2.5 Biological Resources

This section evaluates the impacts that may occur with implementation of the Cannabis Program on biological resources known to inhabit or with potential to inhabit San Diego County. It summarizes relevant federal, state, and local regulations that pertain to biological resources and describes the existing environmental conditions. Biological resources include vegetation and habitat types, special-status plant and wildlife species, sensitive natural communities, state and federally protected wetlands, wildlife movement corridors, and native wildlife nursery sites. The analysis includes a description of the methods used for assessment, the potential direct and indirect impacts of program implementation, and mitigation measures recommended to address impacts determined to be potentially significant. The information presented in this section is based on a review of existing and available information and is regional in scope. Data, analysis, and findings provided in this section are programmatic for broad application under the program rather than site-specific.

Comments regarding biological resources submitted in response to the notice of preparation (NOP) were received from the California Department of Fish and Wildlife (CDFW) and several individuals. Comments pertained to impacts on sensitive habitats (e.g., riparian habitat, wetlands, grassland, coastal sage scrub, sensitive natural communities), wildlife corridors, nesting birds, listed wildlife species, mountain lions, land preserves under the San Diego Multiple Species Conservation Program (MSCP), nighttime lighting, noise, and introduction of nonnative species. These issues are addressed in the impact analysis below. All comments received in response to the NOP are presented in Appendix A of this Draft PEIR.

A summary of impacts evaluated in this section is provided in Table 2.5.1.

Table 2.5.1 Biological Resources Summary of Impacts

Issue Number	Issue Topic	Project Direct Impact	Project Cumulative Impact	Impact after Mitigation
1	Special-Status Plant and Wildlife Species	Alternative 1: Less than Significant Alternatives 2–5: Significant	Alternative 1: Less than Significant Alternatives 2–5: Significant	Alternative 1: Less than Significant Alternatives 2–5: Less than Significant
2	Riparian Habitat and Other Sensitive Natural Communities	Alternative 1: No Impact Alternatives 2–5: Significant	Alternative 1: No Impact Alternatives 2–5: Significant	Alternative 1: No Impact Alternatives 2–5: Less than Significant
3	State and Federally Protected Wetlands	Alternative 1: No Impact Alternatives 2–5: Significant	Alternative 1: No Impact Alternatives 2–5: Significant	Alternative 1: No Impact Alternatives 2–5: Less than Significant
4	Wildlife Movement Corridors and Nursery Sites	Alternative 1: No Impact Alternatives 2–5: Significant	Alternative 1: No Impact Alternatives 2–5: Significant	Alternative 1: No Impact Alternatives 2–5: Less than Significant
5	Conflict with Local Policies or Ordinances	Alternative 1: No Impact Alternatives 2–5: Significant	Alternative 1: No Impact Alternatives 2–5: Significant	Alternative 1: No Impact Alternatives 2–5: Less than Significant
6	Conflict with Adopted Habitat Conservation Plans and Natural Community Conservation Plans	Alternative 1: No Impact Alternatives 2–5: Less than Significant	Alternative 1: No Impact Alternatives 2–5: Less than Significant	Alternative 1: No Impact Alternatives 2–5Less than Significant

2.5.1 Existing Conditions

The following key sources of data and information were used in the preparation of this section:

- California Natural Diversity Database (CNDDB) record search of San Diego County (CNDDB 2024);
- California Native Plant Society (CNPS) Inventory of Rare and Endangered Plants database search of San Diego County (CNPS 2024a);
- US Fish and Wildlife Service (USFWS) Inventory for Planning and Consultation tool for San Diego County (USFWS 2024a);
- San Diego County Vegetation Mapping;
- Western San Diego County alliance-level vegetation mapping;
- National Hydrography Dataset mapping;
- San Diego Management and Monitoring Program (SDMMP) Mountain Lion Connectivity Model (Vickers et al. 2017);
- California Essential Habitat Connectivity Mapping (CDFW 2024; Spencer et al. 2010); and
- San Diego MSCP and Biological Mitigation Ordinance (BMO) (County of San Diego 1998; County of San Diego 2010a).

2.5.1.1 *Habitat and Land Cover Types*

Habitat and land cover types in San Diego County are summarized in Table 2.5.2 and Figures 2.5.1 and 2.5.2, which are presented at the end of this section. The program area (unincorporated area of the county under the County of San Diego's jurisdiction where cultivation and noncultivation activities may be permitted) contains approximately 185,369 acres of scrub and chaparral habitat; 68,665 acres of developed or disturbed areas; 59,418 acres of agricultural land cover; 56,130 acres of grasslands, vernal pools, meadows, and other herb communities; 38,288 acres of coastal sage scrub habitat; 48,503 acres of woodland habitat; 20,443 acres of riparian and bottomlands habitat; 18,230 acres of forest habitat; and 1,047 acres of bog and marsh habitat.

