastal Act and local coastal program policies. If significant impacts to biological resources are identified, CEQA mandates the implementation of feasible mitigation measures to avoid, minimize, or compensate for those effects. The CEQA process also promotes transparency, public participation, and interagency collaboration to ensure environmentally responsible decision-making. The City has adopted the City of Del Mar CEQA Supplemental Regulations which present the process used by the City to conduct environmental reviews (City of Del Mar 2020).

2.2.2 California Endangered Species Act (CESA) – Fish & Game Code §§ 2050–2116

CESA establishes a legal framework for the conservation of species at risk of extinction within California. It plays a critical role in integrating biodiversity conservation into California's land use and infrastructure planning. Administered by the CDFW, CESA prohibits the unauthorized "take" of any species listed as

endangered, threatened, or candidates for listing, where “take” includes actions such as hunting, capturing, killing, or harming. CESA mandates the use of the best available scientific information in listing decisions and requires the California Fish and Game Commission to evaluate petitions for listing through a formal process that includes public input and peer-reviewed status reports. Once a species is listed or designated as a candidate, it receives full legal protection under the act. CESA also requires state and local agencies to consult with the CDFW during project planning to identify and mitigate potential impacts to listed species and their habitats. Unlike its federal counterpart, CESA does not include provisions for incidental take permits for listed plants, making its protections more stringent in certain contexts. For state-listed plants, CESA protections differ than those for animals. While CESA prohibits take of listed plants, enforcement is generally limited to state-owned lands or projects requiring state approval or permits. In these cases, the CDFW may require mitigation or other protective measures to avoid or minimize impacts to listed plant species to ensure compliance with CESA and the Native Plant Protection Act.

2.2.3 California Fish and Game Code § 1600 et seq. – Lake and Streambed Alteration Program

California Fish and Game Code Section 1602 requires any person, public utility, or state or local governmental agency to notify the CDFW prior to initiating any activity that would: (1) substantially divert or obstruct the natural flow of any river, stream, or lake; (2) substantially change or remove material from the bed, channel, or bank of any river, stream, or lake; or (3) deposit or dispose of debris, waste, or other material into any river, stream, or lake. The state definition of “lakes, rivers, and streams” includes all rivers or streams that flow at least periodically or permanently through a well-defined bed or channel with banks that support fish or other aquatic life, and watercourses with surface or subsurface flows that support or have supported riparian vegetation.

2.2.4 California Fish and Game Code §§ 3503, 3503.5, 3513 – Nesting Birds and Birds of Prey

California Fish and Game Code Sections 3503, 3503.5, and 3513 collectively provide legal protection for nesting birds and birds of prey in California. Section 3503 prohibits the taking, possession, or needless destruction of the nest or eggs of any bird, while Section 3503.5 specifically protects birds of prey (orders Falconiformes and Strigiformes), making it unlawful to take, possess, or destroy these species or their nests and eggs except as otherwise authorized. Section 3513 aligns with the federal Migratory Bird Treaty Act by prohibiting the take or possession of any migratory non-game bird as designated under federal law. These provisions are routinely addressed in CEQA biological assessments to ensure that project activities avoid impacts to nesting birds and comply with both state and federal wildlife protections.

2.2.5 California Fish and Game Code § 3511, § 4700, § 5050, § 5515 – Fully Protected Species

The Fully Protected Species provisions of the California Fish and Game Code—codified in Sections 3511 (birds), 4700 (mammals), 5050 (reptiles and amphibians), and 5515 (fish)—represent the state’s most stringent wildlife protections, predating the CESA. These statutes prohibit the “take” or possession of listed species under nearly all circumstances, including for scientific, educational, or incidental purposes, unless explicitly authorized by the legislature or under narrowly defined exceptions. The CDFW administers these protections and maintains species lists that include taxa such as light-footed Ridgway’s rail (*Rallus obsoletus levipes*), white-tailed kite (*Elanus leucurus*), and tidewater goby (*Eucyclogobius newberryi*).

Unlike CESA, which allows for incidental take permits of wildlife, the Fully Protected designation generally bars such allowances, although recent amendments permit limited exceptions for specific infrastructure projects (e.g., water, transportation, renewable energy) subject to public notification and CDFW approval. These provisions ensure that species deemed most vulnerable to extinction receive the highest level of legal protection in California's conservation framework.

2.2.6 California Native Plant Protection Act (NPPA) – Fish & Game Code §§ 1900–1913

The NPPA establishes a legal framework for the conservation of native plant species that are rare, endangered, or threatened within the state. Enacted in 1977, the NPPA mandates the CDFW to identify and list protected native plants, regulate their collection and removal, and enforce penalties for unauthorized disturbance. The NPPA applies to both public and private lands and requires landowners and developers to obtain permits before impacting listed species. It also authorizes the CDFW to enter into agreements with federal agencies, local governments, and private entities to facilitate habitat protection and restoration. The NPPA complements broader environmental statutes such as CEQA by integrating plant conservation into land use planning and project review processes.

2.2.7 Natural Community Conservation Planning Act (NCCPA) – Fish & Game Code §§ 2800–2835

The NCCPA provides a statutory framework for ecosystem-based conservation planning aimed at protecting biodiversity while accommodating compatible land use and development. Unlike traditional species-by-species approaches, the NCCPA promotes the preservation of entire natural communities and their ecological functions through large-scale, multi-stakeholder planning efforts. Administered by the CDFW, the NCCPA authorizes the development of natural community conservation plans (NCCPs), which identify habitat conservation strategies for multiple species, including those not yet listed as threatened or endangered. NCCPs must meet rigorous scientific and public participation standards and are subject to approval by the CDFW. Once approved, these plans offer regulatory assurances to participating landowners and agencies under CESA, streamlining permitting processes while ensuring long-term habitat protection. Notably, the City of Del Mar is within the planning area of the San Diego County MSCP; however, its Subarea Plan remains in progress and is not yet adopted, so the City is not currently covered by an approved NCCP/habitat conservation plan.

2.2.8 Porter-Cologne Water Quality Control Act - California Water Code Division 7, §13000 et seq.

The Porter-Cologne Water Quality Control Act defines waters of the State as any surface water or groundwater, including saline waters, within the boundaries of the state. The RWQCBs regulate discharges to all waters of the State with particular responsibility for isolated wetlands, ephemeral streams, and headwaters. These water bodies have high resource value, are vulnerable to filling, and may not be regulated under federal law. The RWQCBs implement the Water Quality Certification Program under CWA Section 401 and Porter-Cologne, requiring certification for projects needing federal permits (e.g., under CWA Section 404). Projects that do not require federal permits but may discharge to waters of the State are regulated through waste discharge requirements issued under state authority. For projects in the City of Del Mar, the San Diego RWQCB oversees compliance.

2.2.9 California Wetlands Policy

The California Wetlands Policy is a state-led initiative designed to protect, restore, and enhance wetland ecosystems through a coordinated regulatory and planning framework. Anchored by Porter-Cologne, the policy is implemented primarily by the State Water Resources Control Board and RWQCBs, with support from agencies such as the CDFW and CCC. In response to evolving federal standards—particularly reductions in Clean Water Act protections—the state adopted Resolution No. 2008-0026, initiating the development of a comprehensive Wetland and Riparian Area Protection Policy. This policy establishes standardized definitions, delineation procedures, and permitting requirements for dredge-and-fill activities affecting wetlands. It also integrates monitoring, restoration, and mitigation strategies to ensure no net loss of wetland acreage or function. The policy is further supported by the California Wetland Program Plan, which outlines strategic goals for interagency coordination, public engagement, and adaptive management to safeguard the ecological integrity of California’s wetland resources.

2.2.10 California Coastal Act – Public Resources Code §§ 30000–30900

The City of Del Mar is entirely within the California Coastal Zone, as defined by the California Coastal Act of 1976 (Public Resources Code Division 20). Within the coastal zone, the CCC has regulatory authority over land use and environmental protection, including oversight of sensitive biological resources such as wetlands and ESHAs.

Under Coastal Act Section 30121, wetlands are defined as lands “which may be covered periodically or permanently with shallow water,” and include saltwater marshes, freshwater marshes, brackish marshes (open or closed), swamps, mudflats, and fens. Importantly, the CCC’s definition—further clarified in California Code of Regulations Title 14, Section 13577(b)—does not require the presence of hydrophytic vegetation or hydric soils to establish wetland jurisdiction. Wetlands may be regulated even if vegetation is absent or soils are poorly developed due to fluctuating water levels or salinity.

ESHAs are defined in Coastal Act Section 30107.5 as areas “in which plant or animal life or their habitats are either rare or especially valuable because of their special nature or role in an ecosystem and which could be easily disturbed or degraded by human activities and developments.” The CCC protects ESHAs through policies that restrict development within and adjacent to these areas, requiring buffers and limiting land uses to those that are resource-dependent, as outlined in Section 30240 of the Coastal Act.

In the City, this regulatory framework is particularly relevant to areas such as the San Dieguito Lagoon, coastal bluffs, beach habitats, and certain vegetation communities that may contain wetlands or ESHAs. Any proposed development or capital improvement project within these areas must comply with CCC permitting requirements and demonstrate avoidance, minimization, or mitigation of impacts to biological resources.

2.3 Local

2.3.1 City of Del Mar Community Plan (General Plan)

The City’s Community Plan, which serves as its General Plan, is the guiding framework for land use, development, and resource conservation (City of Del Mar 2021). It reflects the community’s long-term vision to maintain a small-town coastal character while balancing environmental stewardship, economic vitality, and social equity. The plan is comprehensive and includes elements addressing land use, circulation, housing, recreation, and environmental management. It emphasizes sustainable growth,

protection of scenic and ecological resources, and compatibility between development and the City's unique coastal setting. The plan aligns with the California Coastal Act and incorporates policies to manage pressures from housing demand, commercial development, and infrastructure needs while safeguarding sensitive habitats and open space areas. Specifically, the goals and policies applicable to the project include the protection of designated open space areas, San Dieguito Lagoon and Floodway, and bluffs, slopes, and canyons.

Designated Open Space Areas

The Community Plan identifies beaches, parks, scenic trails, and bluff preserves as Designated Open Space Areas intended for permanent protection. In the Environmental Management chapter, Goal 1 emphasizes maintaining these areas for public use and ecological integrity. Objective E calls for the protection of designated open space areas as a means to avoid habitat fragmentation and preserve native vegetation communities. These provisions ensure that open space functions as a buffer for sensitive species and as a corridor for wildlife movement. Specific areas identified in the plan include Camino del Mar, Del Mar Bluff Preserve, Seagrove Park, and Scenic Loop Trail.

San Dieguito Lagoon and Floodway

The San Dieguito Lagoon is a regionally significant wetland complex supporting diverse biological communities. In the Environmental Management chapter, Objective I calls for the protection and enhancement of lagoon habitats, while Policies I-1 through I-17 requires maintaining natural hydrology and preventing encroachment into floodways. Development proposals must demonstrate consistency with the City's Local Coastal Program (LCP) and sediment management strategies to avoid adverse impacts on tidal wetlands and riparian zones. These policies align with state and federal mandates for wetland conservation and provide a framework for mitigating potential impacts from infrastructure projects.

Bluffs, Slopes, and Canyons

The Community Plan recognizes the ecological and scenic value of bluffs, steep slopes, and canyon areas. In the Environmental Management chapter, Objective H seeks to minimize erosion and habitat loss in these sensitive landforms. Policy H-11 restricts grading and vegetation removal on slopes exceeding 25 percent, and Objective M requires stabilization measures that use native plantings rather than hardscape solutions. These policies are intended to reduce sedimentation into coastal waters and maintain habitat for species adapted to bluff and canyon environments. Compliance with these standards is essential for projects involving slope modification or drainage improvements.

Specific areas called out in the plan include beaches and coast, south end canyons, Crest Canyon, and bluffs and slopes along the north and northeast edges of the Del Mar Hills.

2.3.2 City of Del Mar Local Coastal Program

The City's LCP is a certified land use planning framework that governs development and resource protection within the City's coastal zone. The LCP was developed in accordance with the California Coastal Act, which mandates that local governments prepare LCPs to implement Coastal Act policies at the local level. The City's LCP consists of two main components: 1) a Land Use Plan, which outlines goals and policies for land use, environmental protection, and public access; and 2) an Implementation Plan, which includes zoning ordinances, maps, and other regulatory tools to carry out the Land Use Plan.

Originally certified in the 1990s, the LCP has undergone several amendments to address evolving coastal hazards, most notably sea level rise, bluff erosion, and storm surge. In October 2018, the City adopted a

comprehensive Sea-Level Rise Local Coastal Program Amendment, developed through extensive public engagement and technical analysis. This amendment includes a Coastal Hazards Vulnerability Assessment, Adaptation Plan, and updated policies to guide future development and infrastructure resilience. The City opted for a non-retreat strategy, emphasizing protective measures such as sand replenishment, floodplain overlays, and bluff stabilization, rather than managed retreat. The LCP also integrates goals from the San Dieguito Lagoon Enhancement Program and the Del Mar Community Plan to ensure ecological preservation and recreational access. While the CCC has reviewed the City’s amendments, tensions have emerged over local control versus state mandates, particularly regarding long-term adaptation strategies. Overall, the City’s LCP reflects a proactive, science-based approach to coastal management tailored to the City’s unique geographic and socioeconomic context.

LCP implementation is carried out through a series of ordinances originally certified by the CCC in 2001 (City of Del Mar 2001), specifically in Del Mar Municipal Code (DMMC) Title 30.

2.3.3 City of Del Mar Municipal Code

The DMMC establishes a comprehensive regulatory framework to protect biological resources, floodways, parklands, and natural open space areas within the City (City of Del Mar 2024). The following chapters/sections are particularly relevant for ensuring compliance with CEQA and for guiding CIP project implementation:

- Chapter 8.12 – San Dieguito Lagoon and River
- Chapter 23.50 – Trees
- Chapter 30.29 – Floodway Zone
- Chapter 30.30 – Public Parkland Zone
- Chapter 30.52 – Bluff, Slope, and Canyon Overlay Zone
- Chapter 30.53 – Lagoon Overlay Zone
- Chapter 30.60 – Open Space Overlay Zone
- Section 30.92.040 – Protection of Environmentally Sensitive Habitat Areas

Table 1 summarizes the natural resource protections for these chapters.

TABLE 1. SUMMARY OF MUNICIPAL CODE CHAPTERS/SECTIONS PROTECTING NATURAL RESOURCES

Chapter/Section	Summary
8.12 – San Dieguito Lagoon and River	This chapter safeguards the biodiversity and ecological integrity of the San Dieguito Lagoon and River. It mandates the conservation of aquatic and upland ecosystems, supports habitat restoration, and promotes educational and recreational opportunities while protecting native wildlife and marine populations.
23.50 – Trees	This chapter establishes regulations for the protection, management, and removal of trees within the City, emphasizing the preservation of the urban forest and native tree species. The ordinance identifies “protected trees” as Torrey pine (<i>Pinus torreyana</i>); Monterey cypress (<i>Cupressus macrocarpa</i>); any tree located within the Central Commercial (CC) Zone, Open Space (OS) Overlay Zone, public rights-of-way, or City-owned property, provided it meets size criteria (single trunk equal to or less than 20 inches circumference or multi-trunk equal to or less than 30 inches, measured 2 feet above ground); and any tree planted as mitigation for prior

TABLE 1, CONTINUED

Chapter/Section	Summary
	removals. Removal or significant alteration of a protected tree requires a Tree Removal Permit, typically supported by an assessment from a Certified Arborist, unless the tree qualifies for specific exemptions. The ordinance reflects the City's commitment to ecological integrity, scenic character, and public safety through responsible tree stewardship protection, management, and regulated removal of significant tree species.
30.29 – Floodway Zone	This zone preserves areas subject to floodwaters, reduces reliance on engineered flood control, and protects public health, safety, and property. It restricts development within designated floodways, including portions of the San Dieguito Lagoon, to maintain natural hydrology and minimize flood risk.
30.30 – Public Parkland Zone	This zone designates publicly owned lands for use as parks or open space preserves, such as Crest Canyon Open Space. It ensures these areas are maintained for public recreation and ecological value, limiting incompatible development.
30.52 – Bluff, Slope, and Canyon Overlay Zone	This overlay zone regulates development on bluffs, steep slopes, and canyon areas to prevent erosion, sedimentation, and habitat loss. It requires that projects incorporate measures to stabilize slopes using native vegetation and avoid adverse impacts to downstream resources.
30.53 – Lagoon Overlay Zone	This overlay zone provides additional protections for the biological resources of the San Dieguito Lagoon, including both wetland and sensitive upland habitats. It restricts activities that could degrade these resources and requires compliance with best management practices for habitat preservation.
30.60 – Open Space Overlay Zone	This overlay zone ensures the long-term preservation of open space areas, scenic vistas, and unique natural features, including the San Dieguito Lagoon, Crest Canyon Open Space, and adjacent bluffs and slopes. It limits development to uses compatible with open space conservation and ecological protection.
30.92.040 – Protection of Environmentally Sensitive Habitat Areas	This zone ensures long-term protection and integrity through siting requirements, buffers, and legal protection mechanisms.

All CIP projects within areas protected by the DMMC must be designed and implemented in accordance with the protections and permitted uses specified in the applicable sections of the DMMC. Adherence to these local regulations is essential for CEQA compliance and for the effective protection of Del Mar's sensitive biological resources.

2.3.4 San Diego County Multiple Species Conservation Program

The MSCP is a comprehensive, long-term habitat conservation plan that addresses the needs of multiple species by identifying key areas for preservation as open space to link core biological areas into a regional wildlife preserve (County of San Diego 1998). The MSCP was approved in August 1998 and provides coverage for 85 species over a 900-square-mile area in southwestern San Diego County.

The MSCP is one of several large multiple jurisdictional habitat planning efforts in San Diego County, each of which constitutes a subregional plan under the NCCPA of 1991. The MSCP includes 10 incorporated cities, as well as unincorporated portions of southwestern San Diego County, that will implement their respective portions of the MSCP through citywide "subarea" plans, which describe the specific implementing mechanisms that each city will institute for the MSCP.

The City of Del Mar is a signatory to the MSCP indicating its intent to participate, and its draft Subarea Plan is currently being prepared, but it has not yet been approved or adopted as of the date of this report. Consequently, the City does not currently have the authority to issue incidental take permits or implement the streamlined permitting and mitigation provisions available to jurisdictions with approved Subarea Plans. Projects within the City, including CIP projects, must therefore comply with state and federal environmental regulations on a project-specific basis, including conducting biological surveys, assessing potential impacts to sensitive species, and coordinating with resource agencies as needed.

Until the City adopts its Subarea Plan, all biological resource evaluations must be conducted in accordance with CEQA, CESA, and ESA requirements, with appropriate consultation with the CDFW and the USFWS where applicable. Additionally, the City has committed to implementing the draft measures which are referenced in this report for project planning considerations and demonstration of voluntary consistency.

3.0 ENVIRONMENTAL SETTING

The City of Del Mar is defined by its marine-influenced climate and diverse coastal landscape, which includes beaches, coastal bluffs, and lagoon ecosystems. While the City is largely developed, the Del Mar Fairgrounds occupy approximately 20 percent of its northern area, north of the San Dieguito Lagoon. Remaining developed areas consist primarily of residential and commercial uses. Open space is limited but ecologically significant, including the San Dieguito Lagoon—a regionally important estuarine habitat supporting a variety of plant and animal species—coastal bluffs along the western shoreline, and patches of coastal sage scrub and chaparral along the central-eastern boundary. These open space areas contribute meaningfully to the City’s biological diversity and natural resource value.

3.1 Climate

The City experiences a Mediterranean climate with warm summers that average high temperatures of around 75 degrees Fahrenheit and very little rain. Winters are wet and mild with temperatures rarely dropping below 50 degrees Fahrenheit. Most rainfall occurs between November and March with little to no rainfall during the summer months. As a coastal city, Del Mar benefits from the moderating influence of the Pacific Ocean, which helps maintain stable year-round temperatures, keeping extreme temperatures rare.

3.2 Topography and Soils

The City features a coastal topography with rolling hills, bluffs, and low-lying beach areas. Its soils are primarily sandy and loamy, shaped by marine and alluvial processes. Elevation ranges from sea level to approximately 360 feet. The coastal zone ranges in elevation from sea level to approximately 20 feet. The marine terraces and coastal bluffs range from 20 to 100 feet above sea level and feature steep, eroding bluffs that rise sharply from the beach. The geology is composed of sedimentary layers (Torrey Sandstone and Del Mar Formation), prone to erosion and landslides. The inland rolling hills range from approximately 100 to 360 feet above sea level. The San Dieguito Lagoon and River Valley area of the city range from 5 to 15 feet above sea level rise and are characterized by wetlands, estuarine habitat, and floodplains.

There are 15 soil types present throughout the City (NRCS 2025) (Attachment A: Figure 4, USDA Soils). Predominant soils that each contribute over 10 percent of the City’s soil composition include made land (19.7 percent), which is soil that has been significantly altered by human activity; marina loamy coarse sand, 2 to 9 percent slopes (18.3 percent), which is a somewhat excessively drained soil on gentle slopes with a loamy coarse sand texture; marina loamy coarse sand, 9 to 30 percent slopes (14.5 percent), which is also somewhat excessively drained soil; Tujunga sand, 0 to 5 percent slopes (12.3 percent), well-drained soil formed in sandy alluvium; and Loamy alluvial land-Huerhuero complex, 9 to 50 percent slopes, severely eroded (11.9 percent), which has a high susceptibility to erosion.

All other soil types include tidal flats (6.7 percent), terrace escarpments (6.1 percent), lagoon water (4.1 percent), Carlsbad-Urban land complex, 2 to 9 percent slopes (2.1 percent), coastal beaches (1.8 percent), Corralitos loamy sand, 9 to 15 percent slopes, (1.2 percent), Corralitos loamy sand, 5 to 9 percent slopes (1.0 percent), Carlsbad gravelly loamy sand 5 to 9 percent slopes (0.1 percent), Huerhuero loam, 2 to 9 percent slopes (<0.1 percent), and Huerhuero-Urban land complex, 2 to 9 percent slopes (0.2 percent).