In 2009, the CDFW Vegetation Classification and Mapping Program (VegCAMP), the County of San Diego, and San Diego Association of Governments (SANDAG) collaborated to classify and map the vegetation of western San Diego County. The area mapped during this effort includes a portion of the program area; however, the entire program area was not included. The vegetation classifications used for this effort followed the *Manual of California Vegetation* (MCV), which is consistent within the larger context of the National Vegetation Classification System (NVCS) The NVCS has been adopted by federal agencies, such as US Geological Survey and National Park Service. The hierarchy of the NVCS is represented by 8 primary levels, and this mapping focused on the lowest levels, known as alliances and associations. Alliances are typically defined by the presence of diagnostic species within a range of cover values within a single plant stratum, whereas associations represent a subset of types within an alliance.

Table 2.5.2 and Figures 2.5.1 and 2.5.2, presented at the end of this section, describe and depict the habitat and land cover types in the program area, as well as the alliances mapped in the

western portion of the program area. The alliance-level mapping overlaps the higher-level habitat and land cover categories, and these overlapping categories are described in Table 2.5.2.

Scrub and Chaparral

The scrub and chaparral habitat is one of the most widespread vegetation communities in the program area, comprising approximately 185,369 acres (Table 2.5.2; Figure 2.5.1). Scrub and chaparral habitat in San Diego County is composed of evergreen drought- and fire-tolerant shrubs with hard, leathery, evergreen leaves adapted to long, hot, dry summers and intermittent rain in winter. These habitats in San Diego County consist of several different types or species assemblages, including southern mixed chaparral, northern mixed chaparral, chamise chaparral, scrub oak chaparral, southern maritime chaparral, and the coastal sage-chaparral transition. These habitats may be dominated by species in the genus *Ceanothus* (e.g., chaparral whitethorn [*Ceanothus leucodermis*], woolly leaf ceanothus [*Ceanothus tomentosus*], hoary leaved ceanothus [*Ceanothus crassifolius*], hairy ceanothus [*Ceanothus oliganthus*], white coast ceanothus [*Ceanothus verrucosus*]), scrub oak (*Quercus berberidifolia*), chamise (*Adenostoma fasciculatum*), and manzanita (e.g., Del Mar manzanita [*Arctostaphylos glandulosa* ssp. *crassifolia*], mission manzanita [*Xylococcus bicolor*]). Other shrub species include monkeyflower (e.g., southern bush monkeyflower [*Diplacus longiflorus*], sticky monkeyflower [*Mimulus aurantiacus* var. *puniceus*]), and alderleaf mountain mahogany (*Cercocarpus montanus*). Chaparral habitat is found throughout the foothills and mountains on exposed slopes and ridges, often forming a mosaic with woodland and forest (Figure 2.5.1).

Twenty-two different vegetation alliances have been identified within scrub and chaparral habitat in the program area, as described in Table 2.5.2 and shown in Figure 2.5.2. Several of these alliances are considered sensitive natural communities, which are described in more detail below in Section 2.5.1.2.

Coastal Sage Scrub

The program area contains approximately 38,288 acres of coastal sage scrub habitat (Table 2.5.2; Figure 2.5.1). Coastal sage scrub consists predominantly of low-growing (i.e., typically less than 3 feet tall), aromatic, drought-deciduous, and generally soft-leaved shrubs. This vegetation community occurs from sea level to approximately 3,000 feet in elevation along the California coast, on south- and west-facing slopes from Camp Pendleton to the lower slopes of Palomar Mountain and around Escondido, the San Pasqual Valley, El Cajon, and Jamul to the area surrounding Otay Mountain in San Diego County. These habitats in San Diego County consist of several different types or species assemblages, including Diegan coastal sage scrub, coastal scrub, maritime succulent scrub, and *Baccharis*-dominated coastal sage scrub. The dominant shrub species in coastal sage scrub habitat are California sage (*Artemesia californica*), California buckwheat (*Eriogonum fasciculatum*), black sage (*Salvia mellifera*), saw-tooth golden bush (*Hazardia squarrosa*), laurel sumac (*Malosma laurina*), bladderpod (*Peritoma arborea*), and San Diego sunflower (*Hulsea californica*).

Four different vegetation alliances have been identified within coastal sage scrub habitat in the program area, as described in Table 2.5.2 and shown in Figure 2.5.2. Several of these alliances are considered sensitive natural communities, which are described in more detail below in Section 2.5.1.2.

Disturbed or Developed Areas

In San Diego County, developed land is composed of urban and suburban areas, as well as roads and highways, and generally occurs adjacent to urban or built-out communities (Figure 2.5.1). Along with urban development, suburban development, and other hardscape, urban landcover also includes urban landscaping, lawns, parks, and green zones. Urban areas can support some special-status wildlife species, including roosting and nesting raptors.

Agriculture

Agricultural land cover in San Diego County is characterized by row crops, orchards, vineyards, pasture, dairies, nurseries, and chicken ranches. Agricultural uses are largely concentrated in the northern half of the county, especially along the San Luis Rey River (Figure 2.5.1). The distribution of these agricultural land types within the county may expand and contract rapidly with market conditions and crop rotations. Although agricultural areas are subject to human disturbance and considered to be developed, some common and special-status wildlife species use or even prefer agricultural areas for breeding, cover, or foraging.

Grasslands, Vernal Pools, Meadows, and Other Herb Communities

The program area contains approximately 56,130 acres of grasslands, vernal pools, meadows, and other herb communities (Table 2.5.2; Figure 2.5.1). Grassland habitat in San Diego County is composed of native (i.e., 20-percent cover of native species) and nonnative grasses. Nonnative grasslands are much more prevalent than native grasslands in the county. Native grasslands in the county include valley needlegrass grasslands, valley sacaton grasslands, and saltgrass grasslands. Valley needlegrass grassland is dominated by perennial, tussock-forming purple needlegrass (*Stipa pulchra*) with native and introduced annuals, including checkerbloom (*Sidalcea* spp.), blue-eyed grass (*Sisyrinchium* spp.), poppies (*Eschscholzia* spp.), and goldfields (*Lasthenia* spp.). Valley sacaton grassland is dominated by alkali sacaton (*Sporobolus airoides*). Saltgrass grassland is dominated by saltgrass (*Distichlis spicata*). Nonnative grasslands, or annual grasslands, have sparse to dense cover of annual grasses and are associated with numerous species of showy-flowered, native annual forbs, especially in favorable rainfall years. In San Diego County, nonnative grasslands are typically dominated by grasses in the genera *Avena*, *Bromus*, *Erodium*, and *Brassica*.

In San Diego County, vernal pools often occur on flat mesa tops or in valleys in lower parts of watersheds. Vernal pools in San Diego County can form complexes of interconnected basins with a relatively large, shared watershed or can occur as single pools with no watershed that are dependent entirely on rainfall filling the pools directly. Vernal pools vary in size and depth depending on geomorphology and hydrological conditions. Small, rounded hummocks called mima mounds are characteristic of many vernal pools in San Diego County. Plant species associated with vernal pools in San Diego County include pygmy-weed (*Crassula connata*), water pygmyweed (*Crassula aquatica*), annual hair grass (*Deschampsia danthonioides*), toothed calicoflower (*Downingia cuspidate*), common spikerush (*Eleocharis macrostachya*), flowering-quillwort (*Lilaea scilloides*), American pillwort (*Pilularia americana*), short woollyheads (*Psilocarphus brevissimus*), and slender woolly-marbles (*Psilocarphus tenellus*).

Six different vegetation alliances have been identified within grassland habitat in the program area, as described in Table 2.5.2 and shown in Figure 2.5.2. One of these alliances is considered a sensitive natural community, which is described in more detail below in Section 2.5.1.2.

Woodland

The program area contains approximately 48,503 acres of woodland habitat (Table 2.5.2; Figure 2.5.1). Woodland in San Diego County occurs in a variety of locations where soil conditions are moister than the soils hosting coastal sage scrub and scrub and chaparral vegetation. In the lowlands, woodlands are mostly confined to stream and canyon bottoms, and in the foothills and mountains, they are found in areas with productive soil, especially on north- and east-facing slopes. Woodlands typically have an open canopy. Dominant tree species in woodlands include coast live oak (*Quercus agrifolia*), Engelmann oak (*Quercus engelmannii*), California black oak (*Quercus kelloggii*), and canyon live oak (*Quercus chrysolepis*). Oak woodlands often have an understory of poison oak, gooseberry (*Ribes* spp.), and various herbaceous species. Some woodland habitat in San Diego County is dominated by nonnative eucalyptus (*Eucalyptus* spp.), tree of heaven (*Ailanthus altissima*), or black locust (*Robinia pseudoacacia*).

Six different vegetation alliances have been identified within woodland habitat in the program area, as described in Table 2.5.2 and shown in Figure 2.5.2. Some of these alliances are considered sensitive natural communities, which are described in more detail below under Section 2.5.1.2.