3.3 Watersheds and Hydrology

The City is primarily influenced by the San Dieguito River Watershed and the Los Peñasquitos Watershed, with hydrology shaped by coastal drainage patterns, seasonal rainfall, and imported water sources. The San Dieguito River Watershed, which flows through the northern portion of the City and terminates in the Pacific Ocean, is about 345 square miles, starting at its headwaters in the Cuyamaca Mountains. Pollutants of concern for the San Dieguito River Watershed include bacteria and nutrients with likely pollutant sources from garbage, litter and debris, animal and yard waste, home and garden care activities, and landscaping. The Los Peñasquitos Watershed is about 94 square miles, begins in the mountains east of Poway, drains into the Pacific Ocean in the southernmost portion of the City, and stretches south to Mission Bay in the City of San Diego. Pollutants of concern for the Los Peñasquitos Watershed include bacteria and sediment with likely pollutant sources similar to that of the San Dieguito River Watershed.

3.3.1 Surface Water

Surface water features of the City include the San Dieguito Lagoon, San Dieguito River tributary, and the Los Peñasquitos Lagoon. The San Dieguito Lagoon, which is a brackish estuary that receives freshwater from the river and tidal exchange from the ocean, traverses the northern portion of the City and flows west into the Pacific Ocean. Pollutant stressors for the San Dieguito Lagoon include indicator bacteria, dissolved oxygen, phosphorus, turbidity, eutrophic conditions, sedimentation/siltation, and toxicity. The San Dieguito River tributary runs from the parent water body, San Dieguito River, and travels north adjacent to the San Diego Northern Railway, then east into the Del Mar Fairgrounds, according to the San Diego RWQCB Basin Plan. The San Dieguito River tributary often faces stressors such as runoff. The Los Peñasquitos Lagoon, a coastal wetland and estuary, is located directly south of the City's boundary and faces pollutant stressors, including excessive sedimentation, toxicity, year-round accelerated freshwater flows, storm water runoff, and trash and debris.

The City's receiving waters primarily include the Pacific Ocean and the San Dieguito Lagoon, which serve as the final discharge points for surface runoff and storm water conveyed through the City's drainage infrastructure. Urban runoff, originating from residential, commercial, and transportation corridors, is directed through a network of storm drains and culverts that ultimately discharge into these sensitive aquatic environments. The San Dieguito Lagoon plays a critical role in filtering pollutants and supporting biodiversity before water flows into the ocean. These receiving waters are subject to regulatory oversight under the San Diego RWQCB Basin Plan and the National Pollutant Discharge Elimination System, which establish water quality objectives and monitoring requirements to protect beneficial uses such as recreation, wildlife habitat, and marine ecosystems. Effective storm water management and low-impact development practices are essential to minimizing pollutant loads and preserving the ecological integrity of Del Mar's receiving waters.

3.3.2 Groundwater

Groundwater is not a major water source for the City. The groundwater in Del Mar comes from the San Elijo Valley Groundwater Basin, a small alluvial basin that follows the course of the Escondido Creek and discharges into the San Elijo Lagoon.

3.4 Historic Disturbances

The City has experienced historical environmental disturbances such as bluff and beach erosion. Its coastal bluffs are geologically composed of weakly cemented sandstone and siltstone, making them highly susceptible to coastal erosion, surficial failures, and deep-seated landslides. Over the past several decades, erosion has intensified due to rising sea levels, increased storm activity, and urban runoff, leading to significant bluff retreat. One of the most impacted areas is the Los Angeles-San Diego-San Luis Obispo (LOSSAN) Rail Corridor, which runs along the edge of the bluffs. Between 2019 and 2024, this corridor experienced at least 12 shutdowns due to bluff failures, with three extended closures occurring in 2023 and 2024 alone.

The City has also experienced historic flooding events due to its proximity to the Pacific Ocean and the San Dieguito River. One of the most impactful incidents occurred in 1980, when the San Dieguito River overflowed, inundating low-lying areas and causing substantial damage to infrastructure and property. Another major event in 1983 saw additional flooding and coastal erosion, prompting the City to reassess its flood resilience and join the Federal Emergency Management Agency's (FEMA) National Flood Insurance Program. This enabled access to disaster relief and pre-disaster mitigation funding. The City has since implemented a "Floodplain Overlay Zone" to regulate development in areas designated as Special Flood Hazard Areas. More recently, winter storms in January 2023 caused minor flooding when large swells breached sand berms along the shoreline, leading to temporary closures of beach access points and localized inundation along Ocean Front Alley. These recurring events underscore Del Mar's vulnerability to both fluvial and coastal flooding, driving ongoing adaptation efforts such as sea level rise planning and updated FEMA flood mapping.

3.5 Vegetation Communities and Land Cover Types

Vegetation communities and land cover types mapped within the City are listed, with total acreage and percentage of the City's jurisdiction, in Table 2. This list of communities was obtained from the SANGIS database online and is based on Oberbauer et al. (2008). The list is provided in numerical order by macrogroup code, then further broken down numerically by class. General descriptions of these communities follow Table 2 and are taken directly from Oberbauer et al. (2008). A map of vegetation communities and land cover types is included in Attachment A: Figure 5, Vegetation Communities and Land Cover Types.

TABLE 2. VEGETATION COMMUNITIES AND LAND COVER TYPES

Macrogroup	Class	Acres	% of City
10000 Disturbed or Developed Habitat	11000 Non-Native Vegetation	4.1	0.36
10000 Disturbed or Developed Habitat	11300 Disturbed Habitat	22.91	2.00
10000 Disturbed or Developed Habitat	12000 Urban/Developed	886.47	77.50
<i>10000 Disturbed or Developed Habitat</i>	<i>Subtotal</i>	<i>913.48</i>	<i>79.86</i>
20000 Dune Community	21230 Southern Foredunes	0.33	0.03
<i>20000 Dune Community</i>	<i>Subtotal</i>	<i>0.33</i>	<i>0.03</i>
30000 Scrub and Chaparral	31200 Southern Coastal Bluff Scrub	1.26	0.11
30000 Scrub and Chaparral	32400 Maritime Succulent Scrub	6.18	0.54

TABLE 2, CONTINUED

Macrogroup	Class	Acres	% of City
30000 Scrub and Chaparral	32500 Diegan Coastal Sage Scrub	10.15	0.89
30000 Scrub and Chaparral	32510 Diegan Coastal Sage Scrub: Coastal form	0.57	0.05
<i>30000 Scrub and Chaparral</i>	<i>Subtotal</i>	<i>18.16</i>	<i>1.59</i>
37000 Chaparral	37120 Southern Mixed Chaparral	23.96	2.09
37000 Chaparral	37C30 Southern Maritime Chaparral	5.33	0.47
<i>37000 Chaparral</i>	<i>Subtotal</i>	<i>29.29</i>	<i>2.56</i>
40000 Grasslands, Vernal Pools, Meadows, and Other Herb Communities	42200 Non-Native Grassland	4.5	0.39
<i>40000 Grasslands, Vernal Pools, Meadows, and Other Herb Communities</i>	<i>Subtotal</i>	<i>4.5</i>	<i>0.39</i>
50000 Bog and Marsh	52120 Southern Coastal Salt Marsh	41.62	3.64
50000 Bog and Marsh	52410 Coastal and Valley Freshwater Marsh	1.07	0.09
<i>50000 Bog and Marsh</i>	<i>Subtotal</i>	<i>42.69</i>	<i>3.73</i>
60000 Riparian and Bottomland Habitat	61320 Southern Arroyo Willow Riparian Forest	0.16	0.01
60000 Riparian and Bottomland Habitat	63000 Riparian Scrubs	0.57	0.05
60000 Riparian and Bottomland Habitat	63320 Southern Willow Scrub	0.18	0.02
<i>60000 Riparian and Bottomland Habitat</i>	<i>Subtotal</i>	<i>0.91</i>	<i>0.08</i>
64000 Unvegetated Habitat	64000 Unvegetated Habitat	13.2	1.15
64000 Unvegetated Habitat	64100 Open Water	37.92	3.32
64000 Unvegetated Habitat	64112 Intertidal	4.09	0.36
64000 Unvegetated Habitat	64130 Estuarine	6.49	0.57
64000 Unvegetated Habitat	64140 Freshwater	0.37	0.03
64000 Unvegetated Habitat	64300 Saltpan/Mudflats	1.29	0.11
64000 Unvegetated Habitat	64400 Beach	59.09	5.17
<i>64000 Unvegetated Habitat</i>	<i>Subtotal</i>	<i>122.45</i>	<i>10.71</i>
80000 Forest	83140 Torrey Pine Forest	12.05	1.05
<i>80000 Forest</i>	<i>Subtotal</i>	<i>12.05</i>	<i>1.05</i>
All Macrogroups	Total	1,143.86	100%

3.5.1 Non-Native Vegetation (11000)

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

3.5.2 Disturbed Habitat (11300)

These areas have been physically disturbed (by previous legal human activity) and are no longer recognizable as a native or naturalized vegetation association but continue to retain a soil substrate. Typically, vegetation, if present, is nearly exclusively composed of non-native plant species such as ornamentals or ruderal exotic species that take advantage of disturbance or show signs of past or present animal usage that removes any capability of providing viable natural habitat for uses other than dispersal. Examples of disturbed land include areas that have been graded, repeatedly cleared for fuel management purposes and/or experienced repeated use that prevents natural revegetation (i.e., dirt parking lots, trails that have been present for several decades), recently graded firebreaks, graded construction pads, construction staging areas, off-road vehicle trails, and old homesites.

3.5.3 Urban/Developed (12000)

These areas have been constructed upon or otherwise physically altered to an extent that native vegetation is no longer supported. Developed land is characterized by permanent or semi-permanent structures, pavement or hardscape, and landscaped areas that often require irrigation. Areas where no natural land is evident due to a large amount of debris or other materials being placed upon it may also be considered Urban/Developed (e.g., car recycling plant, quarry).

3.5.4 Southern Foredunes (21230)

This community is dominated by succulent, perennial herbs and subshrubs and lacks perennial grasses, but has a higher proportion of suffrutescent plants (to 30 centimeters tall). Vegetative coverage varies from nearly complete to scattered. Typical species include red sand verbena (*Abronia maritima*), ragweed (*Ambrosia* spp.), and searocket (*Cakile* spp.) usually occurring in the exposed sites and beach sand verbena (*Abronia umbellata*), morning glory (*Calystegia* spp.), and suncups (*Camissonia* spp.) in less exposed sites. Growth and flowering occur during early to mid-spring.

3.5.5 Southern Coastal Bluff Scrub (31200)

This community is characterized as a low scrub up to 2 meters tall, forming continuous mats or more scattered. Dwarf shrubs, herbaceous perennials, and annuals are represented with varying degrees of succulence. Most plants in this community are woody and/or succulent. Characteristic species include saltbush (*Atriplex* spp.), bush sunflower (*Encelia californica*), cliff aster (*Malacothrix saxatilis*), and lemonadeberry (*Rhus integrifolia*). Most growth and flowering occur from late winter through spring.

3.5.6 Maritime Succulent Scrub (32400)

This is a low (knee to waist high), open (25%-75% cover) scrub dominated by drought deciduous, subligneous, malacophyllous shrubs with a rich admixture of stem and leaf succulents. The proportion of cacti is highest toward the south or in some inland areas. The ground is more or less bare between the shrubs. Characteristic species include California acalypha (*Acalypha californica*), California sagebrush (*Artemisia californica*), prickly pear (*Opuntia littoralis*), and lemonadeberry. Growth and flowering are concentrated in the spring.

3.5.7 Diegan Coastal Sage Scrub (32500)

This vegetation community is characterized as low, soft-woody subshrubs (to about 1 meter high) that are most active in winter and early spring. Many taxa are facultatively drought-deciduous. It is dominated by California sagebrush and California buckwheat (*Eriogonum fasciculatum*) together with laurel sumac (*Malosma laurina*), white sage (*Salvia apiana*), and black sage (*Salvia mellifera*). Stem- and leaf-succulents, while present, are not nearly as conspicuous as in Maritime Succulent Scrub (32400).

3.5.8 Diegan Coastal Sage Scrub: Coastal Form (32510)

This community is similar to Diegan Coastal Sage Scrub (32500) but occurs at lower elevations (typically below 1,000 feet).

3.5.9 Southern Mixed Chaparral (37120)

This vegetation community contains broad-leaved sclerophyll shrubs, typically between 1.5 and 3 meters tall. It occasionally has patches of bare soil or forms a mosaic with Venturan Coastal Sage Scrub (32300) or Riversidean Sage Scrub (32700). It is divisible into Granitic (37121) and Mafic (37122) subtypes based on substrate, but floristic distinctions between these two subtypes remain unknown. In San Diego County, this community is dominated by blue-colored lilacs, especially Ramona lilac (*Ceanothus tomentosus* var. *olivaceus*) as well as chaparral whitethorn (*C. leucodermis*), and hairy ceanothus (*C. oliganthus*); other *Ceanothus* spp. generally indicate other chaparral types.

3.5.10 Southern Maritime Chaparral (37C30)

This is a low, fairly open chaparral dominated by wart-stemmed ceanothus (*Ceanothus verrucosus*) and Del Mar manzanita (*Arctostaphylos glandulosa* ssp. *crassifolia*). It occurs in weathered sands within the coastal fog belt. Fire appears necessary for continued reproduction of many characteristic species.

3.5.11 Non-Native Grassland (42200)

This vegetation community contains a dense to sparse cover of annual grasses with flowering culms (i.e., stems) that are 0.2–0.5 (occasionally up to 1.0) meter high. It is often associated with numerous species of showy-flowered, native annual forbs ("wildflowers"), especially in years of favorable rainfall. In San Diego County, the presence of oats (*Avena* spp.), bromes (*Bromus* spp.), filaree (*Erodium* spp.), and mustards (*Brassica* spp.) are common indicators. In some areas, depending on past disturbance and annual rainfall, annual forbs may be the dominant species; however, it is presumed that grasses will soon dominate. Germination occurs with the onset of the late fall rains; growth, flowering, and seed-set occur from winter through spring. With a few exceptions, the plants are dead through the summer-fall dry season, persisting as seeds. Remnant native species are variable. This can include grazed and even dry-farmed (i.e., disked) areas where irrigation is not present.

3.5.12 Southern Coastal Salt Marsh (52120)

These are highly productive, herbaceous and suffrutescent, salt-tolerant hydrophytes forming moderate to dense cover and up to 1 meter tall. Most species are active in summer, and dormant in winter. They are usually segregated horizontally with cordgrass (*Spartina* spp.) nearer the open water; Bigelow's pickleweed (*Salicornia bigelovii*), Virginia glasswort (*Salicornia depressa*), and saltwort (*Batis maritima*) at mid-littoral elevations; and a richer mixture closer to high ground such as Frankenia (*Frankenia* spp.), seablite (*Suaeda* spp.), and/or Parish's glasswort (*Arthrocnemum subterminale*), with a higher abundance of suffrutescent species at higher, drier sites.

3.5.13 Coastal and Valley Freshwater Marsh (52410)

This community is dominated by perennial, emergent monocots up to 4 to 5 meters tall. It often forms completely closed canopies and typically consists of quiet sites (lacking significant water current) that are permanently flooded by freshwater (rather than brackish, alkaline, or variable water). Prolonged saturation permits accumulation of deep, peaty soils. Characteristic plant species include species of bulrush (*Schoenoplectus* spp.) and cattails (*Typha* spp.)

3.5.14 Southern Arroyo Willow Riparian Forest (61320)

These are winter-deciduous riparian forests dominated by moderately tall broad-leaved trees, particularly by arroyo willow (*Salix lasiolepis*), and having closed or nearly closed canopies. Understories usually are shrubby willows. Other species that may occur include mugwort (*Artemisia douglasiana*), mulefat (*Baccharis salicifolia*), western sycamore (*Platanus racemosa*), and cottonwood (*Populus fremontii*). It typically occurs along perennially wet stream reaches.

3.5.15 Riparian Scrubs (63000)

This community consists of riparian zones dominated by small trees or shrubs, lacking taller riparian trees. It may encroach into some coastal saltmarsh habitats. This community occurs mostly in major river systems where flood scour occurs, and its distribution has expanded as a result of increased urban and agricultural runoff. Characteristic species include arroyo willow and other willows (*Salix* spp.).

3.5.16 Southern Willow Scrub (63320)

This vegetation community is characterized by dense, broad-leaved, winter-deciduous riparian thickets dominated by several *Salix* species including black willow (*S. gooddingii*), arroyo willow, red willow (*S. laevigata*) and others, with scattered emergent cottonwood and western sycamore. Most stands are too dense to allow much understory development.

3.5.17 Unvegetated Habitat (64000)

Submerged aquatic communities or terrestrial wetlands with minimal vegetative cover (less than 2 percent cover of herbaceous species and less than 10 percent cover by tree or shrub species). The structure and composition of the substrate (e.g., stream channel, marine versus freshwater) is largely determined by the surrounding environment. It is usually composed of rocky outcroppings, sandy beaches, or mudflats.

3.5.18 Open Water (64100)

These areas typically consist of perennial water bodies or areas along the coast that are subject to sandbar presence but are otherwise flowing when sandbars are open. In the City of Del Mar, this includes the San Dieguito River and San Dieguito Lagoon.

3.5.19 Intertidal (64112)

The intertidal zone includes the area exposed by low tide up to and including the spray zone. Although often unvegetated, characteristic species may include algae and Scouler's surfgrass (*Phyllospadix scouleri*). These areas are periodically submerged by water, depending on the tides.

3.5.20 Estuarine (64130)

Estuarine habitats occur on periodically and permanently flooded substrates and open water portions of semi-enclosed coastal waters where tidal seawater is diluted by flowing fresh water. Salinity and depth

vary dramatically in estuarine habitats, resulting in high species richness but low diversity of phyla. Species composition is generally composed of phytoplankton.

3.5.21 Freshwater (64140)

This is composed of year-round bodies of fresh water (extremely low salinity) in the form of lakes, streams, ponds, or rivers. This includes those portions of water bodies that are usually covered by water and contain less than 10 percent vegetative cover.

3.5.22 Saltpan/Mudflats (64300)

Mudflats are coastal wetlands that form when mud is deposited by the tides or rivers. They are commonly found in sheltered areas such as bays and estuaries. For a majority of the time, salt pans are expanses of ground covered in salt or other minerals formed from evaporated water. Salt pans generally pool water when it rains, forming mudflats.

3.5.23 Beach (64400)

Beaches are sandy and/or cobbly habitat on coastal strands, lagoons, or lakes. Ocean beaches are a shoreline feature of deposited sand formed by waves and tides off the coast. Beaches on lakes may be a result of waves, disturbance, or geological formations. These are mainly unvegetated areas; however, upper portions may be thinly populated with herbaceous species.

3.5.24 Torrey Pine Forest (83140)

This is an open to moderately dense forest up to 20 meters tall in sheltered localities, becoming much shorter and wind-pruned in exposed situations; it is dominated by Torrey pine (*Pinus torreyana*). The understory varies from almost nothing on the driest, rockiest sites to fairly dense chaparral on generally rocky soil to an open mixture of grasses and shrubs on better-developed soils. With a dense tree canopy, needles accumulate on the ground, and again, few understory plants occur. Some of the understory plants that do make up this community when present include chamise (*Adenostoma fasciculatum*), California sagebrush, toyon (*Heteromeles arbutifolia*), lemonadeberry, and laurel sumac. Most growth and flowering occur in late winter and spring, with some activity in other months, at least in mesic sites. There are only two naturally occurring stands in San Diego County, the larger of which is in the vicinity of Del Mar and the Torrey Pines State Reserve. This particular stand intergrades with Southern Coastal Bluff Scrub (31200) and Southern Mixed Chaparral (37120).

4.0 SPECIAL-STATUS BIOLOGICAL RESOURCES

The special-status plant and wildlife species evaluated in this report inform the PEIR. Final determinations regarding species presence for individual CIP projects will be made through project-specific biological resources technical reports prepared pursuant to the PEIR and applicable regulatory requirements.

The City is characterized by a unique assemblage of vegetation communities and land cover types, plants, wildlife, aquatic resources, and other unique features.

4.1 Sensitive Natural Communities

Records of the following sensitive natural communities are reported to occur within the region.

- Maritime Succulent Scrub
- San Diego Mesa Hardpan Vernal Pool
- Southern Coast Live Oak Riparian Forest
- Southern Coastal Salt Marsh
- Southern Cottonwood Willow Riparian Forest
- Southern Maritime Chaparral
- Southern Riparian Forest
- Southern Riparian Scrub
- Southern Sycamore Alder Riparian Woodland
- Southern Willow Scrub
- Torrey Pine Forest
- Valley Needlegrass Grassland

Sensitive natural communities within the boundaries of the City include Southern Coastal Salt Marsh, Southern Maritime Chaparral, Southern Willow Scrub, and Torrey Pine Forest (Attachment A, Figure 5). Southern Coastal Salt Marsh (41.62 acres) is primarily associated with the San Dieguito Lagoon; Southern Maritime Chaparral (5.33 acres) is associated with the Torrey Pines State Natural Reserve Extension and Crest Canyon Open Space Park; Southern Willow Scrub (0.18 acres) is mapped along a tributary to the San Dieguito River; and Torrey Pine Forest (12.05 acres) is mapped in patches on the hillside south of San Dieguito Drive. The remaining sensitive natural communities listed above do not occur within City limits.

4.2 Special-Status Plants

Based on the results of the literature review and records search, a total of 107 special-status plant species were evaluated for their potential to occur within the City (Attachment B). Of these, 15 special-status plants are expected to occur due to the presence of known locations within the City. Table 3 lists these species alphabetically by scientific name, along with the habitat type(s) or general location of where they have been documented within the City limits.