Riparian and Bottomland Habitat

The program area contains approximately 20,443 acres of riparian and bottomland habitat (Table 2.5.2; Figure 2.5.1). Riparian vegetation is present along streams, in floodplains, and in canyon bottoms and consists of tree-dominated habitat (i.e., riparian forest) or shrub-dominated habitat (i.e., riparian scrub). Riparian forests in San Diego County are dominated by trees such as coast live oak, willow (e.g., Goodding's willow [*Salix gooddingii*], arroyo willow [*Salix lasiolepis*]), Fremont cottonwood (*Populus fremontii*), and California sycamore (*Platanus racemosa*). Common understory species are mulefat (*Baccharis salicifolia*), poison oak (*Toxicodendron diversilobum*), black elderberry (*Sambucus nigra*), yerba mansa (*Anemopsis californica*), and sedges (*Carex* spp.). Riparian scrub is shrub-dominated and dense, often dominated by mulefat and tamarisk species (*Tamarix* spp.). Invasive species common in riparian areas are giant reed (*Arundo donax*) and tamarisk.

Four different vegetation alliances have been identified within riparian and bottomland habitat in the program area, as described in Table 2.5.2 and shown in Figure 2.5.2. Some of these alliances are considered sensitive natural communities, which are described in more detail below in Section 2.5.1.2.

Forest

The program area contains approximately 18,230 acres of forest habitat (Table 2.5.2; Figure 2.5.1). Forest habitat in the program area includes southern interior cypress, Torrey pine (*Pinus torreyana*), bigcone Douglas-fir (*Psedotsuga macrocarpa*), and ponderosa pine (*Pinus ponderosa*) forests. Southern interior cypress forest is a moderately dense, fire-maintained, low forest dominated by Cuyamaca cypress (*Hesperocyparis stephensonii*) and Tecate cypress (*Hesperocyparis forbesii*). The canopy of southern interior cypress forests is open to intermittent, depending on stand age and substrate development, with trees up to approximately 50 feet tall. This vegetation type often occurs as isolated groves within a matrix of chaparral or pinyon-juniper woodland.

Bigcone Douglas-fir forest and ponderosa pine forest are also present in San Diego County. Bigcone Douglas-fir is closely associated with canyon live oak and ponderosa pine and occupies an intermediate position between the lower elevation chaparral zone and the higher elevation mixed-conifer forest. Ponderosa pine is found in higher elevation areas of the county and is associated with bigcone Douglas-fir, black oak, incense cedar (*Calocedrus decurrens*), and white fir (*Abies concolor*).

Bog and Marsh

The program area contains approximately 1,047 acres of bog and marsh habitat (Table 2.5.2; Figure 2.5.1). Bog and marsh habitat in San Diego County is composed of freshwater and salt marsh habitats. Freshwater marsh vegetation communities are characterized by the presence of emergent hydrophytes (i.e., plants adapted to growing in saturated soils and standing water). The dominant plants within freshwater marshes often include rushes (*Juncus* spp.), cattails (*Typha* spp.), bulrushes or tules (*Schoenoplectus* spp.), sedges (*Carex* spp.), grass species, and several species of small willows (*Salix* spp.)

Salt marsh habitat is a productive vegetation community of herbaceous, salt-tolerant plants typically less than 3 feet tall. Some species unique to salt marshes in southern California include matscale (*Atriplex watsonii*), saltwort (*Batis maritima*), California box thorn (*Lycium californicum*), shore grass (*Distichlis littoralis*), California seablite (*Suaeda californica*), and Parish's pickleweed (*Arthrocnemum subterminale*).

Five different vegetation alliances have been identified within bog and marsh habitat in the program area, as described in Table 2.5.2 and shown in Figure 2.5.2. Several of these alliances are considered sensitive natural communities, which are described in more detail below in Section 2.5.1.2.

Aquatic Habitat

The program area contains multiple types of aquatic habitats (Table 2.5.2; Figure 2.5.3). Lakes and reservoirs in or adjacent to the program area include Lake Henshaw, Lake Sutherland, Lake Jennings, Lake Hodges, Lower Otay Lake, San Vicente Reservoir, El Capitan Reservoir, and Sweetwater Reservoir. Smaller ponds are also present throughout the county, including small ponds on private property. Perennial stream features in the program area are the San Luis Rey River, San Diego River, and Santa Margarita River, as well as smaller tributary streams to these rivers. Many of these aquatic features have nearby associated wetland habitat, consisting of saline and freshwater wetlands (which may be included in the approximately 1,047 acres of bog and marsh habitat mapped in the program area), and approximately 20,443 acres of mapped riparian and bottomland habitat, as described above.

Overall, the program area contains approximately 3,970 acres of lakes and ponds, 155 acres of reservoirs, 241 acres of swamp and marsh habitat, 85 miles of perennial stream habitat, 416 miles of intermittent streams, and 3,555 miles of ephemeral stream habitat (Table 2.5.2; Figure 2.5.3). In addition, the program area contains approximately 78 miles of human-made features, including pipelines, ditches, and aqueducts (Table 2.5.2; Figure 2.5.3).

2.5.1.2 *Sensitive Biological Resources*

Special-Status Species

Special-status species are defined as species that are legally protected or that are otherwise considered sensitive by federal, state, or local resource agencies. Special-status species are species, subspecies, or varieties that fall into one or more of the following categories, regardless of their legal or protection status:

- officially listed by California under the California Endangered Species Act (CESA) or the federal government under the federal Endangered Species Act (ESA) as endangered, threatened, or rare;
- a candidate for state or federal listing as endangered, threatened, or rare;
- taxa (i.e., taxonomic categories or groups) that meet the criteria for listing, even if not currently included on any list, as described in Section 15380 of the State CEQA Guidelines;
- species identified by CDFW as Species of Special Concern;
- species designated as Fully Protected under the California Fish and Game Code;
- species covered or with special consideration under the San Diego MSCP;
- species on the County of San Diego sensitive plant list (List A, List B, List C, and List D);
- species on the County of San Diego sensitive animal list (Group I and Group II);
- species afforded protection under local planning documents; and
- taxa considered by CDFW to be "rare, threatened, or endangered in California" and assigned a California Rare Plant Rank (CRPR). The CDFW system includes 5 rarity and endangerment ranks for categorizing plant species of concern, 3 of which are typically considered to be special status, summarized as follows:
    - CRPR 1A: Plants presumed to be extinct in California
    - CRPR 1B: Plants that are rare, threatened, or endangered in California and elsewhere
    - CRPR 2: Plants that are rare, threatened, or endangered in California but more common elsewhere
    - CRPR 3: Plants about which more information is needed—A Review List
    - CRPR 4: Plants of limited distribution—A Watch List

All plants with a CRPR are considered "special plants" by CDFW. The term "special plants" is a broad term used by CDFW to refer to all plant taxa inventoried in the CNDDB, regardless of their legal or protection status. Plants ranked as CRPR 1A, 1B, 2A, or 2B may be considered as endangered, rare, or threatened species under CEQA within the definition of State CEQA Guidelines Section 15380. CDFW recommends that CRPR 1 and 2 species be addressed within the context of CEQA analyses and documentation. In general, CRPR 3 and 4 species do not meet the definition of endangered, rare, or threatened pursuant to State CEQA Guidelines Section 15380; however, some of these species are included on the County of San Diego sensitive plant list (List C and List D) and are therefore considered in this analysis.

The term “California species of special concern” is applied by CDFW to animals not listed under ESA or CESA, but that are considered to be declining at a rate that could result in listing or that historically occurred in low numbers and known threats to their persistence currently exist.

A total of 292 special-status plant species are known to occur in San Diego County (see Table 2.5.3, presented at the end of this section). A total of 173 special-status wildlife species are known to occur in San Diego County (see Table 2.5.4, presented at the end of this section).

Critical Habitat

“Critical habitat” is a term defined and used in ESA. It refers to specific geographic areas designated by USFWS and the National Oceanic and Atmospheric Administration Fisheries that contain features essential to the conservation of an endangered or threatened species and that may require special management and protection. Critical habitat for 17 species is present in San Diego County (Figure 2.5.4, presented at the end of this section). The species and acreage of critical habitat are summarized below.

Critical habitat designations affect only federal agency actions or federally funded or permitted activities. Critical habitat designations do not have direct effects on regulation of activities by private landowners if there is no federal “nexus”—that is, no federal funding or authorization.

- Arroyo toad (*Anaxyrus californicus*): 41,090.5 acres
- Coastal California gnatcatcher (*Polioptila californica californica*): 42,408.5 acres
- Hermes copper butterfly (*Lycaena hermes*): 12,772.7 acres
- Least Bell’s vireo (*Vireo bellii pusillus*): 5,962.4 acres
- Mexican flannelbush (*Fremontodendron mexicanum*): 0.1 acres
- Otay tarplant (*Deinandra conjugens*): 1,233.1 acres
- Peninsular bighorn sheep (*Ovis canadensis nelsoni* pop. 2): 7,315.1 acres
- Quino checkerspot butterfly (*Euphydryas editha quino*): 19,014.0 acres
- Riverside fairy shrimp (*Streptocephalus woottoni*): 1.3 acres
- San Bernardino blue grass (*Poa atropurpurea*): 132.5 acres
- San Diego ambrosia (*Ambrosia pumila*): 226.7 acres
- San Diego fairy shrimp (*Branchinecta sandiegonensis*): 849.0 acres
- San Diego thorn-mint (*Acanthomintha ilicifolia*): 354.5 acres
- Southwestern willow flycatcher (*Empidonax traillii extimus*): 2,455.8 acres
- Spreading navarretia (*Navarretia fossalis*): 453.5 acres
- Thread-leaved brodiaea (*Brodiaea filifolia*): 130.9 acres