TABLE 3. SPECIAL-STATUS PLANTS EXPECTED TO OCCUR WITHIN THE CITY OF DEL MAR

Scientific Name	Common Name	Habitat Type or Location
<i>Abronia maritima</i>	red sand-verbena	San Dieguito Lagoon Coastal Bluffs
<i>Adolphia californica</i>	California adolphia	San Dieguito Lagoon Coastal Scrub
<i>Arctostaphylos glandulosa</i> ssp. <i>crassifolia</i>	Del Mar manzanita	Torrey Pines State Natural Reserve Extension Crest Canyon Open Space Park Chapparal
<i>Bahiopsis laciniata</i>	San Diego County viguiera	San Dieguito Lagoon Ecological Reserve
<i>Ceanothus verrucosus</i>	wart-stemmed ceanothus	Torrey Pines State Natural Reserve Extension Crest Canyon Open Space Park
<i>Centromadia parryi</i> ssp. <i>australis</i>	southern tarplant	San Dieguito Lagoon Ecological Reserve
<i>Chaenactis glabriuscula</i> var. <i>orcuttiana</i>	Orcutt's pincushion	Del Mar Canyon Preserve Torrey Pine State Natural Reserve
<i>Chorizanthe orcuttiana</i>	Orcutt's spineflower	Crest Canyon Open Space Park Torrey Pines State Natural Reserve Extension
<i>Corethrogyne filaginifolia</i> var. <i>linifolia</i>	Del Mar Mesa sand aster	Crest Canyon Open Space Park Del Mar Canyon Preserve Torrey Pines State Natural Reserve Extension
<i>Leptosyne maritima</i>	sea dahlia	Coastal Bluffs Crest Canyon Open Space Park Torrey Pines State Natural Reserve Extension
<i>Lycium californicum</i>	California box-thorn	Coastal Bluffs
<i>Phacelia ramosissima</i> var. <i>austrolitoralis</i>	south coast branching phacelia	Crest Canyon Open Space Park San Dieguito Lagoon Torrey Pines State Natural Reserve Extension
<i>Pinus torreyana</i> ssp. <i>torreyana</i>	Torrey pine	Crest Canyon Open Space Park Del Mar Canyon Preserve Torrey Pines State Natural Reserve Extension
<i>Suaeda esteroa</i>	estuary seablite	San Dieguito Lagoon
<i>Suaeda taxifolia</i>	woolly seablite	San Dieguito Lagoon

Of the 107 special-status plant species assessed, 46 have a moderate potential to occur due to the presence of nearby known locations and potentially suitable habitat within the City. There are no known records of these species within the City. Table 4 lists these species alphabetically by scientific name, along with the habitat type(s) or general location of where potentially suitable habitat occurs.

TABLE 4. SPECIAL-STATUS PLANTS WITH A MODERATE POTENTIAL TO OCCUR WITHIN THE CITY OF DEL MAR

Scientific Name	Common Name	Habitat Type or Location
<i>Acmispon prostratus</i>	Nuttall's acmispon	Coastal Bluffs Coastal Scrub
<i>Agave shawii</i> var. <i>shawii</i>	Shaw's agave	Coastal Bluffs Coastal Scrub
<i>Ambrosia monogyra</i>	singlewhorl burrobrush	Chaparral
<i>Ambrosia pumila</i>	San Diego ambrosia	Chaparral Coastal Scrub
<i>Aphanisma blitoides</i>	aphanisma	Coastal Bluffs Coastal Scrub
<i>Aphyllon parishii</i> ssp. <i>brachylobum</i>	short-lobed broomrape	Coastal Bluffs Coastal Scrub
<i>Artemisia palmeri</i>	San Diego sagewort	Chaparral Coastal Scrub
<i>Atriplex coulteri</i>	Coulter's saltbush	Coastal Bluffs Coastal Scrub
<i>Atriplex pacifica</i>	south coast saltscale	Coastal Bluffs Coastal Scrub
<i>Baccharis vanessae</i>	Encinitas baccharis	Chaparral Crest Canyon Open Space Park
<i>Berberis nevinii</i>	Nevin's barberry	Chaparral Coastal Scrub
<i>Bergerocactus emoryi</i>	golden-spined cereus	Chaparral Coastal Scrub
<i>Calandrinia breweri</i>	Brewer's calandrinia	Chaparral Coastal Scrub
<i>Camissoniopsis lewisii</i>	Lewis' evening-primrose	Coastal Bluffs Coastal Scrub San Dieguito Lagoon Torrey Pines State Natural Reserve Extension
<i>Chloropyron maritimum</i> ssp. <i>maritimum</i>	salt marsh bird's-beak	Coastal Bluffs San Dieguito Lagoon
<i>Cistanthe maritima</i>	seaside cistanthe	Coastal Bluffs Coastal Scrub
<i>Comarostaphylis diversifolia</i> ssp. <i>Diversifolia</i>	summer holly	Chaparral Crest Canyon Open Space Park
<i>Corethrogyne filaginifolia</i> var. <i>incana</i>	San Diego sand aster	Chaparral Coastal Bluffs Coastal Scrub Crest Canyon Open Space Park

TABLE 4, CONTINUED

Scientific Name	Common Name	Habitat Type or Location
<i>Cylindropuntia californica</i> var. <i>californica</i>	snake cholla	Chaparral Coastal Scrub
<i>Dichondra occidentalis</i>	western dichondra	Chaparral Coastal Scrub
<i>Dudleya brevifolia</i>	short-leaved dudleya	Chaparral Coastal Scrub Crest Canyon Open Space Park Torrey Pines State Natural Reserve Extension
<i>Ericameria palmeri</i> var. <i>palmeri</i>	Palmer's goldenbush	Chaparral Coastal Scrub Crest Canyon Open Space Park Torrey Pines State Natural Reserve Extension
<i>Erysimum ammophilum</i>	sand-loving wallflower	Chaparral Coastal Scrub Crest Canyon Open Space Park Torrey Pines State Natural Reserve Extension
<i>Euphorbia misera</i>	cliff spurge	Coastal Bluffs Coastal Scrub
<i>Ferocactus viridescens</i>	San Diego barrel cactus	Chaparral Coastal Scrub Crest Canyon Open Space Park Torrey Pines State Natural Reserve Extension
<i>Geothallus tuberosus</i>	Campbell's liverwort	Coastal Scrub Crest Canyon Open Space Park
<i>Heterotheca sessiliflora</i> ssp. <i>sessiliflora</i>	beach goldenaster	Chaparral Coastal Scrub Crest Canyon Open Space Park Torrey Pines State Natural Reserve Extension
<i>Holocarpha virgata</i> ssp. <i>elongata</i>	graceful tarplant	Chaparral Coastal Scrub
<i>Isocoma menziesii</i> var. <i>decumbens</i>	decumbent goldenbush	Chaparral Coastal Scrub
<i>Iva hayesiana</i>	San Diego marsh-elder	San Dieguito River and Lagoon
<i>Juglans californica</i>	Southern California black walnut	Chaparral Coastal Scrub
<i>Juncus acutus</i> ssp. <i>leopoldii</i>	southwestern spiny rush	Coastal Scrub
<i>Lasthenia glabrata</i> ssp. <i>coulteri</i>	Coulter's goldfields	San Dieguito Lagoon
<i>Lepidium virginicum</i> var. <i>robinsonii</i>	Robinson's pepper-grass	Chaparral Coastal Scrub

TABLE 4, CONTINUED

Scientific Name	Common Name	Habitat Type or Location
<i>Microseris douglasii</i> ssp. <i>platycarpha</i>	small-flowered microseris	Coastal Scrub
<i>Monardella viminea</i>	willowy monardella	Chaparral Coastal Scrub
<i>Nemacaulis denudata</i> var. <i>denudata</i>	coast woolly-heads	San Dieguito Lagoon
<i>Pentachaeta aurea</i> ssp. <i>aurea</i>	golden-rayed pentachaeta	Chaparral Coastal Scrub
<i>Phacelia stellaris</i>	Brand's star phacelia	Coastal Scrub
<i>Piperia cooperi</i>	chaparral rein orchid	Chaparral
<i>Quercus dumosa</i>	Nuttall's scrub oak	Chaparral Coastal Scrub
<i>Quercus engelmannii</i>	Engelmann oak	Chaparral
<i>Selaginella cinerascens</i>	ashy spike-moss	Chaparral Coastal Scrub
<i>Senecio aphanactis</i>	chaparral ragwort	Chaparral Coastal Scrub
<i>Sphaerocarpos drewiae</i>	bottle liverwort	Chaparral Coastal Scrub Crest Canyon Open Space Park
<i>Stipa diegoensis</i>	San Diego County needle grass	Chaparral Coastal Scrub

The remaining 46 species are not expected to occur due to the lack of suitable habitat, the City's location outside of the species' known range, and/or the historical rank of known records in the region.

No USFWS designated critical habitat for any listed plant species is mapped within the City.

4.3 Special-Status Wildlife

Based on the results of the literature review and records search, a total of 52 special-status wildlife species were evaluated for their potential to occur within the City (Attachment B). Of these, 15 species are expected to occur due to the presence of suitable habitat or documented locations within the City. Table 5 lists these species alphabetically by scientific name within their taxonomic groups, along with the habitat type(s) or general location of where they have been documented within the City limits.

TABLE 5. SPECIAL-STATUS WILDLIFE EXPECTED TO OCCUR WITHIN THE CITY OF DEL MAR

Class	Scientific Name	Common Name	Habitat Type or Location
Invertebrate	<i>Danaus plexippus plexippus</i>	monarch - California overwintering population	Migrating individuals throughout developed and undeveloped portions of the City where there are floral resources Overwintering-tree groves along eastern City boundary
Amphibian	<i>Spea hammondi</i>	western spadefoot	Coastal Scrub
Reptile	<i>Aspidoscelis hyperythra</i>	orange-throated whiptail	Chapparal Coastal Scrub
Reptile	<i>Aspidoscelis tigris stejnegeri</i>	coastal whiptail	Chapparal
Bird	<i>Charadrius alexandrinus nivosus</i>	western snowy plover	San Dieguito Lagoon
Bird	<i>Elanus leucurus</i>	white-tailed kite	San Dieguito Lagoon
Bird	<i>Icteria virens</i>	yellow-breasted chat	San Dieguito Lagoon
Bird	<i>Passerculus sandwichensis beldingi</i>	Belding's savannah sparrow	San Dieguito Lagoon
Bird	<i>Poliophtila californica californica</i>	coastal California gnatcatcher	Coastal Bluffs Coastal Scrub
Bird	<i>Rallus obsoletus levipes</i>	light-footed Ridgway's rail	San Dieguito Lagoon
Bird	<i>Setophaga petechia</i>	yellow warbler	San Dieguito Lagoon
Bird	<i>Sternula antillarum browni</i>	California least tern	San Dieguito Lagoon
Mammal	<i>Chaetodipus fallax fallax</i>	northwestern San Diego pocket mouse	Chaparral Coastal Scrub
Mammal	<i>Neotoma lepida intermedia</i>	San Diego desert woodrat	Coastal Scrub
Mammal	<i>Nyctinomops femorosaccus</i>	pocketed free-tailed bat	Bridge

Of the 52 special-status wildlife species assessed, 14 have a moderate potential to occur due to the presence of nearby known locations and potentially suitable habitat within the City. There are no known records of these species within the City. Table 6 lists these species alphabetically by scientific name within their taxonomic group, along with the habitat type(s) or general location of where potentially suitable habitat occurs.

TABLE 6. SPECIAL-STATUS WILDLIFE WITH A MODERATE POTENTIAL TO OCCUR WITHIN THE CITY OF DEL MAR

Class	Scientific Name	Common Name	Habitat Type or Location
Invertebrate	<i>Bombus crotchii</i>	Crotch's bumble bee	Throughout developed and undeveloped portions of the City where floral resources occur
Reptile	<i>Anniella stebbinsi</i>	southern California legless lizard	Chaparral Coastal Scrub Crest Canyon Open Space Park Torrey Pines State Natural Reserve Extension
Reptile	<i>Crotalus ruber</i>	red-diamond rattlesnake	Chaparral
Reptile	<i>Diadophis punctatus similis</i>	San Diego ringneck snake	Chaparral Torrey Pines State Natural Reserve Extension
Reptile	<i>Phrynosoma blainvillii</i>	coast horned lizard	Chaparral Coastal Bluffs Coastal Scrub Torrey Pines State Natural Reserve Extension
Reptile	<i>Plestiodon skiltonianus interparietalis</i>	Coronado skink	Chaparral Torrey Pines State Natural Reserve Extension
Bird	<i>Agelaius tricolor</i>	tricolored blackbird	San Dieguito River and Lagoon
Mammal	<i>Antrozous pallidus</i>	pallid bat	San Dieguito Lagoon
Mammal	<i>Chaetodipus californicus femoralis</i>	Dulzura pocket mouse	Chaparral Coastal Scrub
Mammal	<i>Corynorhinus townsendii</i>	Townsend's big-eared bat	Chaparral
Mammal	<i>Euderma maculatum</i>	spotted bat	San Dieguito Lagoon
Mammal	<i>Eumops perotis californicus</i>	western mastiff bat	Chaparral Coastal scrub
Mammal	<i>Myotis yumanensis</i>	Yuma myotis	San Dieguito Lagoon
Mammal	<i>Nyctinomops macrotis</i>	big free-tailed bat	San Dieguito Lagoon

The remaining 23 species are not expected to occur due to the lack of suitable habitat or the City's location outside of the species known range.

Critical habitat for western snowy plover occurs in the northern portion of the City of Del Mar within the San Dieguito Lagoon, as described in more detail in the following section.

4.4 Critical Habitat

Under the ESA, Critical Habitat may be established for species listed as threatened or endangered. Critical Habitat refers to specific areas within the geographical range of a species that were occupied at the time it was listed that contain the physical or biological features that are essential to the survival and eventual recovery of that species and that may require special management considerations or protection, regardless of whether the species is still extant in the area. Areas that were not known to be occupied at the time a species was listed can also be designated Critical Habitat if they contain one or more of the physical or biological features that are essential to that species' conservation and if the other areas that are occupied are inadequate to ensure the species' recovery.

In the event that a project may result in take or adverse modification to a listed species' designated Critical Habitat, a project proponent may be required to engage in suitable mitigation. However, consultation for impacts to Critical Habitat is only required when a project has a federal nexus. This may include projects that occur on federal lands, require federal permits (e.g., CWA Section 404 permit), or receive any federal oversight or funding. If there is a federal nexus, then the federal agency that is responsible for providing funds or permits would be required to consult with the USFWS under the ESA.

Critical habitat for western snowy plover (*Charadrius nivosus nivosus*; WSP) Subunit CA 52A is located at the west end of San Dieguito River Park in the City of Del Mar (USFWS 2012; Attachment A: Figure 6, Critical Habitat and Essential Fish Habitat). This 4-acre subunit is currently occupied and is on private property. This subunit is a nest site that was created for nesting seabirds and shorebirds including WSP and California least tern (*Sternula antillarum browni*). The Recovery Plan for the Pacific Coast WSP recognizes the San Dieguito Lagoon as an important coastal wetland that provides valuable nesting, wintering, and foraging habitat, contributing to the species' overall recovery by enhancing habitat connectivity and seasonal resource availability. The recovery plan emphasizes the need for ongoing habitat protection, restoration, and monitoring at sites like the San Dieguito Lagoon to mitigate urban pressures and maintain ecological functions critical to plover conservation (USFWS 2007). This subunit also facilitates interchange between wintering locations. This subunit contains the physical or biological features essential to the conservation of the species, including wide sandy beaches and tidally influenced estuarine mud flats with tide-cast organic debris supporting small invertebrates. It should be noted that two other subunits (CA 52B and CA 52C) were ultimately excluded from the final critical habitat designation because they are located on non-federal lands that receive coverage from the City of San Diego Subarea Plan under the MSCP, whereas Subunit CA 52A is not located within the boundaries of this subarea plan and thus does not receive MSCP coverage.

4.5 Essential Fish Habitat

The coastal waters offshore of the City are designated as EFH under the Magnuson-Stevens Fishery Conservation and Management Act for several federally managed fisheries, including coastal pelagic species, finfish, groundfish, and krill. EFH in this region encompasses nearshore marine habitats, the mouth of the San Dieguito Lagoon, and adjacent estuarine habitats (Attachment A: Figure 6). These areas provide the waters and substrate necessary for fish spawning, breeding, feeding, and growth to maturity, supporting species such as rockfish, cabezon, California sheephead, ocean whitefish, and greenlings, as well as anchovy, sardine, mackerel, and various migratory sharks and tunas.

Within the Del Mar area, Habitat Areas of Particular Concern are recognized for their high ecological value. These include offshore areas that are especially important for juvenile and adult life stages of groundfish and other marine species. The interface between the San Dieguito Lagoon and the Pacific Ocean is particularly notable, functioning as a nursery and foraging area for estuarine-dependent fish and invertebrates, and contributing to the productivity of nearshore fisheries.

4.6 Wetlands and Other Aquatic Resources

A variety of aquatic resource types occur within the City. The most prominent of these is the Pacific Ocean along the western boundary and the San Dieguito Lagoon and Floodplain system in the northern portion of the City (Attachment A: Figure 7, Aquatic Resources). The San Dieguito Lagoon contains diverse wetland types including tidal salt marshes, distinguished by salt-tolerant vegetation, that undergo tidal changes and are home to various fish, invertebrate, and bird species. Brackish marshes and mudflats create transitional zones between saltwater and freshwater, supporting unique plant communities and offering foraging habitat for shorebirds. Freshwater marshes and seeps occur in low-lying regions and riparian corridors, with emergent vegetation that provides shelter for amphibians. Riparian woodland and scrub line streams and rivers, giving cover, nesting sites, and food resources to wildlife while contributing to water filtration and stabilization of riverbanks. Open water features, such as lagoon channels, river mouths, ponds, and the nearshore ocean environment, foster aquatic life and serve as stopover points for migratory birds. Altogether, these wetlands make up an ecological system that sustains a rich variety of plant and animal life, enables wildlife movement, and promotes water quality, flood management, and scenic value.

4.7 Wildlife Corridors and Habitat Linkages

The concept of wildlife corridors and habitat linkages addresses the connection between large blocks of habitat that allow the safe movement of mammals and other wildlife species between habitat areas. The definition of a corridor varies; however, corridors may include areas such as greenbelts, refuge systems, underpasses, and biogeographic land bridges. In general, a corridor is described as a linear habitat, embedded in a dissimilar matrix, which connects two or more large blocks of habitat. Wildlife movement corridors are critical for the survivorship of ecological systems for several reasons. Corridors can connect water, food, and cover sources, spatially linking these three resources with wildlife in different areas. In addition, wildlife movement between habitat areas provides for the potential of genetic exchange between wildlife species populations, thereby maintaining genetic variability and adaptability to maximize the success of wildlife responses to changing environmental conditions. This is especially critical for small populations subject to loss of variability from genetic drift and effects of inbreeding. The nature of corridor use and wildlife movement patterns varies greatly among species.

Wildlife movement and habitat connectivity are critical for maintaining viable populations of native species, allowing for gene flow, dispersal, foraging, and adaptation to environmental changes. The City is situated within the highly urbanized coastal corridor of northwestern San Diego County, an area recognized as a biodiversity hotspot with a variety of habitat types, including coastal bluffs, wetlands, riparian corridors, and upland scrub. Despite its small size and largely built-out character, the City is surrounded by natural landforms and resources, including the Pacific Ocean to the west, the San Dieguito Lagoon and Crest Canyon to the north and east, and the Los Peñasquitos Lagoon to the south. These features, along with the City's steep slopes and canyons, provide wildlife movement opportunities for a variety of species (Attachment A: Figure 8, Wildlife Corridors).

The San Dieguito Lagoon and River Valley provide an east-west wildlife corridor in the northern portion of the City, connecting inland habitats to the coast. This corridor supports a diversity of aquatic and terrestrial species, including migratory birds, amphibians, reptiles, and mammals. The lagoon's wetlands and adjacent uplands are recognized as important habitat for both resident and migratory wildlife. Los Peñasquitos Lagoon and its uplands also provide an east-west movement corridor connecting inland habitats to the coast just south of the City. Crest Canyon serves as a north-south linkage, providing a natural drainage feature and travel route for terrestrial wildlife between the lagoon and upland habitats. Lastly, coastal bluffs and beaches within the City, while steep and fragmented by development and infrastructure (notably the railroad corridor), provide movement opportunities for species endemic to these habitat types and also serve as stopover points for migratory birds. A review of the California Wildlife Crossing Database does not show any wildlife crossings within the City. The nearest mapped crossings are approximately 6.5 miles east under State Route 56 and 8.6 miles east under Interstate 15 (Wildlands Network, n.d.).

5.0 ENVIRONMENTAL PROTOCOLS AND PROTECTIONS

This section describes the environmental protocols and protections for biological resources that must be considered to ensure that all CIP projects are evaluated for potential impacts to biological resources, consistent with CEQA, the City's LCP, and municipal ordinances.

This information is intended to be used within the PEIR impact analyses and future project-specific evaluations. The protocols described below are a framework for avoidance, minimization, monitoring, and mitigation of biological resource impacts and guide project-specific environmental review conducted pursuant to the PEIR.

5.1 Summary of Biological Resource Protections

Table 7 summarizes key environmental protections for biological resources that primarily align with the significance thresholds for biological resources provided in the CEQA Guidelines Appendix G environmental checklist. The table also includes specific overlays, ordinances, and review protocols relevant to project compliance and environmental review within the City. The specific overlay zones that incorporate biological resource protections are illustrated in Attachment A, Figure 9, Local Coastal Program/Land Use Plan/Overlay Zones.

TABLE 7. BIOLOGICAL RESOURCE PROTECTIONS

Resource	Summary	Source
Special-Status Species	Any plant or wildlife species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or US Fish and Wildlife Service.	CEQA Guidelines Appendix G, Section IV(a)
Riparian and Sensitive Natural Communities	Riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or US Fish and Wildlife Service. Also includes Environmentally Sensitive Habitat Areas.	CEQA Guidelines Appendix G, Section IV(b); LCP, Policy VI-1 through VI-5
State and Federal Wetlands	Any state or federally protected wetlands (including marsh, vernal pool, coastal, etc.).	CEQA Guidelines Appendix G, Section IV(c)
Wildlife Movement/Corridors	Any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or native wildlife nursery sites.	CEQA Guidelines Appendix G, Section IV(d)
Local Policies/Ordinances	Any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance, such as the below:	CEQA Guidelines Appendix G, Section IV(e)
Local Policies/Ordinances	<u>Open Space Overlay Zone:</u> Designated areas with sensitive biological resources. Trees and vegetation in this zone are subject to stricter protections. Development proposals must demonstrate avoidance or mitigation of impacts.	DMMC §23.50
Local Policies/Ordinances	<u>Bluff, Slope, and Canyon Overlay Zone:</u> Restricts development in areas with steep slopes, bluffs, and canyons to protect sensitive	Del Mar SB 9 Ordinance Report

TABLE 7, CONTINUED

Resource	Summary	Source
	habitats and prevent erosion. Projects require additional environmental review and may be excluded from SB 9 eligibility.	
Local Policies/Ordinances	<u>Lagoon Overlay Zone</u> : Designated areas with sensitive wetland and adjacent upland habitat to the Los Peñasquitos Lagoon and San Dieguito Lagoon. Requires all development activities conform to the wetland preservation regulations of the Land Use Plan.	DMMC §30.53
Local Policies/Ordinances	<u>Coastal Zone (LCP Jurisdiction)</u> : State-defined area along California's coastline that includes both land and water, extending inland generally 1,000 yards from the mean high tide line.	LCP
Local Policies/Ordinances	<u>Tree Protection Ordinance (DMMC §23.50)</u> : Protects specific tree species including Torrey pine and Monterey cypress, as well as trees in the Open Space (OS) Overlay Zone, Central Commercial (CC) Zone, and public rights-of-way. Removal requires a Tree Removal Permit and Certified Arborist Report.	Del Mar Tree Ordinance Guide
Habitat Conservation Plan Area	Adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.	CEQA Guidelines Appendix G, Section IV(f)

5.2 Biological Resources Sensitivity Zones

A biological resources sensitivity zone map (Attachment A: Figure 10, Biological Resources Sensitivity Zones) was developed as an effective tool for identifying areas that have potential resources that require protection. In general, sensitivity maps have the following broad characteristics:

- They are used to identify ecological communities sensitive to a specific influence or activity.
- They inform strategic planning decisions during the initial site selection phase of the development process at a landscape scale.
- They use GIS to collate, analyze, and display spatial and geographic data.
- They employ spatial biodiversity data relating to species and/or sites to display overlapping resources.

The biological resources sensitivity zone map is intended to guide the initial screening of CIP projects for potential biological resource concerns, and is based on regulatory status, ecological rarity, and potential for sensitive resources. While the map provides a landscape-scale overview, it does not replace the need for site-specific biological assessments, which may be required for individual projects depending on their location and scope.

5.2.1 High Sensitivity Zone

These areas contain the highest concentration of sensitive biological resources, such as wetlands, riparian habitats, rare vegetation communities, designated ESHAs, and known occurrences of special-status species. High Sensitivity Zones often overlap with regulatory overlays (e.g., Lagoon Overlay Zone,

Bluff/Slope/Canyon Overlay Zone) and may include critical habitat, wildlife corridors, or protected tree species.

- **Project Review:** Projects within High Sensitivity Zones require the most rigorous biological review, which could include detailed site-specific surveys, early coordination with regulatory agencies, and robust avoidance and mitigation measures.
- **Standard Measures:** Enhanced protocols for habitat protection, species surveys, and mitigation are typically required.

5.2.2 Moderate Sensitivity Zone

The Moderate Sensitivity Zone is mapped as a 100-foot buffer surrounding the High Sensitivity Zone. Its primary purpose is to provide an added layer of protection for the most sensitive biological resources by minimizing indirect impacts from adjacent development or activities. This buffer helps to maintain ecological integrity, reduce edge effects, and support habitat connectivity adjacent to high-value areas.

- **Project Review:** Projects within the Moderate Sensitivity Zone require focused biological review to ensure that activities do not adversely affect the adjacent High Sensitivity Zone.
- **Standard Measures:** Construction best management practices (BMPs), seasonal restrictions, and targeted surveys for species that may utilize buffer areas. Avoidance and minimization measures are prioritized, and mitigation requirements may be tailored to address potential indirect impacts to the High Sensitivity Zone.

5.2.3 Low Sensitivity Zone

The Low Sensitivity Zone is generally characterized by developed or disturbed areas with limited biological resource value, such as urbanized parcels, maintained landscapes, or areas lacking native vegetation. Due to the presence of the Moderate Sensitivity Zone buffer, these areas are not expected to overlap with High Sensitivity Zones. While these areas generally have limited habitat value, they may still contain biological resources that could support nesting birds and listed species that may occur in developed areas (e.g., monarch or Crotch's bumble bee).

- **Project Review:** Projects in Low Sensitivity Zones require basic biological screening to confirm the absence of sensitive resources and to identify any features (e.g., trees, landscaping) that may provide habitat for protected species.
- **Standard Measures:** Standard BMPs and compliance with municipal ordinances (e.g., tree protection, nesting bird surveys) are typically sufficient, but additional measures may be required if protected resources are identified during project-specific review.

The Biological Resources Sensitivity Zones map is intended to serve as an early planning tool for CIP projects, helping to identify areas where biological resources may require special consideration. While the map provides valuable guidance for initial project siting and review, it does not replace the need for site-specific biological assessments, which remain essential for confirming the presence and extent (or absence) of sensitive resources. The level of biological review, avoidance, and mitigation measures required for a given project will be determined by the sensitivity zone in which it is located, with the most stringent requirements applied to projects in High Sensitivity Zones and progressively less intensive measures in Moderate and Low Sensitivity Zones.

To further support the application of the Biological Resources Sensitivity Zones map, Table 8 provides a summary of key requirements, survey needs, and avoidance/minimization or mitigation actions associated with common project locations and resource triggers within the City of Del Mar. This matrix outlines how overlay zones, ordinances, and local policies interact with the sensitivity zones to determine the level of biological review and regulatory compliance required for CIP projects. For example, projects located within High Sensitivity Zones or designated overlay areas—such as the Open Space, Lagoon, or Bluff/Slope/Canyon Overlay Zones—will likely be subject to more rigorous assessment and mitigation requirements, including field surveys, avoidance measures, and possibly agency consultation. In contrast, projects in Moderate or Low Sensitivity Zones may require less intensive review, focusing on desktop assessments and standard BMPs. The evaluation matrix is intended to guide the City in identifying the appropriate protocols and protections for each CIP project, ensuring that biological resources are adequately considered throughout the planning and environmental review process. As impacts and mitigation are addressed programmatically in the PEIR, this technical report and accompanying matrix provide the foundational background for future project-specific evaluations and compliance with applicable environmental regulations.

TABLE 8. BIOLOGICAL RESOURCE EVALUATION MATRIX

Project Location/ Resource Trigger	Overlay Zone or Ordinance	Key Requirements/Actions	Survey/Assessment Required?	Mitigation/Permit Needed?
All projects (citywide)	CEQA, Screening Process	Initial desktop review; biological Resources Sensitivity Zone check; overlay zone check; determine need for field surveys and technical review	Desktop assessment; field survey if indicated	Yes, if significant impacts identified
Within High or Moderate Sensitivity Zone	Community Plan, LCP	Avoid/minimize impacts; consult with resource agencies; implement mitigation as needed	Biological resources technical report; focused survey or preconstruction survey if special-status species likely	Yes, if impacts cannot be avoided; agency consultation
Within Open Space	Open Space Overlay Zone (DMMC §30.60)	Demonstrate avoidance and minimization of impacts; limit uses to those compatible with conservation	Biological resource desktop assessment; field survey if special-status species likely	Yes, if impacts cannot be avoided; mitigation plan required
Within/adjacent to San Dieguito Lagoon	Lagoon Overlay Zone (DMMC §30.53), Floodway Zone (DMMC §30.29)	Avoid impacts to wetlands, riparian, and sensitive upland habitats; comply with BMPs; maintain natural hydrology	Wetland delineation; special-status species survey	Yes; may require mitigation and/or Coastal Development Permit
On or near bluffs, steep slopes, or canyons	Bluff, Slope, and Canyon Overlay Zone (DMMC §30.52)	Restrict grading/vegetation removal; require slope stabilization with native plants; avoid erosion	Slope stability assessment; vegetation survey	Yes, if disturbance exceeds thresholds; mitigation plan required
Removal or alteration of significant trees	Tree Protection Ordinance (DMMC §23.50)	Arborist report required; permit for removal of Torrey pine, Monterey cypress, or trees in protected zones	Tree impact assessment by Certified Arborist	Yes, permit required; replacement planting/mitigation
Within ESHA	Local Coastal Program (LCP)	Demonstrate consistency with LCP policies; may require Coastal Development Permit	Biological resource assessment; consistency analysis	Yes, if impacts cannot be avoided; mitigation plan required

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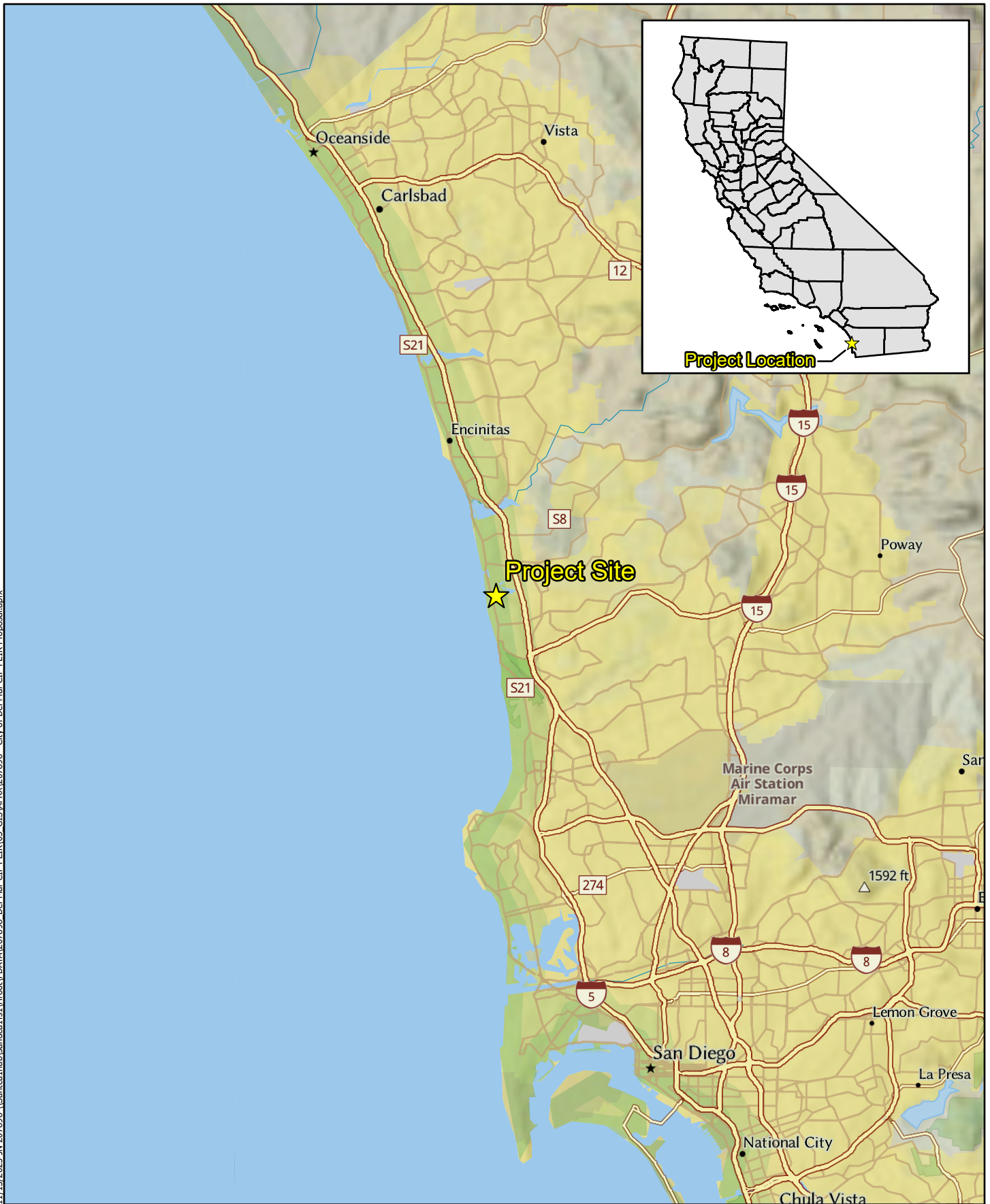
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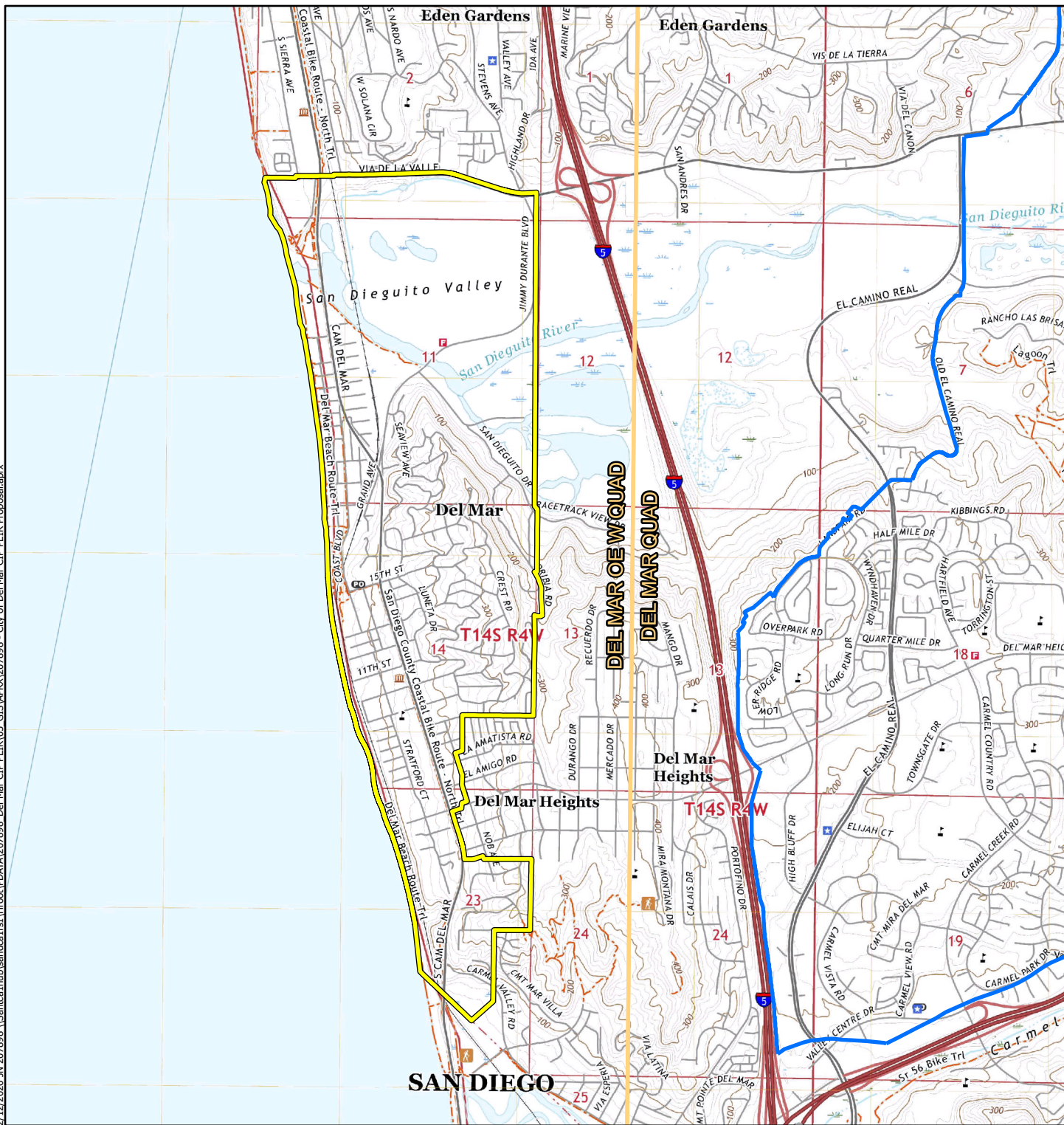
ATTACHMENT A

FIGURES

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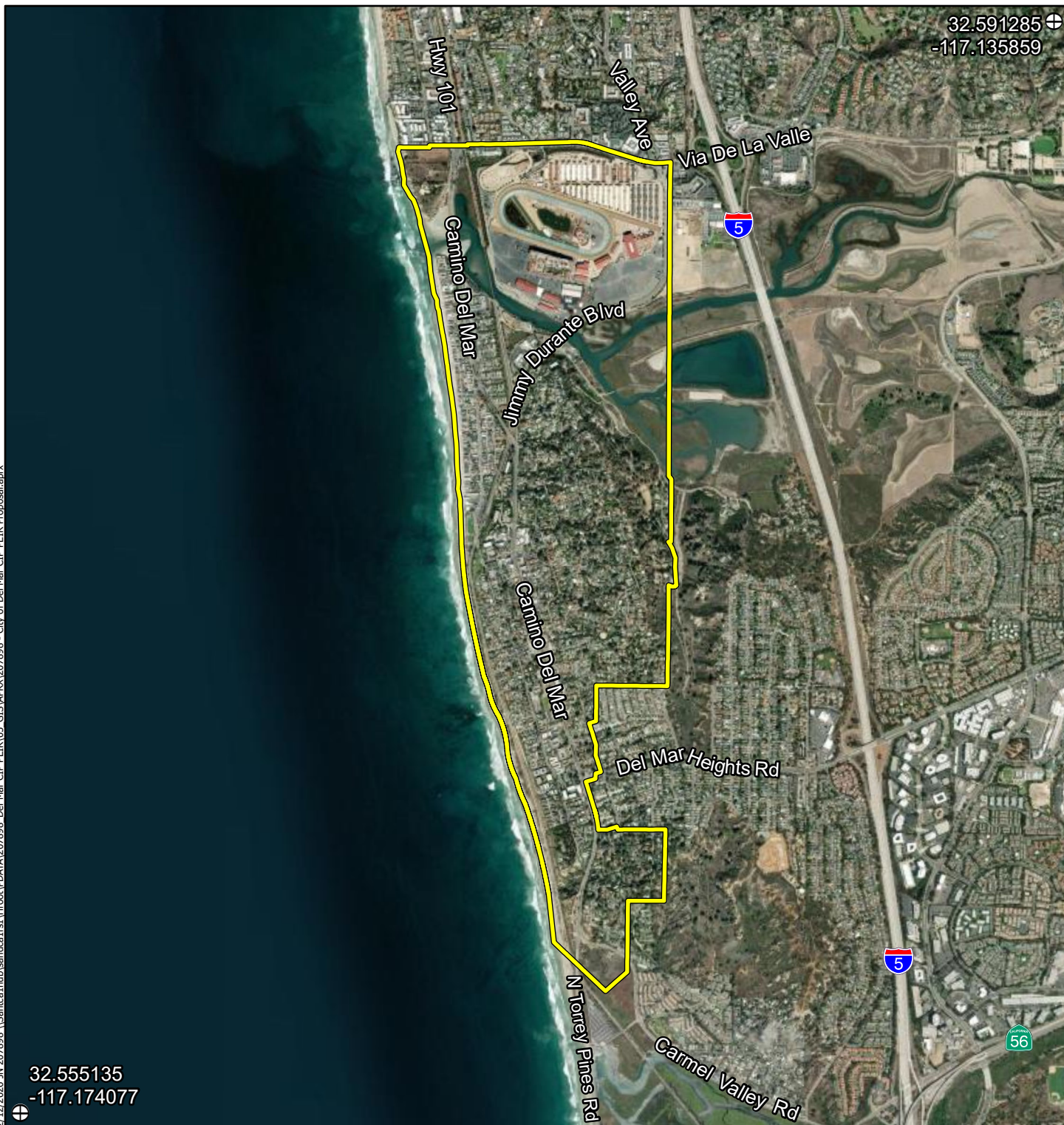


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-  Coastal Zone Boundary
-  Project Site



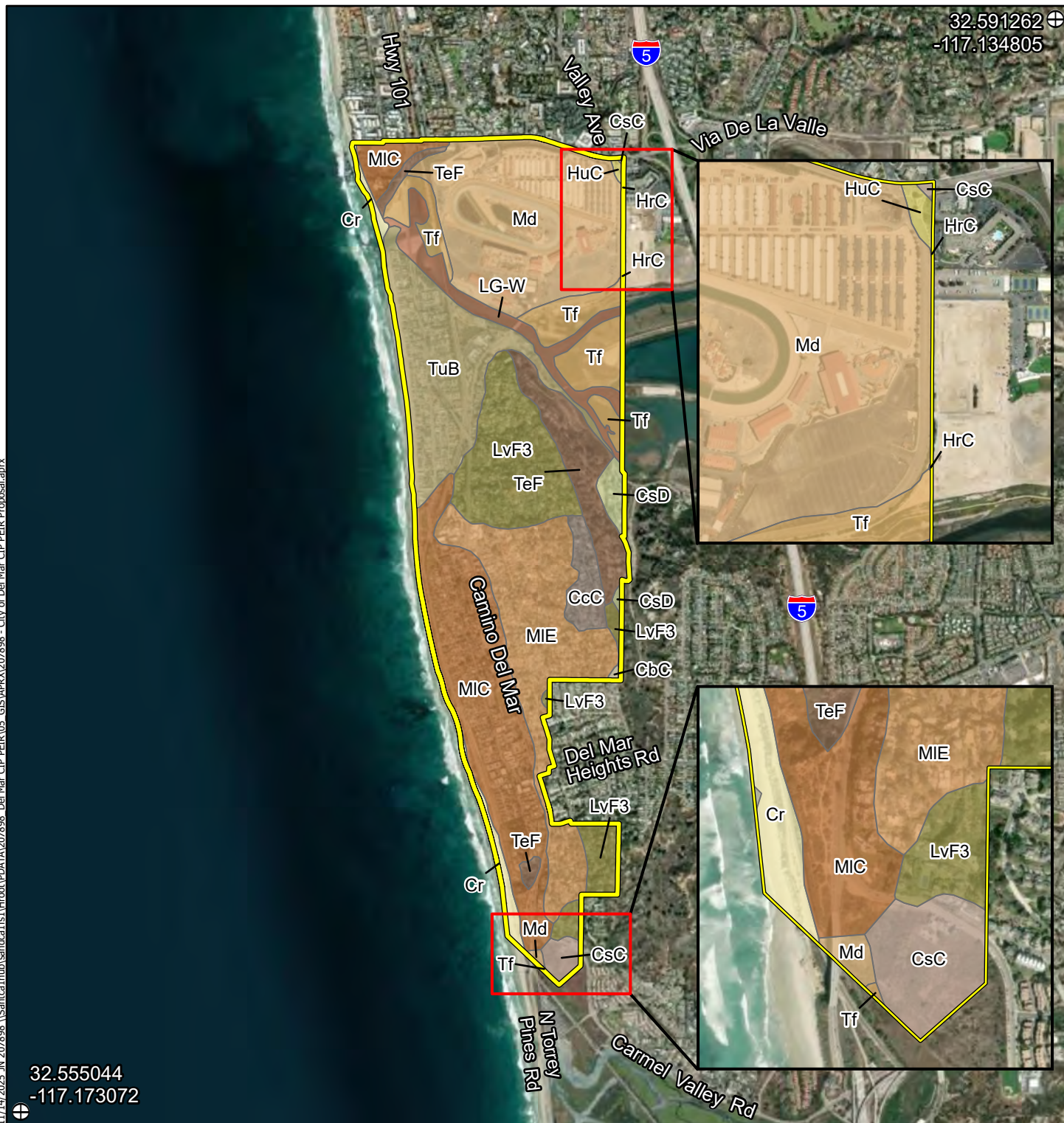
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-  Reference Point
-  Project Site