Sensitive Natural Communities

Sensitive habitats include those that are of special concern to resource agencies or are afforded specific consideration through CEQA, Section 1602 of the California Fish and Game Code, Section 404 of the Clean Water Act (CWA), and the state Porter-Cologne Act, as

discussed in Section 2.5.2, “Regulatory Framework,” below. Sensitive habitats may be of special concern to agencies and conservation organizations for a variety of reasons, including their locally or regionally declining status or because they provide important habitat to common and special-status species. Sensitive natural communities are native plant communities defined by CDFW as having limited distribution statewide or in a county or region and that are often vulnerable to environmental effects of projects (CDFW 2018). In addition to habitats officially identified by CDFW as sensitive natural communities or habitats meeting the definition of waters of the United States, other sensitive habitats include riparian habitats, oak woodlands, chaparral, and coastal sage scrub.

CDFW maintains a list of plant communities that are native to California. Sensitive natural communities are ranked by CDFW from S1 to S3, where S1 is critically imperiled, S2 is imperiled, and S3 is vulnerable. CDFW natural-community rarity rankings follow the 2009 NatureServe Conservation Status Assessments: Methodology for Assigning Ranks (Faber-Langendoen et al. 2012), in which all alliances are listed with a global (G) and state (S) rank, where G1 is critically imperiled, G2 is imperiled, G3 is vulnerable, G4 is apparently secure, and G5 is secure. These communities may or may not contain special-status species or their habitat. Known occurrences of sensitive natural communities are included in the CNDDB; however, no new occurrences have been added to the CNDDB since the mid-1990s, when funding was cut for this portion of the CNDDB program. In addition, the sensitive natural communities included in the CNDDB are based on the Holland (1986) classification and are not consistent with the state’s current vegetation mapping and classification standards. The “legacy” sensitive natural community data from CNDDB is currently being validated and moved to the Biogeographic Information and Observation System (BIOS). Sensitive natural communities are currently being mapped as part of the Vegetation Classification and Mapping Program (VegCAMP) statewide vegetation mapping program and are being added to BIOS as mapping is completed and verified.

Twenty-six legacy sensitive natural communities were reported in the CNDDB as occurring in San Diego County (Table 2.5.5, presented at the end of this section) (CNDDB 2024). Some of these communities reported by the CNDDB overlap with communities identified as sensitive natural communities in the new system using the Manual of California Vegetation Online (CNPS 2024b) and mapped by VegCAMP.

Twenty-three sensitive natural communities have been mapped by VegCAMP in San Diego County and are therefore known to occur, and 32 sensitive natural communities have potential to occur in San Diego County based on the habitat types present in the county (Table 2.5.6; Figure 2.5.2). Vegetation communities indicated with an asterisk in Table 2.5.6 are known to occur in San Diego County, and the other communities have potential to occur in the county within the habitat types identified in the table.

In addition, approximately 46,920 acres of oak woodland (comprising coast live oak woodland, black oak woodland, and Engelmann oak woodland), 20,443 acres of riparian and bottomland habitat, and 1,047 acres of bog and marsh habitat—all considered sensitive habitat—are mapped in the program area and are discussed above in Section 2.5.1.1, “Habitat and Land Cover Types” (Table 2.5.2; Figure 2.5.1). Coastal sage scrub, which is present in approximately 38,288 acres of the county, is also considered a sensitive habitat.

2.5.1.3 *Invasive Plant Species and Noxious Weeds*

An invasive plant is one that is not native to a region but rather is introduced and tends to crowd out native vegetation. Invasive plant species in San Diego County occur throughout several different habitat types and include annual grasses (e.g., *Avena* spp., *Bromus* spp., *Lolium* spp.), perennial grasses (e.g., giant reed [*Arundo donax*], pampas grass [*Cortaderia selloana*], crimson fountaingrass [*Pennisetum setaceum*]), herbaceous broadleaf plants (e.g., mustard [*Brassica* spp.], fennel [*Foeniculum vulgare*], thistles [*Carduus* spp., *Centaurea* spp., *Cirsium* spp.]), and woody trees and shrubs (e.g., saltcedar [*Tamarix* spp.], acacias [*Acacia* spp.], and eucalyptus).