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⊕ Reference Point	USDA Soils			
Project Site	CbC Carlsbad gravelly loamy sand, 5 to 9 percent slopes	CsC Corralitos loamy sand, 5 to 9 percent slopes	LG-W Lagoon water	MIE Marina loamy coarse sand, 9 to 30 percent slopes
	CcC Carlsbad-Urban land complex, 2 to 9 percent slopes	CsD Corralitos loamy sand, 9 to 15 percent slopes	LvF3 Loamy alluvial land-Huerhuero complex, 9 to 50 percent slopes, severely eroded	TeF Terrace escarpments
	Cr Coastal beaches	HrC Huerhuero loam, 2 to 9 percent slopes	Md Made land	Tf Tidal flats
		HuC Huerhuero-Urban land complex, 2 to 9 percent slopes	MIC Marina loamy coarse sand, 2 to 9 percent slopes	TuB Tujunga sand, 0 to 5 percent slopes

CITY OF DEL MAR CIP STREAMLINING PROJECT
BIOLOGICAL RESOURCES TECHNICAL REPORT





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Project Site

Vegetation Communities and Land Cover Types

- 11000 Non-Native Vegetation
- 11300 Disturbed Habitat
- 12000 Urban/Developed
- 21230 Southern Foredunes
- 31200 Southern Coastal Bluff Scrub

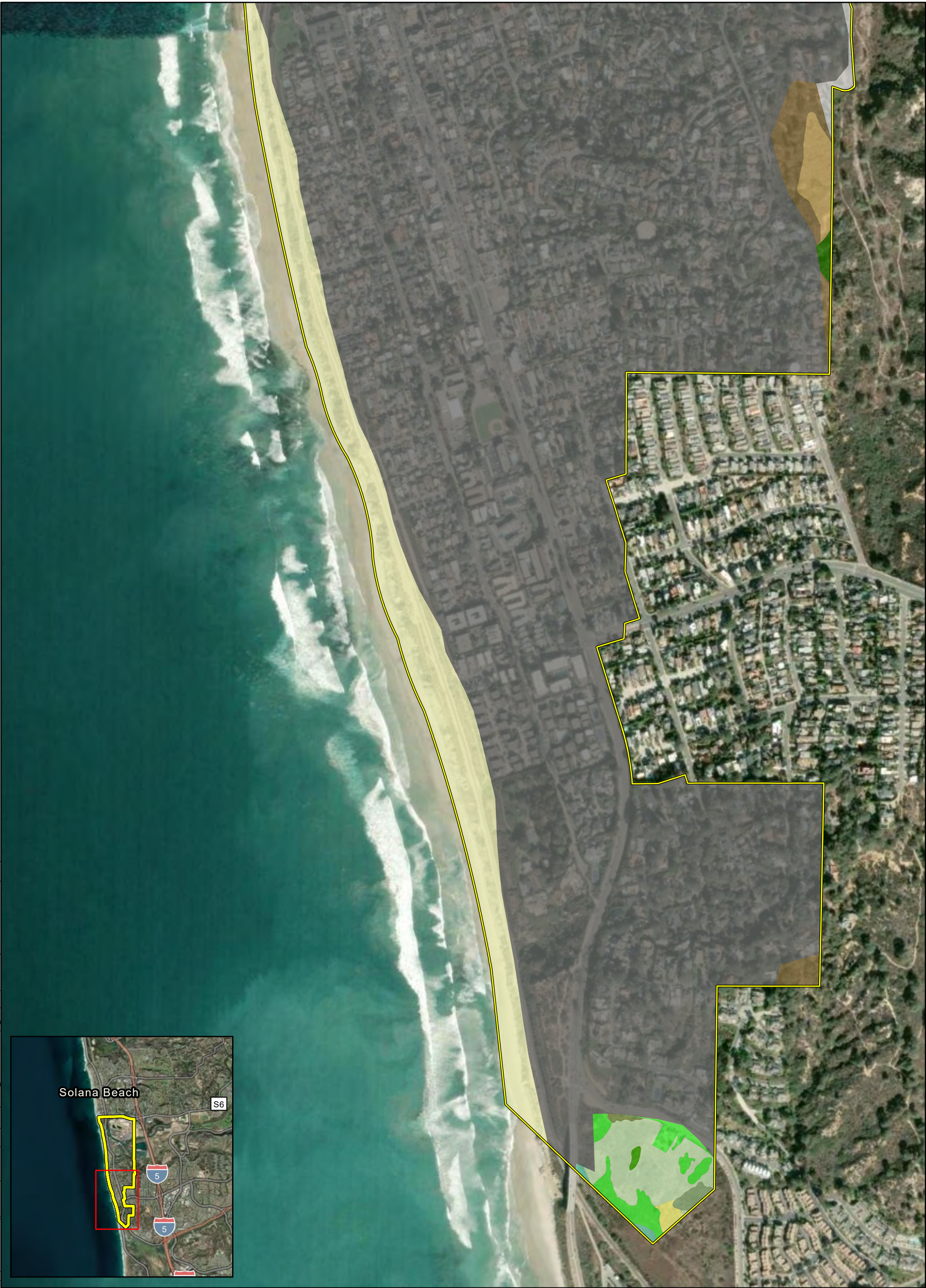
- 32500 Diegan Coastal Sage Scrub
- 32510 Diegan Coastal Sage Scrub: Coastal form
- 37120 Southern Mixed Chaparral
- 42200 Non-Native Grassland
- 52120 Southern Coastal Salt Marsh

- 52410 Coastal and Valley Freshwater Marsh
- 63320 Southern Willow Scrub
- 64000 Unvegetated Habitat
- 64100 Open Water
- 64112 Intertidal

- 64130 Estuarine
- 64140 Freshwater
- 64300 Saltpan/Mudflats
- 64400 Beach
- 83140 Torrey Pine Forest



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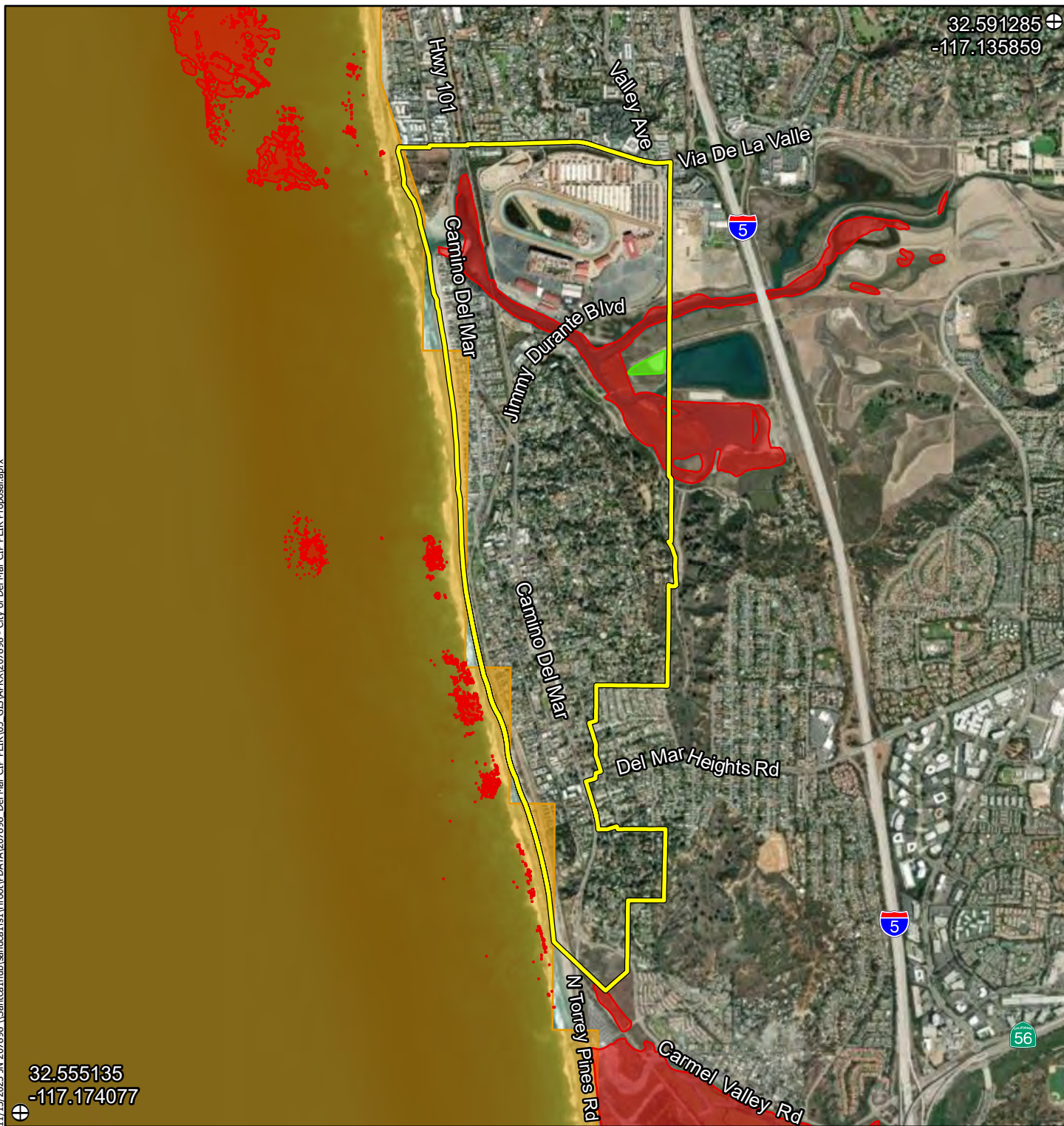


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 Project Site

Vegetation Communities and Land Cover Types

11300 Disturbed Habitat	37120 Southern Mixed Chaparral	63000 Riparian Scrubs
12000 Urban/Developed	37C30 Southern Maritime Chaparral	64000 Unvegetated Habitat
32400 Maritime Succulent Scrub	42200 Non-Native Grassland	64400 Beach
32500 Diegan Coastal Sage Scrub	52120 Southern Coastal Salt Marsh	83140 Torrey Pine Forest
	61320 Southern Arroyo Willow Riparian Forest	

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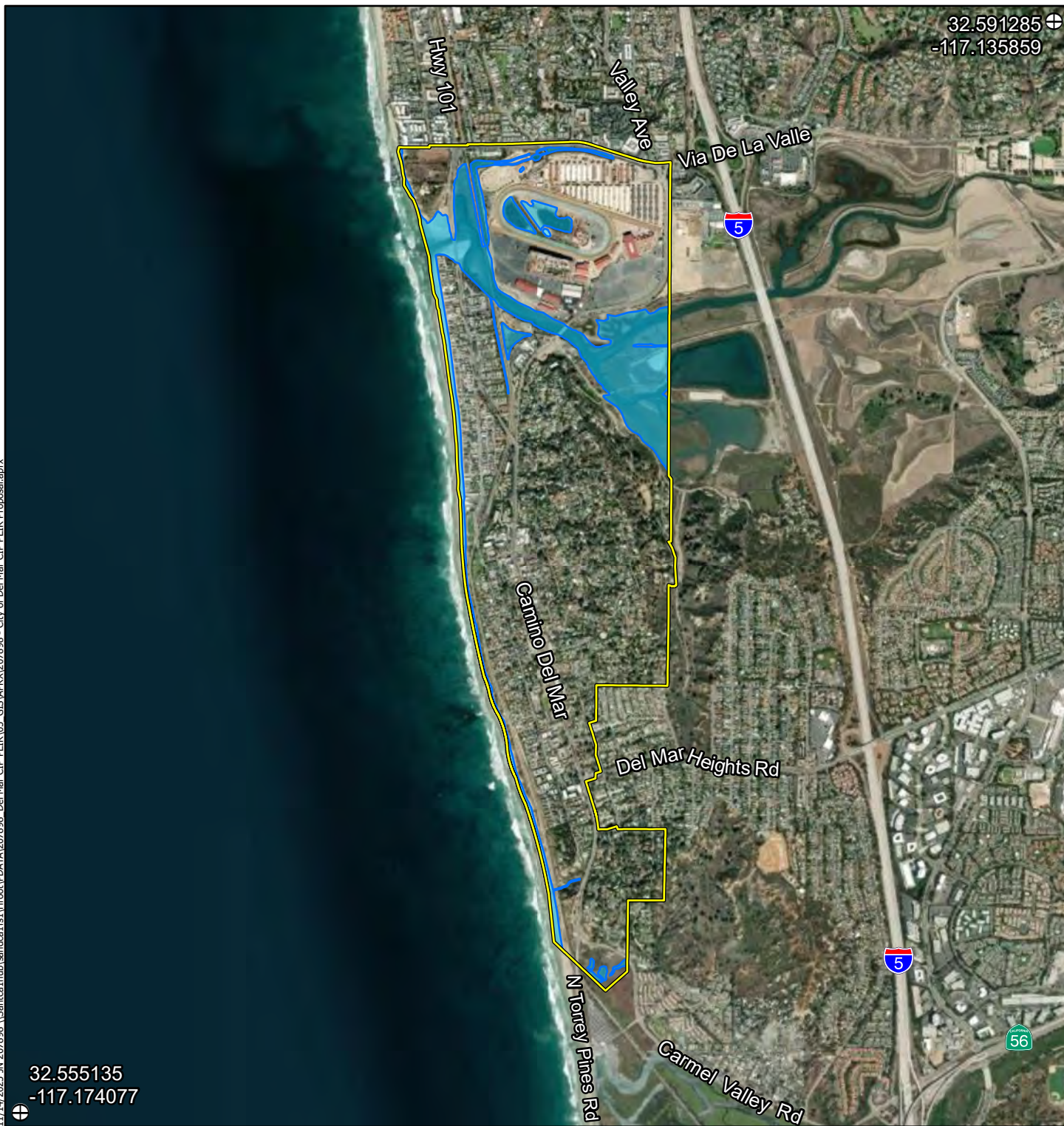
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-  Reference Point
-  Project Site
-  Critical Habitat: Western Snowy Plover (*Charadrius nivosus nivosus*)
-  Essential Fish Habitat (EFH)
-  EFH Habitat Areas of Particular Concern (HAPC)

CITY OF DEL MAR CIP STREAMLINING PROJECT
BIOLOGICAL RESOURCES TECHNICAL REPORT



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- ⊕ Reference Point
- Aquatic Resources
- ▭ Project Site

CITY OF DEL MAR CIP STREAMLINING PROJECT
BIOLOGICAL RESOURCES TECHNICAL REPORT

Aquatic Resources

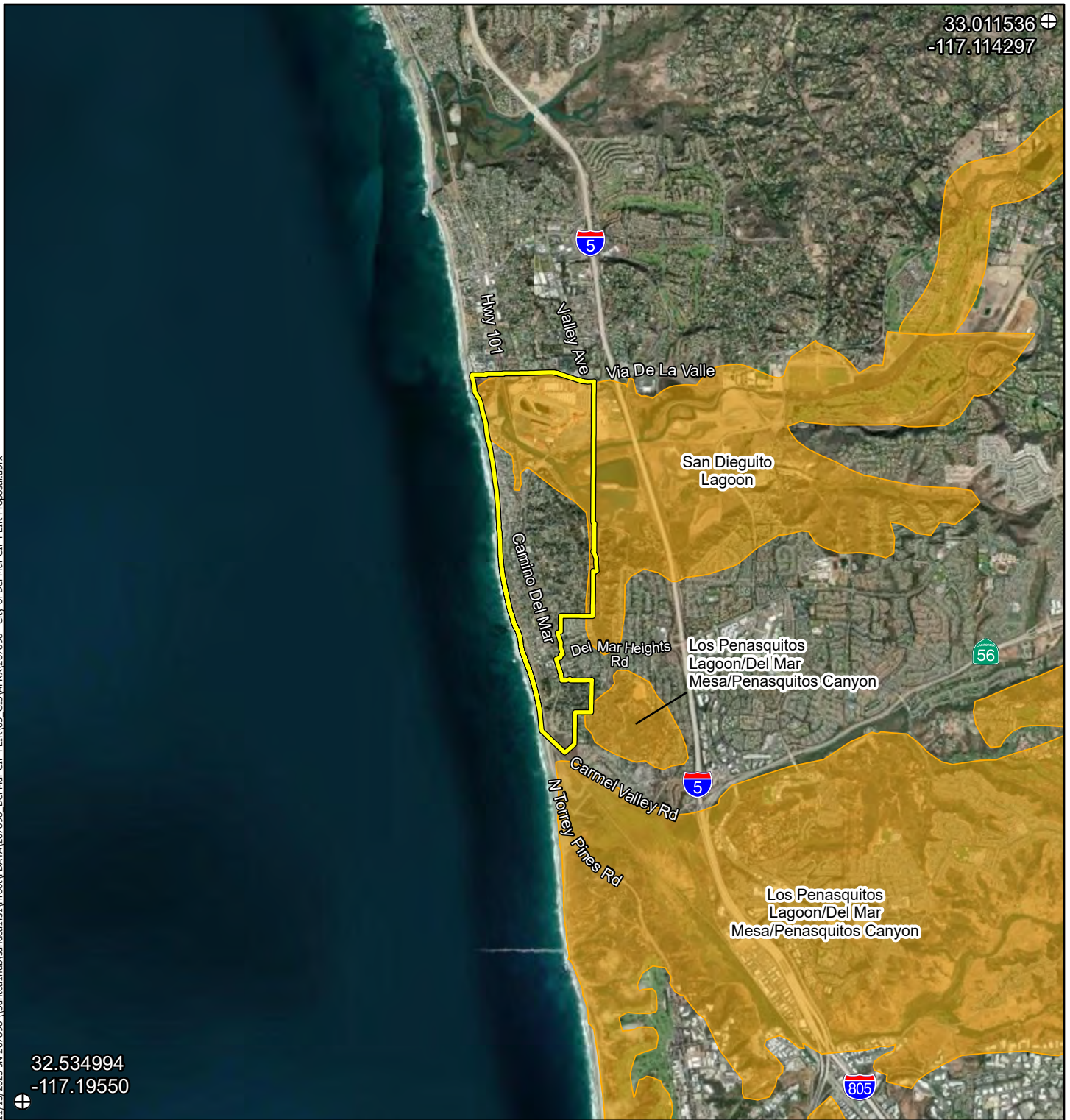
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Miles

Source: Esri, ArcGIS Online, USFWS, USGS, City of Del Mar, San Diego County

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-  Reference Point
-  Wildlife Corridors/Linkages
-  Project Site

CITY OF DEL MAR CIP STREAMLINING PROJECT
BIOLOGICAL RESOURCES TECHNICAL REPORT

Wildlife Corridors

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Source: Esri, ArcGIS Online, SANDAG, City of Del Mar, San Diego County

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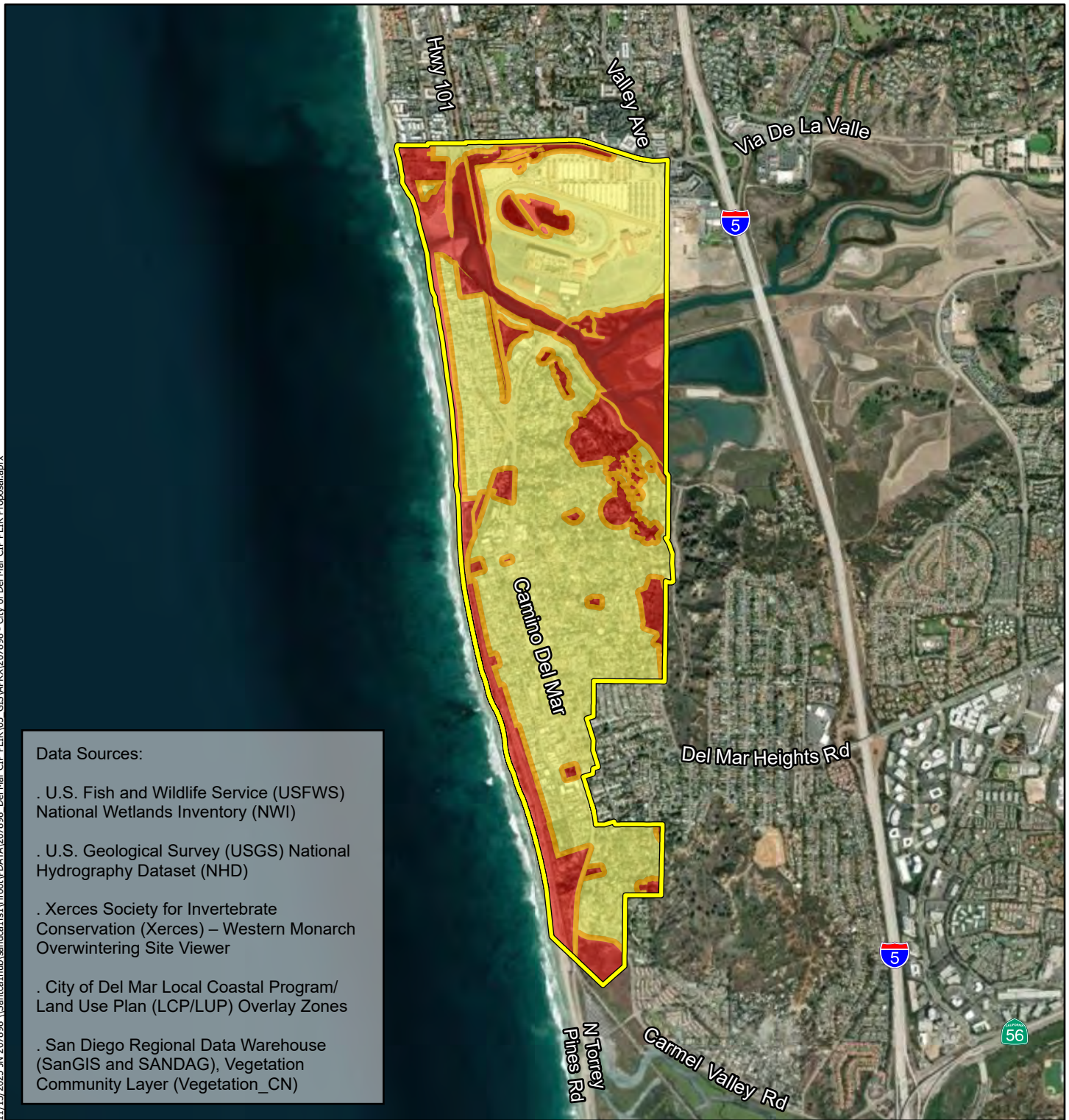
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|---------------------|---------------------------------------|-------------------------|
| Project Site | Beach Overlay Zone | Floodplain Overlay Zone |
| Lagoon Overlay Zone | Bluff, Slope, and Canyon Overlay Zone | |
| Coastal Bluffs | | |