2.5.1.4 *Wildlife Movement Corridors*

San Diego County contains several large areas of relatively undisturbed wildlife habitat, including Cleveland National Forest, Anza-Borrego Desert State Park, land managed by the Bureau of Land Management (e.g., Carrizo Gorge Wilderness, Sawtooth Mountains Wilderness, Hauser Mountain Wilderness Study Area, Otay Mountain Wilderness), and land managed by CDFW (e.g., Hollenbeck Canyon Wildlife Area, Sycuan Peak Ecological Reserve, Crestridge Ecological Reserve, Canada de San Vicente Ecological Reserve, San Felipe Valley Wildlife Area). In addition, major river systems throughout the county also contain movement habitat for fish and wildlife species. Federal and state lands are not included in the program area; however, natural habitat adjacent to these lands that may provide connectivity to other large areas of wildlife habitat are included in the program area.

There have been multiple efforts to model habitat connectivity for wildlife in San Diego County. The California Essential Habitat Connectivity Project was commissioned by the California Department of Transportation and CDFW with the purpose of making transportation and land use planning more efficient and less costly while helping reduce dangerous wildlife-vehicle collisions (Spencer et al. 2010). This effort identified Natural Landscape Blocks and Essential Connectivity Areas (ECAs) throughout the state. Furthermore, core resource areas (i.e., areas generally supporting a high concentration of sensitive biological resources) and linkages for these core areas were modeled for the MSCP South County Subarea Plan. As shown in Figure 2.5.5, presented at the end of this section, Natural Landscape Blocks have been identified throughout much of the eastern half of San Diego County, including the areas described above. Large ECAs connect natural habitats in the western portion of the county with the larger natural areas to the east, and these ECAs are mostly consistent with the linkages modeled for the MSCP (Figure 2.5.5).

Additional habitat connectivity modeling for mountain lions (*Felis concolor*) has been conducted by the SDMMP for San Diego County, which is shown in Figure 2.5.6, presented at the end of this section. The eastern half of San Diego County has been identified as a “high connectivity” area, and urban areas in the western portion of the county have been identified as “no connectivity” areas for mountain lions (Figure 2.5.6).

2.5.1.5 *Native Wildlife Nursery Sites*

Nursery sites are locations where fish and wildlife concentrate for hatching or raising young, such as nesting rookeries for birds, spawning areas for native fish, fawning areas for deer, and maternal roosts for bats. Nursery sites are considered in this analysis for native wildlife that are not defined and otherwise considered under CEQA as special-status species. The program

area likely contains a variety of wildlife nursery sites. Native nursery sites are not mapped for the program area and would need to be identified and evaluated at a site-specific level.

2.5.1.6 *Habitat Conservation Plans*

As described below in Section 2.5.2, "Regulatory Framework," the MSCP South County Subarea Plan was adopted in 1998. The County is currently developing additional MSCP Plans for the North County and East County unincorporated areas, as well as a Butterflies Habitat Conservation Plan (HCP). These plans are in development and have not been adopted. Details regarding adopted plans and plans in development are included in Section 2.5.2, below.

2.5.2 Regulatory Framework

2.5.2.1 *Federal*

Federal Endangered Species Act

Pursuant to ESA (16 US Code [USC] Section 1531 et seq.), USFWS regulates the taking of species listed under ESA as threatened or endangered. In general, persons subject to ESA (including private parties) are prohibited from taking endangered or threatened fish and wildlife species on private property and from taking endangered or threatened plants in areas under federal jurisdiction or in violation of state law. Under Section 9 of ESA, the definition of "take" is to "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct." USFWS has also interpreted the definition of "harm" to include significant habitat modification that could result in take.

Section 10 of ESA applies if a nonfederal agency is the lead agency for an action that results in take and no other federal agencies are involved in permitting the action. Section 7 of ESA applies if a federal discretionary action is required (e.g., a federal agency must issue a permit), in which case the involved federal agency consults with USFWS.

Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA), first enacted in 1918, provides for protection of international migratory birds and authorizes the secretary of the interior to regulate the taking of migratory birds. The MBTA provides that it will be unlawful, except as permitted by regulations, to pursue, take, or kill any migratory bird or any part, nest, or egg of any such bird. Under the MBTA, "take" is defined as "to pursue, hunt, shoot, wound, kill, trap, capture, or collect, or any attempt to carry out these activities." A take does not include habitat destruction or alteration, as long as there is not a direct taking of birds, nests, eggs, or parts thereof. The current list of species protected by the MBTA can be found in Title 50 of the Code of Federal Regulations (CFR), Section 10.13 (50 CFR 10.13). The list includes nearly all birds native to the United States.

Bald and Golden Eagle Protection Act

The Bald and Golden Eagle Protection Act, enacted in 1940 and amended multiple times since, prohibits the taking of bald eagles (*Haliaeetus leucocephalus*) and golden eagles (*Aquila chrysaetos*) without a permit from the secretary of the interior. Similar to ESA, the Bald and

Golden Eagle Protection Act defines “take” as “pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest or disturb” (16 USC Sections 668–668c). For the purpose of the act, disturbance that would injure an eagle, decrease productivity, or cause nest abandonment, including habitat alterations that could have these results, are considered take and can result in civil or criminal penalties.