CITY OF DEL MAR CIP STREAMLINING PROJECT
BIOLOGICAL RESOURCES TECHNICAL REPORT



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Data Sources:

- . U.S. Fish and Wildlife Service (USFWS) National Wetlands Inventory (NWI)
- . U.S. Geological Survey (USGS) National Hydrography Dataset (NHD)
- . Xerces Society for Invertebrate Conservation (Xerces) – Western Monarch Overwintering Site Viewer
- . City of Del Mar Local Coastal Program/ Land Use Plan (LCP/LUP) Overlay Zones
- . San Diego Regional Data Warehouse (SanGIS and SANDAG), Vegetation Community Layer (Vegetation_CN)

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Project Site

Biological Resources Sensitivity Zones



High Sensitivity Zone



Moderate Sensitivity Zone



Low Sensitivity Zone



ATTACHMENT B

**SPECIAL-STATUS SPECIES
POTENTIAL TO OCCUR TABLES**

SPECIAL-STATUS PLANT SPECIES WITH POTENTIAL TO OCCUR IN PROGRAM AREA

Scientific Name	Common Name	Status (Federal/State/CRPR/Other)	Primary Habitat Associations/ Life Form/Blooming Period/ Elevation Range (feet)	Potential to Occur
<i>Abronia maritima</i>	red sand- verbena	None/None/4.2/None	Coastal dunes/perennial herb/Feb–Nov/0–330	Expected to occur. There is a 2024 CNDDDB record in the San Dieguito Lagoon west of the race track, a 2013 Calflora record on a coastal bluff within the City, and a number of historical records within the areas of the San Dieguito Lagoon, Sea Grove Park, and Torrey Pines State Natural Reserve.
<i>Acanthomintha ilicifolia</i>	San Diego thorn-mint	FT/SE/1B.1/None	Chaparral, Coastal scrub, Valley and foothill grassland, Vernal pools; Clay, Openings/annual herb/Apr–June/35–3150	Not expected to occur. This species is primarily associated with vernal pools and clay soils, which are not known to occur within the City. The nearest known record occurs south of the City limits within the Torrey Pines State Natural Reserve.
<i>Acmispon prostratus</i>	Nuttall's acmispon	None/None/1B.1/None	Coastal dunes, Coastal scrub (sandy)/annual herb/Mar–June(July)/0–35	Moderate potential to occur. There is one historical location of this species within the City. Additionally, there are CNDDDB and Calflora records outside of the City, the closest of which is approximately 0.2 miles south of the City limits in the Torrey Pines State Natural Reserve.
<i>Adolphia californica</i>	California adolphia	None/None/2B.1/None	Chaparral, Coastal scrub, Valley and foothill grassland; Clay/perennial deciduous shrub/Dec–May/35–2430	Expected to occur. There is a 2018 Calflora record of this species within the northern portion of the City southeast of the intersection of Camino Del Mar and Via De La Valle.
<i>Agave shawii</i> var. <i>shawii</i>	Shaw's agave	None/None/2B.1/None	Coastal bluff scrub, Coastal scrub/perennial leaf/Sep–May/10–395	Moderate potential to occur. There are no known locations of this species within the City. However, there are CNDDDB and Calflora records outside of the City, the closest of which are approximately 1 mile south of the City limits in the Torrey Pines State Natural Reserve.
<i>Ambrosia monogyra</i>	singlewhorl burrobrush	None/None/2B.2/None	Chaparral, Sonoran desert scrub; Sandy/perennial shrub/Aug–Nov/35–1640	Moderate potential to occur. There are no known locations of this species within the City; however, potentially suitable habitat is present.

Scientific Name	Common Name	Status (Federal/State/CRPR/Other)	Primary Habitat Associations/ Life Form/Blooming Period/ Elevation Range (feet)	Potential to Occur
<i>Ambrosia pumila</i>	San Diego ambrosia	FE/None/1B.1/None	Chaparral, Coastal scrub, Valley and foothill grassland, Vernal pools; Alkaline (sometimes), Clay (sometimes), Disturbed areas (often), Loam (sometimes), Sandy (sometimes)/perennial rhizomatous herb/Apr–Oct/65–1360	Moderate potential to occur. There are no known locations of this species within the City; however, potentially suitable habitat is present.
<i>Aphanisma blitoides</i>	aphanisma	None/None/1B.2/None	Coastal bluff scrub, Coastal dunes, Coastal scrub; Gravelly (sometimes), Sandy (sometimes)/annual herb/Feb–June/5–1000	Moderate potential to occur. There are two historical locations of this species within the City. Additionally, there are recent CNDDDB and Calflora records outside of the City, the closest of which is approximately 1.6 miles south of the City limits in the Torrey Pines State Natural Reserve.
<i>Aphyllon parishii</i> <i>ssp. brachylobum</i>	short-lobed broomrape	None/None/4.2/None	Coastal bluff scrub, Coastal dunes, Coastal scrub; Sandy/annual/perennial herb (parasitic)/Apr–Oct/10–1000	Moderate potential to occur. There are no known locations of this species within the City; however, potentially suitable habitat is present, and there is one historical location south of the City in the Torrey Pines State Natural Reserve.
<i>Arctostaphylos glandulosa</i> <i>ssp. crassifolia</i>	Del Mar manzanita	FE/None/1B.1/None	Chaparral (maritime, sandy)/perennial evergreen shrub/June–Apr/0–1200	Expected to occur. There are records of this species from 2020 east of Camino Del Mar within the Torrey Pines State Natural Reserve Extension, Crest Canyon Open Space Park, and within residential areas north of the terminus of Crest Road.
<i>Artemisia palmeri</i>	San Diego sagewort	None/None/4.2/None	Chaparral, Coastal scrub, Riparian forest, Riparian scrub, Riparian woodland; Mesic, Sandy/perennial deciduous shrub/(Feb)May–Sep/15–3000	Moderate potential to occur. There are no known locations of this species within the City; however, potentially suitable habitat is present, and there are historical locations both north and south of the City.
<i>Asplenium vespertinum</i>	western spleenwort	None/None/4.2/None	Chaparral, Cismontane woodland, Coastal scrub; Rocky/perennial rhizomatous herb/Feb–June/590–3280	Not expected to occur. The study area is outside of the species' known elevation range.

Scientific Name	Common Name	Status (Federal/State/CRPR/Other)	Primary Habitat Associations/ Life Form/Blooming Period/ Elevation Range (feet)	Potential to Occur
<i>Astragalus tener</i> <i>var. titi</i>	coastal dunes milk-vetch	FE/SE/1B.1/None	Coastal bluff scrub (sandy), Coastal dunes, Coastal prairie (mesic); Mesic (often), Vernally Mesic (often)/annual herb/Mar– May/5–165	Not expected to occur. Known historically from two locations in San Diego County and is presumed extirpated due to heavy urbanization (USFWS 1998).
<i>Atriplex coulteri</i>	Coulter's saltbush	None/None/1B.2/None	Coastal bluff scrub, Coastal dunes, Coastal scrub, Valley and foothill grassland; Alkaline (sometimes), Clay (sometimes)/perennial herb/Mar–Oct/10–1510	Moderate potential to occur. There are no known locations of this species within the City; however, potentially suitable habitat is present. The closest known location is approximately 2.5 miles north within the San Elijo Lagoon and Ecological Reserve.
<i>Atriplex pacifica</i>	south coast saltscale	None/None/1B.2/None	Coastal bluff scrub, Coastal dunes, Coastal scrub, Playas/annual herb/Mar–Oct/0– 460	Moderate potential to occur. There are no known locations of this species within the City. However, there are CNDDDB and Calflora records outside of the City, the closest of which are 1 mile northeast north of Via del la Valle and 1.5 miles south in the Torrey Pines State Natural Reserve.
<i>Baccharis</i> <i>vanessae</i>	Encinitas baccharis	FT/SE/1B.1/None	Chaparral (maritime), Cismontane woodland; Sandstone/perennial deciduous shrub/Aug–Nov/195–2360	Moderate potential to occur. There are no known locations of this species within the City; however, potentially suitable habitat is present. There is one historical location east of the City limits within the southern portion of Crest Canyon Open Space Park and one 2019 location approximately 1.4 miles southeast labeled "Sorrento Hills."
<i>Bahiopsis laciniata</i>	San Diego County viguiera	None/None/4.3/None	Chaparral, Coastal scrub/perennial shrub/Feb– June(Aug)/195–2460	Expected to occur. There is one 2005 location of this species within the San Dieguito Lagoon Ecological Reserve portion of the City. The closest known location outside of the City is from 2018 approximately 0.2 miles south within the Torrey Pines State Natural Reserve.

Scientific Name	Common Name	Status (Federal/State/CRPR/Other)	Primary Habitat Associations/ Life Form/Blooming Period/ Elevation Range (feet)	Potential to Occur
<i>Berberis nevinii</i>	Nevin's barberry	FE/SE/1B.1/None	Chaparral, Cismontane woodland, Coastal scrub, Riparian scrub; Gravelly (sometimes), Sandy (sometimes)/perennial evergreen shrub/(Feb)Mar–June/230–2705	Moderate potential to occur. There are no known locations of this species within the City; however, potentially suitable habitat is present. The nearest known locations occur approximately 1.2 miles south of the City limits in the Torrey Pines Natural Reserve.
<i>Bergerocactus emoryi</i>	golden-spined cereus	None/None/2B.2/None	Chaparral, Closed-cone coniferous forest, Coastal scrub; Sandy/perennial stem/May–June/10–1295	Moderate potential to occur. There are no known locations of this species within the City; however, potentially suitable habitat is present. Historical locations occur approximately 1 mile south of the City limits within the Torrey Pines Natural Reserve.
<i>Bloomeria clevelandii</i>	San Diego goldenstar	None/None/1B.1/BLM-S	Chaparral, Coastal scrub, Valley and foothill grassland, Vernal pools; Clay/perennial bulbiferous herb/Apr–May/165–1525	Not expected to occur. This species is primarily associated with vernal pools and clay soils which are not known to occur within the City. The nearest known locations occur southeast of the City on Del Mar Mesa. There is also one historical location (1998) from Torrey Pines State Natural Reserve south of the City.
<i>Brodiaea filifolia</i>	thread-leaved brodiaea	FT/SE/1B.1/None	Chaparral (openings), Cismontane woodland, Coastal scrub, Playas, Valley and foothill grassland, Vernal pools; Clay (often)/perennial bulbiferous herb/Mar–June/80–3675	Not expected to occur. This species is primarily associated with vernal pools and clay soils which are not known to occur within the City. The nearest known locations occur more than 8 miles east on Black Mountain.
<i>Brodiaea orcuttii</i>	Orcutt's brodiaea	None/None/1B.1/BLM-S, USFS-S	Chaparral, Cismontane woodland, Closed-cone coniferous forest, Meadows and seeps, Valley and foothill grassland, Vernal pools; Clay, Mesic/perennial bulbiferous herb/May–July/100–5550	Not expected to occur. This species is primarily associated with vernal pools and clay soils which are not known to occur within the City. The nearest known location occurs approximately 2.4 miles southeast in the Carmel Mountain Reserve.

Scientific Name	Common Name	Status (Federal/State/CRPR/Other)	Primary Habitat Associations/ Life Form/Blooming Period/ Elevation Range (feet)	Potential to Occur
<i>Calandrinia breweri</i>	Brewer's calandrinia	None/None/4.2/None	Chaparral, Coastal scrub; Burned areas, Disturbed areas, Loam (sometimes), Sandy (sometimes)/annual herb/(Jan)Mar–June/35–4005	Moderate potential to occur. There are no known locations of this species within the City; however, potentially suitable habitat is present. The nearest known location occurs approximately 5 miles southeast of the City limits in the Los Peñasquitos Canyon Preserve.
<i>Calochortus plummerae</i>	Plummer's mariposa-lily	None/None/4.2/None	Chaparral, Cismontane woodland, Coastal scrub, Lower montane coniferous forest, Valley and foothill grassland; Granitic, Rocky/perennial bulbiferous herb/May–July/330–5580	Not expected to occur. This species is only known historically from one record in the Rancho Santa Fe USGS topographic quadrangle.
<i>Camissoniopsis lewisii</i>	Lewis' evening-primrose	None/None/3/None	Cismontane woodland, Coastal bluff scrub, Coastal dunes, Coastal scrub, Valley and foothill grassland; Clay (sometimes), Sandy (sometimes)/annual herb/Mar–May(June)/0–985	Moderate potential to occur. There are no known locations of this species within the City; however, potentially suitable habitat is present. The nearest known locations occur approximately 0.1 miles east of the City limits within San Dieguito Lagoon and 0.2 miles southeast in Torrey Pines State Natural Reserve Extension.
<i>Ceanothus cyaneus</i>	Lakeside ceanothus	None/None/1B.2/BLM-S, USFS-S	Chaparral, Closed-cone coniferous forest/perennial evergreen shrub/Apr–June/770–2475	Not expected to occur. The City is outside of the known elevation range of this species.
<i>Ceanothus otayensis</i>	Otay Mountain ceanothus	None/None/1B.2/BLM-S	Chaparral (gabbroic, metavolcanic)/perennial evergreen shrub/Jan–Apr/1970–3610	Not expected to occur. The City is outside of the known elevation range of this species.
<i>Ceanothus verrucosus</i>	wart-stemmed ceanothus	None/None/2B.2/None	Chaparral, Coastal scrub/perennial evergreen shrub/Dec–May/5–1245	Expected to occur. There are known locations of this species within the City, primarily within Crest Canyon Open Space Park and Torrey Pines State Natural Reserve Extension.

Scientific Name	Common Name	Status (Federal/State/CRPR/Other)	Primary Habitat Associations/ Life Form/Blooming Period/ Elevation Range (feet)	Potential to Occur
<i>Centromadia parryi</i> ssp. <i>australis</i>	southern tarplant	None/None/1B.1/None	Marshes and swamps (margins), Valley and foothill grassland (vernally mesic), Vernal pools/annual herb/May–Nov/0–1575	Expected to occur. There are known locations of this species within San Dieguito Lagoon Ecological Reserve in the northern portion of the City.
<i>Centromadia pungens</i> ssp. <i>laevis</i>	smooth tarplant	None/None/1B.1/None	Chenopod scrub, Meadows and seeps, Playas, Riparian woodland, Valley and foothill grassland; Alkaline/annual herb/Apr–Sep/0–2100	Not expected to occur due to the absence of suitable habitat within the City.
<i>Chaenactis glabriuscula</i> var. <i>orcuttiana</i>	Orcutt's pincushion	None/None/1B.1/None	Coastal bluff scrub (sandy), Coastal dunes/annual herb/Jan–Aug/0–330	Expected to occur. There are known locations of this species in open space areas in the southern portion of the City from Del Mar Canyon Preserve (Sunset Seat) to the southern City boundary and within Torrey Pines State Natural Reserve Extension.
<i>Chamaebatia australis</i>	southern mountain misery	None/None/4.2/None	Chaparral (gabbroic, metavolcanic)/perennial evergreen shrub/Nov–May/985–3345	Not expected to occur. The City is outside of the known elevation range of this species.
<i>Chloropyron maritimum</i> ssp. <i>maritimum</i>	salt marsh bird's-beak	FE/SE/1B.2/BLM-S	Coastal dunes, Marshes and swamps (coastal salt)/annual herb (hemiparasitic)/May–Oct(Nov)/0–100	Moderate potential to occur. There are no known locations of this species within the City. However, there is one Calflora record outside of the City within Torrey Pines State Natural Reserve.
<i>Chorizanthe orcuttiana</i>	Orcutt's spineflower	FE/SE/1B.1/None	Chaparral (maritime), Closed-cone coniferous forest, Coastal scrub; Openings, Sandy/annual herb/Mar–May/10–410	Expected to occur. There are known locations of this species just east of the City boundary within Crest Canyon Open Space Park and Torrey Pines State Natural Reserve Extension.
<i>Chorizanthe polygonoides</i> var. <i>longispina</i>	long-spined spineflower	None/None/1B.2/BLM-S	Chaparral, Coastal scrub, Meadows and seeps, Valley and foothill grassland, Vernal pools; Clay (often)/annual herb/Apr–July/100–5020	Not expected to occur. This species is primarily associated with meadows and vernal pools with clay soils which are not known to occur within the City. The nearest known locations occur approximately 1.5 miles south in the Torrey Pines State Natural Reserve.

Scientific Name	Common Name	Status (Federal/State/CRPR/Other)	Primary Habitat Associations/ Life Form/Blooming Period/ Elevation Range (feet)	Potential to Occur
<i>Cistanthe maritima</i>	seaside cistanthe	None/None/4.2/None	Coastal bluff scrub, Coastal scrub, Valley and foothill grassland; Sandy/annual herb/(Feb)Mar–June(Aug)/15–985	Moderate potential to occur. There are no known locations of this species within the City; however, potentially suitable habitat is present. The nearest known locations occur approximately 1 mile south of the City limits in the Torrey Pines State Natural Reserve.
<i>Clarkia delicata</i>	delicate clarkia	None/None/1B.2/BLM-S	Chaparral, Cismontane woodland; Gabbroic (often)/annual herb/Apr–June/770–3280	Not expected to occur. The City is outside of the known elevation range of this species.
<i>Comarostaphylis diversifolia</i> ssp. <i>diversifolia</i>	summer holly	None/None/1B.2/BLM-S	Chaparral, Cismontane woodland/perennial evergreen shrub/Apr–June/100–2590	Moderate potential to occur. There are no known locations of this species within the City; however, potentially suitable habitat is present. The nearest known locations occur just east of the City boundary within Crest Canyon Open Space Park.
<i>Convolvulus simulans</i>	small-flowered morning-glory	None/None/4.2/None	Chaparral (openings), Coastal scrub, Valley and foothill grassland; Clay, Seeps, Serpentine/annual herb/Mar–July/100–2430	Not expected to occur. This species is primarily associated with seeps and clay or serpentine soils which are not known to occur within the City. The nearest known locations occur more than 5 miles northeast in Lusardi Creek and southeast in Los Peñasquitos Creek watershed.
<i>Corethrogyne filaginifolia</i> var. <i>incana</i>	San Diego sand aster	None/None/1B.1/None	Chaparral, Coastal bluff scrub, Coastal scrub/perennial herb/June–Sep/10–375	Moderate potential to occur. There is one historical location of this species at the southern fringe of San Dieguito Lagoon just east of the City boundary within Crest Canyon Open Space Park.
<i>Corethrogyne filaginifolia</i> var. <i>linifolia</i>	Del Mar Mesa sand aster	None/None/1B.1/None	Chaparral (maritime, openings), Coastal bluff scrub, Coastal scrub; Sandy/perennial herb/May–Sep/15–490	Expected to occur. There are known locations of this species within Crest Canyon Open Space Park, Del Mar Canyon Preserve (Sunset Seat), and Torrey Pines State Natural Reserve Extension within the City limits.

Scientific Name	Common Name	Status (Federal/State/CRPR/Other)	Primary Habitat Associations/ Life Form/Blooming Period/ Elevation Range (feet)	Potential to Occur
<i>Cryptantha wigginsii</i>	Wiggins' cryptantha	None/None/1B.2/None	Coastal scrub; Clay (often)/annual herb/Feb–June/65–900	Not expected to occur. This species is primarily associated with clay soils which are not known to occur within the City. The nearest known location occurs approximately 3.5 miles northeast in the City of Encinitas.
<i>Cylindropuntia californica</i> var. <i>californica</i>	snake cholla	None/None/1B.1/BLM-S	Chaparral, Coastal scrub/perennial stem/Apr–May/100–490	Moderate potential to occur. There are no known locations of this species within the City; however, potentially suitable habitat is present. The nearest known location occurs approximately 6.5 miles northeast in Lusardi Creek.
<i>Dichondra occidentalis</i>	western dichondra	None/None/4.2/None	Chaparral, Cismontane woodland, Coastal scrub, Valley and foothill grassland/perennial rhizomatous herb/(Jan)Mar–July/165–1640	Moderate potential to occur. There are no known locations of this species within the City; however, potentially suitable habitat is present. The nearest known location occurs approximately 0.3 miles east in Torrey Pines State Natural Reserve Extension.
<i>Diplacus aridus</i>	low bush monkeyflower	None/None/4.3/None	Chaparral (rocky), Sonoran desert scrub/perennial evergreen shrub/Apr–July/2460–3935	Not expected to occur. The City is outside of the known elevation range of this species.
<i>Dudleya blochmaniae</i> ssp. <i>blochmaniae</i>	Blochman's dudleya	None/None/1B.1/None	Chaparral, Coastal bluff scrub, Coastal scrub, Valley and foothill grassland; Clay (often), Rocky, Serpentine/perennial herb/Apr–June/15–1475	Not expected to occur. This species is primarily associated with clay soils which are not known to occur within the City. The nearest known location occurs more than 15 miles north in the City of Oceanside.
<i>Dudleya brevifolia</i>	short-leaved dudleya	None/SE/1B.1/None	Chaparral (maritime, openings), Coastal scrub; Sandstone/perennial herb/Apr–May/100–820	Moderate potential to occur. There are no known locations of this species within the City; however, potentially suitable habitat is present. The nearest known locations are within Crest Canyon Open Space Park, Torrey Pines State Natural Reserve Extension, and Torrey Pines State Natural Reserve.

Scientific Name	Common Name	Status (Federal/State/CRPR/Other)	Primary Habitat Associations/ Life Form/Blooming Period/ Elevation Range (feet)	Potential to Occur
<i>Dudleya variegata</i>	variegated dudleya	None/None/1B.2/BLM-S	Chaparral, Cismontane woodland, Coastal scrub, Valley and foothill grassland, Vernal pools; Clay/perennial herb/Apr–June/10–1905	Not expected to occur. This species is primarily associated with vernal pools and clay soils which are not known to occur within the City. The nearest known locations occur more than 6 miles east on Black Mountain and in Los Peñasquitos Canyon.
<i>Dudleya viscida</i>	sticky dudleya	None/None/1B.2/BLM-S, USFS-S	Chaparral, Cismontane woodland, Coastal bluff scrub, Coastal scrub; Rocky/perennial herb/May–June/35–1805	Not expected to occur. Historically occurred in southern San Diego County; however, currently only known from north county near Oceanside and Camp Pendleton.
<i>Ericameria palmeri</i> <i>var. palmeri</i>	Palmer's goldenbush	None/None/1B.1/None	Chaparral, Coastal scrub; Mesic/perennial evergreen shrub/(July)Sep–Nov/100–1970	Moderate potential to occur. There are no known locations of this species within the City; however, potentially suitable habitat is present. The nearest known location is a historical record (1990) from Carmel Valley approximately 2 miles southeast of the City.
<i>Eriodictyon sessilifolium</i>	sessile-leaved yerba santa	None/None/2B.1/None	Coastal scrub; Volcanic/perennial shrub/July/560–560	Not expected to occur. This species is only known from one location in the County in the Mira Mesa area.
<i>Eryngium aristulatum</i> <i>var. parishii</i>	San Diego button-celery	FE/SE/1B.1/None	Coastal scrub, Valley and foothill grassland, Vernal pools; Mesic/annual/perennial herb/Apr–June/65–2035	Not expected to occur. This species is primarily associated with vernal pools which are not known to occur within the City. The nearest known locations occur southeast in Los Peñasquitos Canyon.
<i>Erysimum ammophilum</i>	sand-loving wallflower	None/None/1B.2/None	Chaparral (maritime), Coastal dunes, Coastal scrub; Openings, Sandy/perennial herb/Feb–June(July–Aug)/0–195	Moderate potential to occur. There are no known locations of this species within the City; however, potentially suitable habitat is present. The nearest known locations are within San Dieguito Lagoon, Crest Canyon Open Space Park, Torrey Pines State Natural Reserve Extension, and Torrey Pines State Natural Reserve.

Scientific Name	Common Name	Status (Federal/State/CRPR/Other)	Primary Habitat Associations/ Life Form/Blooming Period/ Elevation Range (feet)	Potential to Occur
<i>Erythranthe diffusa</i>	Palomar monkeyflower	None/None/4.3/None	Chaparral, Lower montane coniferous forest; Gravelly (sometimes), Sandy (sometimes)/annual herb/Apr–June/4005–6005	Not expected to occur. The City is outside of the known elevation range of this species.
<i>Euphorbia misera</i>	cliff spurge	None/None/2B.2/None	Coastal bluff scrub, Coastal scrub, Mojavean desert scrub; Rocky/perennial shrub/(Oct)Dec–Aug/35–1640	Moderate potential to occur. There are no known locations of this species within the City; however, potentially suitable habitat is present. The nearest known locations are in the Torrey Pines State Natural Reserve south of the City.
<i>Ferocactus viridescens</i>	San Diego barrel cactus	None/None/2B.1/None	Chaparral, Coastal scrub, Valley and foothill grassland, Vernal pools/perennial stem/May–June/10–1475	Moderate potential to occur. There is one historical record within the City and recent records within Crest Canyon Open Space Park, Torrey Pines State Natural Reserve Extension, and Torrey Pines State Natural Reserve.
<i>Geothallus tuberosus</i>	Campbell's liverwort	None/None/1B.1/None	Coastal scrub (mesic), Vernal pools/ephemeral liverwort/35–1970	Moderate potential to occur. There is a 2017 CNDDB record at the southern end of Crest Canyon Open Space Park east of the City.
<i>Githopsis diffusa ssp. filicaulis</i>	Mission Canyon bluecup	None/None/3.1/USFS-S	Chaparral (disturbed areas, mesic)/annual herb/Apr–June/1475–2295	Not expected to occur. The City is outside of the known elevation range of this species.
<i>Grindelia hallii</i>	San Diego gumplant	None/None/1B.2/BLM-S	Chaparral, Lower montane coniferous forest, Meadows and seeps, Valley and foothill grassland/perennial herb/May–Oct/605–5725	Not expected to occur. The City is outside of the known elevation range of this species.
<i>Harpagonella palmeri</i>	Palmer's grapplinghook	None/None/4.2/None	Chaparral, Coastal scrub, Valley and foothill grassland; Clay, Openings/annual herb/Mar–May/65–3135	Not expected to occur. This species is primarily associated with clay soils which are not present within the City. The nearest known location occurs within Torrey Pines State Natural Reserve south of the City.

Scientific Name	Common Name	Status (Federal/State/CRPR/Other)	Primary Habitat Associations/ Life Form/Blooming Period/ Elevation Range (feet)	Potential to Occur
<i>Hazardia orcuttii</i>	Orcutt's hazardia	None/ST/1B.1/None	Chaparral (maritime), Coastal scrub; Clay (often)/perennial evergreen shrub/Aug–Oct/260–280	Not expected to occur. This species is primarily associated with clay soils which are not present within the City. The nearest known location occurs to the north within San Elijo Lagoon and Ecological Reserve.
<i>Heterotheca sessiliflora</i> ssp. <i>sessiliflora</i>	beach goldenaster	None/None/1B.1/None	Chaparral (coastal), Coastal dunes, Coastal scrub/perennial herb/Mar–Dec/0–4020	Moderate potential to occur. There are no records documented within the City; however, there are records within Crest Canyon Open Space Park and Torrey Pines State Natural Reserve Extension just east of the City boundary.
<i>Holocarpha virgata</i> ssp. <i>elongata</i>	graceful tarplant	None/None/4.2/None	Chaparral, Cismontane woodland, Coastal scrub, Valley and foothill grassland/annual herb/May–Nov/195–3610	Moderate potential to occur. There are no known locations of this species within the City; however, potentially suitable habitat is present. The nearest known locations occur southeast of the City limits within Los Peñasquitos Canyon.
<i>Hordeum intercedens</i>	vernal barley	None/None/3.2/None	Coastal dunes, Coastal scrub, Valley and foothill grassland (depressions, saline flats), Vernal pools/annual herb/Mar–June/15–3280	Not expected to occur. This species is primarily associated with vernal pools which are not present within the City.
<i>Horkelia truncata</i>	Ramona horkelia	None/None/1B.3/BLM-S, USFS-S	Chaparral, Cismontane woodland; Clay, Gabbroic/perennial herb/May–June/1310–4265	Not expected to occur. The City is outside of the known elevation range of this species.
<i>Isocoma menziesii</i> var. <i>decumbens</i>	decumbent goldenbush	None/None/1B.2/BLM-S	Chaparral, Coastal scrub (often disturbed areas, sandy)/perennial shrub/Apr–Nov/35–820	Moderate potential to occur. There are no known locations of this species within the City; however, potentially suitable habitat is present. The nearest known location occurs south of the City limits within Torrey Pines State Natural Reserve.

Scientific Name	Common Name	Status (Federal/State/CRPR/Other)	Primary Habitat Associations/ Life Form/Blooming Period/ Elevation Range (feet)	Potential to Occur
<i>Iva hayesiana</i>	San Diego marsh-elder	None/None/2B.2/None	Marshes and swamps, Playas/perennial herb/Apr–Oct/0–1640	Moderate potential to occur. There are no known locations of this species within the City; however, potentially suitable habitat is present. The nearest known historical (1994) location occurs within the San Dieguito River east of the City and current records occur in Los Peñasquitos Canyon.
<i>Juglans californica</i>	Southern California black walnut	None/None/4.2/None	Chaparral, Cismontane woodland, Coastal scrub, Riparian woodland/perennial deciduous tree/Mar–Aug/165–2955	Moderate potential to occur. There are no known locations of this species within the City; however, potentially suitable habitat is present.
<i>Juncus acutus ssp. leopoldii</i>	southwestern spiny rush	None/None/4.2/None	Coastal dunes (mesic), Coastal scrub, Marshes and swamps (coastal salt), Meadows and seeps (alkaline seeps)/perennial rhizomatous herb/(Mar)May–June/10–2955	Moderate potential to occur. There is a 2009 CNDDB record within open space just south of the City's southern boundary.
<i>Lasthenia glabrata ssp. coulteri</i>	Coulter's goldfields	None/None/1B.1/BLM-S	Marshes and swamps (coastal salt), Playas, Vernal pools/annual herb/Feb–June/5–4005	Moderate potential to occur. There are no known locations of this species within the City; however, potentially suitable habitat is present. Historical records occur within San Dieguito Lagoon and Peñasquitos Lagoon.
<i>Lathyrus splendens</i>	pride-of-California	None/None/4.3/None	Chaparral/perennial herb/Mar–June/655–5005	Not expected to occur. The City is outside of the known elevation range of this species.
<i>Lepechinia cardiophylla</i>	heart-leaved pitcher sage	None/None/1B.2/USFS-S	Chaparral, Cismontane woodland, Closed-cone coniferous forest/perennial shrub/Apr–July/1705–4495	Not expected to occur. The City is outside of the known elevation range of this species.

Scientific Name	Common Name	Status (Federal/State/CRPR/Other)	Primary Habitat Associations/ Life Form/Blooming Period/ Elevation Range (feet)	Potential to Occur
<i>Lepidium virginicum</i> var. <i>robinsonii</i>	Robinson's pepper-grass	None/None/4.3/None	Chaparral, Coastal scrub/annual herb/Jan–July/5–2905	Moderate potential to occur. There are no known locations of this species within the City; however, potentially suitable habitat is present. The nearest known records occur north in San Elijo Lagoon, east in Gonzales Canyon Open Space Preserve, and south in Torrey Pines State Natural Reserve.
<i>Leptosyne maritima</i>	sea dahlia	None/None/2B.2/None	Coastal bluff scrub, Coastal scrub/perennial herb/Mar–May/15–490	Expected to occur. There are records of this species along the City's coastal bluffs and within Crest Canyon Open Space Park and Torrey Pines State Natural Reserve Extension.
<i>Lycium californicum</i>	California box-thorn	None/None/4.2/None	Coastal bluff scrub, Coastal scrub/perennial shrub/Mar–Aug(Dec)/15–490	Expected to occur. There are records of this species within the City's coastal bluffs (Calflora n.d., iNaturalist n.d.).
<i>Microseris douglasii</i> ssp. <i>platycarpa</i>	small-flowered microseris	None/None/4.2/None	Cismontane woodland, Coastal scrub, Valley and foothill grassland, Occurs usually in non-wetlands/annual herb/Mar–May/50–3510	Moderate potential to occur. There are no known locations of this species within the City; however, potentially suitable habitat is present. The nearest known records occur to the south in Torrey Pines State Natural Reserve.
<i>Mobergia calculiformis</i>	light gray lichen	None/None/3/None	Coastal scrub (?)/crustose lichen (saxicolous)/35–35	Not expected to occur. Although potentially suitable habitat is present, this species is ranked possibly extirpated from California.
<i>Monardella hypoleuca</i> ssp. <i>lanata</i>	felt-leaved monardella	None/None/1B.2/BLM-S, USFS-S	Chaparral, Cismontane woodland/perennial rhizomatous herb/June–Aug/985–5170	Not expected to occur. The City is outside of the known elevation range of this species.
<i>Monardella viminea</i>	willowy monardella	FE/SE/1B.1/None	Chaparral, Coastal scrub, Riparian forest, Riparian scrub, Riparian woodland; Alluvial Terraces, Washes/perennial herb/June–Aug/165–740	Moderate potential to occur. There are no known locations of this species within the City; however, potentially suitable habitat is present. The nearest known records occur approximately 5 miles southeast in Lopez Canyon.
<i>Myosurus minimus</i> ssp. <i>apus</i>	little mouseltail	None/None/3.1/None	Valley and foothill grassland, Vernal pools (alkaline)/annual herb/Mar–June/65–2100	Not expected to occur. This species is primarily associated with vernal pools which are not present within the City.

Scientific Name	Common Name	Status (Federal/State/CRPR/Other)	Primary Habitat Associations/ Life Form/Blooming Period/ Elevation Range (feet)	Potential to Occur
<i>Navarretia fossalis</i>	spreading navarretia	FT/None/1B.1/None	Chenopod scrub, Marshes and swamps (shallow freshwater), Playas, Vernal pools/annual herb/Apr–June/100–2150	Not expected to occur. This species is primarily associated with vernal pools which are not present within the City.
<i>Navarretia prostrata</i>	prostrate vernal pool navarretia	None/None/1B.2/None	Coastal scrub, Meadows and seeps, Valley and foothill grassland (alkaline), Vernal pools; Mesic/annual herb/Apr–July/10–3970	Not expected to occur. This species is primarily associated with vernal pools which are not present within the City.
<i>Nemacaulis denudata</i> var. <i>denudata</i>	coast woolly-heads	None/None/1B.2/None	Coastal dunes/annual herb/Apr–Sep/0–330	Moderate potential to occur. There are records of this species in San Dieguito Lagoon east of the City boundary and Peñasquitos Lagoon south of the City boundary.
<i>Ophioglossum californicum</i>	California adder's-tongue	None/None/4.2/None	Chaparral, Valley and foothill grassland, Vernal pools (margins); Mesic/perennial rhizomatous herb/Jan–June(Dec)/195–1725	Not expected to occur. This species is primarily associated with vernal pools which are not present within the City.
<i>Orcuttia californica</i>	California Orcutt grass	FE/SE/1B.1/None	Vernal pools/annual herb/Apr–Aug/50–2165	Not expected to occur. This species is primarily associated with vernal pools which are not present within the City.
<i>Pentachaeta aurea</i> ssp. <i>aurea</i>	golden-rayed pentachaeta	None/None/4.2/None	Chaparral, Cismontane woodland, Coastal scrub, Lower montane coniferous forest, Riparian woodland, Valley and foothill grassland/annual herb/Mar–July/260–6070	Moderate potential to occur. There are no known locations of this species within the City; however, potentially suitable habitat is present. The nearest known records occur approximately 6 miles east in Del Mar Mesa Preserve and southeast in Los Peñasquitos Canyon.
<i>Phacelia ramosissima</i> var. <i>austrolitoralis</i>	south coast branching phacelia	None/None/3.2/None	Chaparral, Coastal dunes, Coastal scrub, Marshes and swamps (coastal salt); Rocky (sometimes), Sandy/perennial herb/Mar–Aug/15–985	Expected to occur. There is at least one record documented within open space in the southern portion of the City. Additional records occur within San Dieguito Lagoon, Crest Canyon Open Space Park, and Torrey Pines State Natural Reserve.

Scientific Name	Common Name	Status (Federal/State/CRPR/Other)	Primary Habitat Associations/ Life Form/Blooming Period/ Elevation Range (feet)	Potential to Occur
<i>Phacelia stellaris</i>	Brand's star phacelia	None/None/1B.1/None	Coastal dunes, Coastal scrub/annual herb/Mar–June/5–1310	Moderate potential to occur. There is a 1998 record of this species occurring in the Torrey Pines State Natural Reserve approximately 1.5 miles to the south.
<i>Pinus torreyana</i> <i>ssp. torreyana</i>	Torrey pine	None/None/1B.2/None	Chaparral, Closed-cone coniferous forest; Sandstone/perennial evergreen tree/100–525	Expected to occur. There are recent records of this species in Crest Canyon Open Space Park, Torrey Pines State Natural Reserve Extension, and Del Mar Canyon Preserve (Sunset Seat).
<i>Piperia cooperi</i>	chaparral rein orchid	None/None/4.2/None	Chaparral, Cismontane woodland, Valley and foothill grassland/perennial herb/Mar–June/50–5200	Moderate potential to occur. There are recent records of this species in the areas surrounding the City boundary, and one historic (1894) record within the City.
<i>Pogogyne abramsii</i>	San Diego mesa mint	FE/SE/1B.1/None	Vernal pools/annual herb/Mar–July/295–655	Not expected to occur. This species is primarily associated with vernal pools which are not present within the City.
<i>Pogogyne nudiusscula</i>	Otay Mesa mint	FE/SE/1B.1/None	Vernal pools/annual herb/May–July/295–820	Not expected to occur. This species is primarily associated with vernal pools which are not present within the City.
<i>Quercus dumosa</i>	Nuttall's scrub oak	None/None/1B.1/BLM-S, USFS-S	Chaparral, Closed-cone coniferous forest, Coastal scrub; Clay, Loam, Sandy/perennial evergreen shrub/Feb–Apr(May–Aug)/50–1310	Moderate potential to occur. There are several records of this species occurring in areas just outside the City boundary, including one area that may overlap with open space in the City. Feasible for acorns to be carried into the City boundary if not already present.
<i>Quercus engelmannii</i>	Engelmann oak	None/None/4.2/None	Chaparral, Cismontane woodland, Riparian woodland, Valley and foothill grassland/perennial deciduous tree/Mar–June/165–4265	Moderate potential to occur. There are several recent records of this species to the south in the Los Peñasquitos Canyon area.

Scientific Name	Common Name	Status (Federal/State/CRPR/Other)	Primary Habitat Associations/ Life Form/Blooming Period/ Elevation Range (feet)	Potential to Occur
<i>Rupertia rigida</i>	Parish's rupertia	None/None/4.3/None	Chaparral, Cismontane woodland, Lower montane coniferous forest, Meadows and seeps, Pebble (Pavement) plain, Valley and foothill grassland/perennial herb/June–Aug/2295–8205	Not expected to occur. The City is outside of the known elevation range of this species.
<i>Salvia munzii</i>	Munz's sage	None/None/2B.2/None	Chaparral, Coastal scrub/perennial evergreen shrub/Feb–Apr/375–3495	Not expected to occur. Perhaps because of its elevation range, nearly all known records of this species in the area are well inland away from the City boundary.
<i>Selaginella cinerascens</i>	ashy spike-moss	None/None/4.1/None	Chaparral, Coastal scrub/perennial rhizomatous herb/65–2100	Moderate potential to occur. There are numerous recent records just outside the City boundary within the Crest Canyon Open Space and Torrey Pines State Natural Reserve Extension.
<i>Senecio aphanactis</i>	chaparral ragwort	None/None/2B.2/None	Chaparral, Cismontane woodland, Coastal scrub; Alkaline (sometimes)/annual herb/Jan–Apr(May)/50–2625	Moderate potential to occur. There is a historical (19th century) record within the City boundaries but also a 2025 record approximately 2.25 miles southeast of the City in the open space outside Torrey View Estates.
<i>Sidalcea neomexicana</i>	salt spring checkerbloom	None/None/2B.2/USFS-S	Chaparral, Coastal scrub, Lower montane coniferous forest, Mojavean desert scrub, Playas; Alkaline, Mesic/perennial herb/Mar–June/50–5020	Not expected to occur. The only known occurrence in the vicinity is approximately 5 miles away from over 60 years ago.
<i>Sphaerocarpos drewiae</i>	bottle liverwort	None/None/1B.1/None	Chaparral, Coastal scrub; Openings/ephemeral liverwort/295–1970	Moderate potential to occur. There is a recent occurrence within the Crest Canyon Open Space just outside the City boundary.
<i>Stemodia durantifolia</i>	purple stemodia	None/None/2B.1/None	Sonoran desert scrub (often mesic, sandy)/perennial herb/(Jan)Apr–Dec/590–985	Not expected to occur. The city is outside of the known elevation range of this species and there is no suitable habitat.

Scientific Name	Common Name	Status (Federal/State/CRPR/Other)	Primary Habitat Associations/ Life Form/Blooming Period/ Elevation Range (feet)	Potential to Occur
<i>Stipa diegoensis</i>	San Diego County needle grass	None/None/4.2/None	Chaparral, Coastal scrub; Mesic (often), Rocky/perennial herb/Feb–June/35–2625	Moderate potential to occur. There are no known locations of this species within the City; however, potentially suitable habitat is present. The nearest locations are outside of the City in the Arroyo Sorrento Open Space and Carmel Valley Open Space.
<i>Stylocline citroleum</i>	oil neststraw	None/None/1B.1/BLM-S	Chenopod scrub, Coastal scrub, Valley and foothill grassland; Clay/annual herb/Mar–Apr/165– 1310	Not expected to occur. The only occurrence in the general vicinity is from the 1800s.
<i>Suaeda esteroa</i>	estuary seablite	None/None/1B.2/None	Marshes and swamps (coastal salt)/perennial herb/(Jan– May)July–Oct/0–15	Expected to occur. There is a recent record of approximately 1000 individuals of this species within the San Dieguito Lagoon.
<i>Suaeda taxifolia</i>	woolly seablite	None/None/4.2/None	Coastal bluff scrub, Coastal dunes, Marshes and swamps (coastal margins)/perennial evergreen shrub/Jan–Dec/0–165	Expected to occur. There is a recent record of this species within the San Dieguito Lagoon.
<i>Texosporium sancti-jacobi</i>	woven-spored lichen	None/None/3/None	Chaparral (openings)/crustose lichen (terricolous)/195–2165	Not expected to occur due to the absence of suitable habitat within the City.
<i>Xanthisma junceum</i>	rush-like bristleweed	None/None/4.3/None	Chaparral, Coastal scrub/perennial herb/Jan– Oct/785–3280	Not expected to occur. The City is outside of the known elevation range of this species.

Status Legend:

Federal

FE: Federally listed as endangered
FT: Federally listed as threatened
FPE: Federally proposed for listing as endangered
FPT: Federally proposed for listing as threatened
FC: Federal candidate species (former Category 1 candidates)
None: No federal listing
FDL: Delisted

State

SE: State listed as endangered
ST: State listed as threatened
SR: State rare
SCE: State candidate for listing as endangered
SCT: State candidate for listing as threatened
None: No state listing
SDL: State delisting

Other

CBR: Considered but rejected
CRPR 1A: Plants presumed extirpated in California and either rare or extinct elsewhere
CRPR 1B: Plants rare, threatened, or endangered in California and elsewhere
CRPR 2A: Plants presumed extirpated in California but common elsewhere
CRPR 2B: Plants rare, threatened, or endangered in California but more common elsewhere
CRPR 3: Review List: Plants about which more information is needed
CRPR 4: Watch List: Plants of limited distribution
.1 Seriously threatened in California (over 80% of occurrences threatened / high degree and immediacy of threat)
.2 Moderately threatened in California (20–80% occurrences threatened / moderate degree and immediacy of threat)
.3 Not very threatened in California (<20% of occurrences threatened / low degree and immediacy of threat or no current threats known)

SPECIAL-STATUS ANIMAL SPECIES WITH POTENTIAL TO OCCUR IN PROGRAM AREA

Scientific Name	Common Name	Status Federal/State/Other	Habitats	Potential to Occur
Amphibians				
<i>Spea hammondi</i>	western spadefoot	FPT / None / BLM-S, CDFW-SSC	Cismontane woodland Coastal scrub Valley & foothill grassland Vernal pool Wetland; Occurs primarily in grassland habitats, but can be found in valley-foothill hardwood woodlands.	Expected. An adult was observed in 2016 on the edge of City boundaries and there is a small ephemeral pond within 100 feet of the sighting.
Birds				
<i>Agelaius tricolor</i>	tricolored blackbird	None / ST / BLM-S, CDFW-SSC	Freshwater marsh Marsh & swamp Swamp Wetland; Highly colonial species, most numerous in Central Valley and vicinity. Largely endemic to California.	Moderate. This species is known to occur along the San Dieguito River upstream of the City boundaries where in-stream riparian habitat and/or upland agricultural habitat is present.
<i>Athene cunicularia</i>	burrowing owl	None / SCE / BLM-S, CDFW-SSC	Coastal prairie Coastal scrub Great Basin grassland Great Basin scrub Mojavean desert scrub Sonoran desert scrub Valley & foothill grassland; Open, dry annual or perennial grasslands, deserts, and scrublands characterized by low-growing vegetation.	Not expected to occur. Suitable habitat is generally not present within the City boundaries but birds may occasionally occur during winter in open space areas like San Dieguito Lagoon.
<i>Buteo swainsoni</i>	Swainson's hawk	None / ST / BLM-S	Great Basin grassland Riparian forest Riparian woodland Valley & foothill grassland; Breeds in grasslands with scattered trees, juniper-sage flats, riparian areas, savannahs, and agricultural or ranch lands with groves or lines of trees.	Not expected to occur. May occasionally fly over the City during migration but not expected to nest.
<i>Campylorhynchus brunneicapillus sandiegensis</i>	coastal cactus wren	None / None / CDFW-SSC, USFS-S	Coastal scrub; Southern California coastal sage scrub.	Not expected to occur. There is no suitable habitat.

Scientific Name	Common Name	Status Federal/State/Other	Habitats	Potential to Occur
<i>Charadrius alexandrinus nivosus</i>	western snowy plover	FT / None / CDFW-SSC	Great Basin standing waters Sand shore Wetland; Sandy beaches, salt pond levees and shores of large alkali lakes.	Expected. This species is expected to occur in small numbers within San Dieguito Lagoon.
<i>Coccyzus americanus occidentalis</i>	western yellow-billed cuckoo	FT / SE / BLM-S, USFS-S	Riparian forest; Riparian forest nester, along the broad, lower flood-bottoms of larger river systems.	Not expected to occur. There is no suitable habitat.
<i>Elanus leucurus</i>	white-tailed kite	None / None / BLM-S, CDFW-FP	Cismontane woodland Marsh & swamp Riparian woodland Valley & foothill grassland Wetland; Rolling foothills and valley margins with scattered oaks and river bottomlands or marshes next to deciduous woodland.	Expected. This species is regularly reported in the San Dieguito Lagoon.
<i>Empidonax traillii extimus</i>	southwestern willow flycatcher	FE / SE / None	Riparian woodland; Riparian woodlands in Southern California.	Not expected to occur. There is no suitable habitat.
<i>Icteria virens</i>	yellow-breasted chat	None / None / CDFW-SSC	Riparian forest Riparian scrub Riparian woodland; Summer resident; inhabits riparian thickets of willow and other brushy tangles near watercourses.	Expected. This species is regularly reported in San Dieguito Lagoon.
<i>Ixobrychus exilis</i>	least bittern	None / None / CDFW-SSC	Marsh & swamp Wetland; Colonial nester in marshlands and borders of ponds and reservoirs which provide ample cover.	Not expected to occur. There is no suitable habitat.
<i>Laterallus jamaicensis coturniculus</i>	California black rail	None / ST / BLM-S, CDFW-FP	Brackish marsh Freshwater marsh Marsh & swamp Salt marsh Wetland; Inhabits freshwater marshes, wet meadows and shallow margins of saltwater marshes bordering larger bays.	Not expected to occur. The City is well outside of this species' range.
<i>Passerculus sandwichensis beldingi</i>	Belding's savannah sparrow	None / SE / None	Marsh & swamp Wetland; Inhabits coastal salt marshes, from Santa Barbara south through San Diego County.	Expected. This species is well known to occur in San Dieguito Lagoon.

Scientific Name	Common Name	Status Federal/State/Other	Habitats	Potential to Occur
<i>Phoebastria albatrus</i>	short-tailed albatross	FE / None / CDFW-SSC	Nests on isolated, windswept islands of the western Pacific; extremely rare in migration offshore along the California coast	Not expected to occur. The City is well outside of this species' range.
<i>Polioptila californica californica</i>	coastal California gnatcatcher	FT / None / CDFW-SSC	Coastal bluff scrub Coastal scrub; Obligate, permanent resident of coastal sage scrub below 2500 ft in Southern California.	Expected. This species is widespread within suitable habitat in the City.
<i>Rallus obsoletus levipes</i>	light-footed Ridgway's rail	FE / SE / CDFW-FP	Marsh & swamp Salt marsh Wetland; Found in salt marshes traversed by tidal sloughs, where cordgrass and pickleweed are the dominant vegetation.	Expected. The San Dieguito River Valley in general supports a large population of this species.
<i>Setophaga petechia</i>	yellow warbler	None / None / CDFW-SSC	Riparian forest Riparian scrub Riparian woodland; Riparian plant associations in close proximity to water. Also nests in montane shrubbery in open conifer forests in Cascades and Sierra Nevada.	Expected. This species is expected to occur during migration and during the summer in suitable habitat.
<i>Sternula antillarum browni</i>	California least tern	FE / SE / CDFW-FP	Alkali playa Wetland; Nests along the coast from San Francisco Bay south to northern Baja California.	Expected. This species is regularly reported in San Dieguito Lagoon.
<i>Vireo bellii pusillus</i>	least Bell's vireo	FE / SE / None	Riparian forest Riparian scrub Riparian woodland; Summer resident of Southern California in low riparian in vicinity of water or in dry river bottoms; below 2000 ft.	Not expected to occur except during migration or accidentally. There is no suitable habitat.
Invertebrates				
<i>Bombus crotchii</i>	Crotch's bumble bee	None / SCE / None	Open grassland, scrub communities, or developed areas supporting suitable floral resources. Coastal California east to the Sierra-Cascade crest and south into Mexico.	Moderate. There is limited undisturbed habitat within the City. However, there are records of this species throughout San Diego County (Bumble Bee Watch n.d.), some of which are within developed areas. There is one 2024 record approximately two miles east of the city boundary within the Gonzales Canyon Open Space Park (iNaturalist n.d.).

Scientific Name	Common Name	Status Federal/State/Other	Habitats	Potential to Occur
<i>Branchinecta sandiegonensis</i>	San Diego fairy shrimp	FE / None / None	Chaparral Coastal scrub Vernal pool Wetland; Endemic to San Diego and Orange County mesas.	Not expected to occur. There is no suitable habitat.
<i>Danaus plexippus plexippus</i>	monarch - California overwintering population	FPT / None / USFS-S	Closed-cone coniferous forest; Winter roost sites extend along the coast from northern Mendocino to Baja California, Mexico.	Expected. Migrating individuals are expected to occur throughout the City. However, there is moderate potential for overwintering. There are three known roosts within the City's boundaries, one of which has been inactive since 1997. The other two are still active in the 2020s, albeit with low numbers (Xerces 2025).
<i>Euphydryas editha quino</i>	quino checkerspot butterfly	FE / SCE / None	Chaparral Coastal scrub; Sunny openings within chaparral and coastal sage shrublands in parts of Riverside and San Diego counties.	Not expected to occur. The City is outside the species' current known range and lacks suitable habitat conditions (open scrub/grassland structure). Urbanization and coastal development have eliminated historical habitat in this area.
<i>Lycaena hermes</i>	Hermes copper butterfly	FT / None / USFS-S	Chaparral Coastal scrub; Found in southern mixed chaparral and coastal sage scrub at western edge of Laguna Mountains.	Not expected to occur. The City is well outside of this species' range.
<i>Streptocephalus woottoni</i>	Riverside fairy shrimp	FE / None / None	Coastal scrub Valley & foothill grassland Vernal pool Wetland; Endemic to Western Riverside, Orange, and San Diego counties in areas of tectonic swales/earth slump basins in grassland and coastal sage scrub.	Not expected to occur. There is no suitable habitat.

Scientific Name	Common Name	Status Federal/State/Other	Habitats	Potential to Occur
Mammals				
<i>Antrozous pallidus</i>	pallid bat	None / None / BLM-S, CDFW-SSC, USFS-S	Chaparral Coastal scrub Desert wash Great Basin grassland Great Basin scrub Mojavean desert scrub Riparian woodland Sonoran desert scrub Upper montane coniferous forest Valley & foothill grassland; Deserts, grasslands, shrublands, woodlands and forests. Most common in open, dry habitats with rocky areas for roosting.	Moderate. There is no suitable roosting habitat. May forage over the San Dieguito Lagoon.
<i>Chaetodipus californicus femoralis</i>	Dulzura pocket mouse	None / None / CDFW-SSC	Chaparral Coastal scrub Valley & foothill grassland; Variety of habitats including coastal scrub, chaparral, and grassland primarily in San Diego County.	Moderate. The City is within the species' range and there is suitable habitat present, but there are no known records in the immediate vicinity.
<i>Chaetodipus fallax fallax</i>	northwestern San Diego pocket mouse	None / None / CDFW-SSC	Coastal scrub, chaparral, grasslands, sagebrush, etc. in western San Diego, Riverside, San Bernardino, and Los Angeles Counties, inclusive of Orange County.	Expected. The City is within the species' range and there is suitable habitat present, as well as a known population immediately outside the City boundaries in the San Dieguito Valley.
<i>Choeronycteris mexicana</i>	Mexican long-tongued bat	None / None / CDFW-SSC	Pinon & juniper woodlands Riparian scrub Sonoran thorn woodland; Occasionally found in San Diego County, which is on the periphery of their range.	Not expected to occur. There is no suitable habitat.

Scientific Name	Common Name	Status Federal/State/Other	Habitats	Potential to Occur
<i>Corynorhinus townsendii</i>	Townsend's big-eared bat	None / None / BLM-S, CDFW-SSC, USFS-S	Broadleaved upland forest Chaparral Chenopod scrub Great Basin grassland Great Basin scrub Joshua tree woodland Lower montane coniferous forest Meadow & seep Mojavean desert scrub Riparian forest Riparian woodland Sonoran desert scrub; Throughout California in a wide variety of habitats. Most common in mesic sites.	Moderate. The City is within the species' range and there is suitable habitat present, but there are no known records in the immediate vicinity.
<i>Euderma maculatum</i>	spotted bat	None / None / BLM-S, CDFW-SSC	Foothills, mountains, desert regions of southern California, including arid deserts, grasslands, and mixed-conifer forests; roosts in rock crevices and cliffs; feeds over water and along washes; Occupies a wide variety of habitats from arid deserts and grasslands through mixed conifer forests.	Moderate. There is no suitable roosting habitat. May forage over the San Dieguito Lagoon.
<i>Eumops perotis californicus</i>	western mastiff bat	None / None / BLM-S, CDFW-SSC	Chaparral Cismontane woodland Coastal scrub Valley & foothill grassland; Many open, semi-arid to arid habitats, including conifer and deciduous woodlands, coastal scrub, grasslands, chaparral, etc.	Moderate. The City is within the species' range and there is suitable habitat present, but there are no known records in the immediate vicinity.
<i>Lasiurus frantzii</i>	western red bat	None / None / CDFW-SSC	Cismontane woodland Lower montane coniferous forest Riparian forest Riparian woodland; Roosts primarily in trees, 2-40 ft above ground, from sea level up through mixed conifer forests.	Not expected to occur. There is no suitable habitat.
<i>Lasiurus xanthinus</i>	western yellow bat	None / None / CDFW-SSC	Desert wash; Found in valley foothill riparian, desert riparian, desert wash, and palm oasis habitats.	Not expected to occur. There is no suitable habitat.

Scientific Name	Common Name	Status Federal/State/Other	Habitats	Potential to Occur
<i>Myotis yumanensis</i>	Yuma myotis	None / None / BLM-S	Lower montane coniferous forest Riparian forest Riparian woodland Upper montane coniferous forest; Optimal habitats are open forests and woodlands with sources of water over which to feed.	Moderate. There is no suitable roosting habitat. May forage over the San Dieguito Lagoon.
<i>Neotoma lepida intermedia</i>	San Diego desert woodrat	None / None / CDFW-SSC	Coastal scrub of Southern California from San Diego County to San Luis Obispo County.	Expected. This species has been historically present in the San Dieguito River Valley and there are numerous other records in the general vicinity of the City.
<i>Nyctinomops femorosaccus</i>	pocketed free-tailed bat	None / None / CDFW-SSC	Joshua tree woodland Pinon & juniper woodlands Riparian scrub Sonoran desert scrub; Variety of arid areas in Southern California; pine-juniper woodlands, desert scrub, palm oasis, desert wash, desert riparian, etc.	Expected. A historical known day roost is present in Del Mar. It is unknown if this roost is still active.
<i>Nyctinomops macrotis</i>	big free-tailed bat	None / None / CDFW-SSC	Rocky areas; roosts in caves, holes in trees, buildings, and crevices on cliffs and rocky outcrops; forages over water ; Low-lying arid areas in Southern California.	Moderate. There is no suitable roosting habitat. May forage over the San Dieguito Lagoon.
<i>Perognathus longimembris pacificus</i>	Pacific pocket mouse	FE / None / CDFW-SSC	Coastal scrub; Inhabits the narrow coastal plains from the Mexican border north to El Segundo, Los Angeles County.	Not expected to occur. This species is only known from three distinct populations, none of which are near the City of Del Mar.

Scientific Name	Common Name	Status Federal/State/Other	Habitats	Potential to Occur
<i>Taxidea taxus</i>	American badger	None / None / CDFW-SSC	Alkali marsh Alkali playa Alpine Alpine dwarf scrub Bog & fen Brackish marsh Broadleaved upland forest Chaparral Chenopod scrub Cismontane woodland Closed-cone coniferous forest Coastal bluff scrub Coastal dunes Coastal prairie; most abundant in drier open stages of most shrub, forest, and herbaceous habitats, with friable soils.	Not expected to occur. There is no suitable habitat.
Reptiles				
<i>Actinemys pallida</i>	southwestern pond turtle	FPT / None / BLM-S, CDFW-SSC, USFS-S	Freshwater environments such as ponds, lakes, reservoirs, and slow-moving streams with abundant aquatic vegetation, typically in low to mid-elevation areas.	Not expected to occur. There is no suitable freshwater habitat for this species.
<i>Anniella stebbinsi</i>	Southern California legless lizard	None / None / CDFW-SSC, USFS-S	Broadleaved upland forest Chaparral Coastal dunes Coastal scrub; Generally south of the Transverse Range, extending to northwestern Baja California. Occurs in sandy or loose loamy soils under sparse vegetation. Disjunct populations in the Tehachapi and Piute Mountains in Kern County.	Moderate. There are historical records within the City (now developed) and many records in the region. This species may occur in scrubby areas surrounding the San Dieguito Lagoon, in Crest Canyon Open Space Park, or in Torrey Pines State Natural Reserve Extension. There is a 2021 photorecord of a specimen in the Crest Canyon Open Space Park on iNaturalist.
<i>Arizona elegans occidentalis</i>	California glossy snake	None / None / CDFW-SSC	Arid scrub, rocky washes, grasslands, chaparral, open areas with loose soil; Patchily distributed from the eastern portion of San Francisco Bay, southern San Joaquin Valley, and the Coast, Transverse, and Peninsular ranges, south to Baja California.	Not expected to occur. There is limited suitable habitat for this species, and nearly all records within the surrounding area are older than 60 years.

Scientific Name	Common Name	Status Federal/State/Other	Habitats	Potential to Occur
<i>Aspidoscelis hyperythra</i>	orange-throated whiptail	None / None / USFS-S	Chaparral Cismontane woodland Coastal scrub; Inhabits low-elevation coastal scrub, chaparral, and valley-foothill hardwood habitats.	Expected. There is suitable habitat for this species in open space areas and abundant records in and around Del Mar.
<i>Aspidoscelis tigris stejnegeri</i>	coastal whiptail	None / None / CDFW-SSC	Hot and dry areas with sparse foliage, including chaparral, woodland, and riparian areas.; Found in deserts and semi-arid areas with sparse vegetation and open areas. Also found in woodland and riparian areas.	Expected. There is suitable habitat for this species in open space areas and abundant records in and around Del Mar.
<i>Crotalus ruber</i>	red-diamond rattlesnake	None / None / CDFW-SSC, USFS-S	Chaparral Mojavean desert scrub Sonoran desert scrub; Chaparral, woodland, grassland, and desert areas from coastal San Diego County to the eastern slopes of the mountains.	Moderate. There is limited suitable habitat for this species within the City boundaries, but many known records more inland, including in the San Dieguito River Valley.
<i>Diadophis punctatus similis</i>	San Diego ringneck snake	None / None / USFS-S	Moist habitats including wet meadows, rocky hillsides, gardens, farmland grassland, chaparral, mixed-conifer forest, and woodland habitats; Open, fairly rocky areas. Use boards, flat rocks, woodpiles, stable talus, rotting logs and small ground holes for cover.	Moderate. There is limited suitable habitat for this species within the City boundaries. There is a 1998 record within the Torrey Pines State Natural Reserve Extension.
<i>Phrynosoma blainvillii</i>	coast horned lizard	None / None / BLM-S, CDFW-SSC	Chaparral Cismontane woodland Coastal bluff scrub Coastal scrub Desert wash Pinon & juniper woodlands Riparian scrub Riparian woodland Valley & foothill grassland; Frequents a wide variety of habitats, most common in lowlands along sandy washes with scattered low bushes.	Moderate. There is limited suitable habitat for this species within the City boundaries. There is a 1998 record within the Torrey Pines State Natural Reserve Extension.

Scientific Name	Common Name	Status Federal/State/Other	Habitats	Potential to Occur
<i>Plestiodon skiltonianus interparietalis</i>	Coronado skink	None / None / BLM-S	Chaparral Cismontane woodland Pinon & juniper woodlands; Grassland, chaparral, pinon-juniper and juniper sage woodland, pine-oak and pine forests in Coast Ranges of Southern California.	Moderate. There is limited suitable habitat for this species within the City boundaries. There is a 1998 record within the Torrey Pines State Natural Reserve Extension.
<i>Salvadora hexalepis virgultea</i>	coast patch-nosed snake	None / None / CDFW-SSC	Coastal scrub; Brushy or shrubby vegetation in coastal Southern California.	Not expected to occur. Although there is suitable habitat within the City, all known records in this area are farther into the interior away from the immediate coast.
<i>Thamnophis hammondi</i>	two-striped gartersnake	None / None / BLM-S, CDFW-SSC, USFS-S	Marsh & swamp Riparian scrub Riparian woodland Wetland; Coastal California from vicinity of Salinas to northwest Baja California. From sea to about 7,000 ft elevation.	Not expected to occur. There is no suitable freshwater habitat for this species.
<i>Thamnophis sirtalis pop. 1</i>	south coast gartersnake	None / None / CDFW-SSC	Artificial standing waters Marsh & swamp Riparian scrub Riparian woodland South coast flowing waters South coast standing waters Wetland; Southern California coastal plain from Ventura County to San Diego County, and from sea level to about 850 m.	Not expected to occur. There is no suitable freshwater habitat for this species.

Status Legend:

Federal

FE: Federally listed as endangered
 FT: Federally listed as threatened
 FPE: Federally proposed for listing as endangered
 FPT: Federally proposed for listing as threatened
 FC: Federal candidate species (former Category 1 candidates)
 None: No federal listing
 FDL: Delisted

State

SE: State listed as endangered
 ST: State listed as threatened
 SR: State rare
 SCE: State candidate for listing as endangered
 SCT: State candidate for listing as threatened
 None: No state listing
 SDL: State delisting

Other

BCC: U.S. Fish and Wildlife Service Bird of Conservation Concern
 BLM-S: Bureau of Land Management Sensitive Species
 CDFW-FP: California Fully Protected Species
 CDFW-SSC: California Species of Special Concern
 USFS-S: U.S. Forest Service Sensitive Species