Section 404 of the Clean Water Act

Section 404 of the federal CWA (33 USC Section 1344) requires a project applicant to obtain a permit before engaging in any activity that involves any discharge of dredged or fill material into waters of the United States, including wetlands. Fill material is material placed in waters of the United States where the material has the effect of replacing any portion of a water of the United States with dry land or changing the bottom elevation of any portion of a water of the United States. Waters of the United States include navigable waters of the United States; interstate waters; all other waters where the use, degradation, or destruction of the waters could affect interstate or foreign commerce; tributaries to any of these waters that are relatively permanent standing or continuously flowing bodies of water; and wetlands adjacent to and with a continuous surface connection to these waters. Wetlands are defined as areas that are inundated or saturated by surface water 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. Potentially jurisdictional wetlands must meet 3 wetland delineation criteria: hydrophytic vegetation, hydric soil types, and wetland hydrology. Wetlands that meet the delineation criteria may be jurisdictional under Section 404 of the CWA pending US Army Corps of Engineers (USACE) verification.

Section 401 of the Clean Water Act

Under Section 401 of the CWA (33 USC Section 1341), an applicant for a Section 404 permit must obtain a certificate from the appropriate state agency stating that the intended dredging or filling activity is consistent with the state’s water quality standards and criteria. In California, the authority to grant water quality certification is delegated by the State Water Resources Control Board (SWRCB) to the regional water quality control boards (RWQCBs).

2.5.2.2 *State*

Porter-Cologne Water Quality Control Act

Under the Porter-Cologne Water Quality Control Act (Porter-Cologne Act, Chapter 368, Statutes of 1943), waters of the state fall under the jurisdiction of the appropriate RWQCB. RWQCBs must prepare and periodically update water quality control plans (Basin Plans). Each Pasin Plan sets forth water quality standards for surface water and groundwater, as well as actions to control point and nonpoint sources of pollution to achieve and maintain these standards. The RWQCB’s jurisdiction includes federally protected waters, as well as areas that meet the definition of “waters of the state.” “Waters of the state” is defined as any surface water or groundwater, including saline waters, within the boundaries of the state. The RWQCB has the discretion to take jurisdiction over areas not federally regulated under Section 401 of the CWA provided they meet the definition of waters of the state. Discharges of dredge or fill material within waters of the state, including wetlands, that do not require a CWA 401 water quality certification, must meet the RWQCB’s waste discharge requirements.

California Endangered Species Act

Pursuant to CESA (California Fish and Game Code Section 2050 et seq.), a permit from CDFW is required for projects that could result in the "take" of a plant or animal species that is listed by the state as threatened or endangered. Under CESA, "take" is defined as an activity that would directly or indirectly kill an individual of a species but, unlike the federal definition, does not include "harm" or "harass." As a result, the threshold for take is higher under CESA than under the federal ESA. Authorization for take of state-listed species can be obtained through a California Fish and Game Code Section 2081 Incidental Take Permit.

California Fish and Game Code Sections 3503 and 3503.5, Protection of Bird Nests and Raptors

Section 3503 of the California Fish and Game Code states that it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird. Section 3503.5 of the Fish and Game Code states that it is unlawful to take, possess, or destroy any raptors (i.e., species in the orders *Falconiformes* and *Strigiformes*), including their nests or eggs. Typical violations include destruction of active nests as a result of tree removal or disturbance caused by project construction or other activities that cause the adults to abandon the nest, resulting in loss of eggs or young.

Fully Protected Species under the California Fish and Game Code

Protection of fully protected species is described in Sections 3511, 4700, 5050, and 5515 of the Fish and Game Code. These statutes prohibit take or possession of fully protected species and do not provide for authorization of incidental take, except under specific conditions. The Fish and Game Code allows CDFW to authorize incidental take of fully protected species for scientific research purposes; relocation to protect livestock; as part of a Natural Community Conservation Plan (NCCP); State Water Project projects; regional or local water agency infrastructure (other than the Delta conveyance project and desalination project); certain transportation-related projects, such as wildlife crossings; and wind and solar photovoltaic projects, provided that the project avoids, minimizes, or mitigates impacts on these species.

California Fish and Game Code Section 1602, Streambed Alteration

All diversions, obstructions, or changes to the natural flow or bed, channel, or bank of any river, stream, or lake in California that supports wildlife resources are subject to regulation by CDFW under Section 1602 of the Fish and Game Code. Under Section 1602 of the Fish and Game Code, it is unlawful for any person, governmental agency, or public utility to do the following without first notifying CDFW:

1. substantially divert or obstruct the natural flow of, or substantially change or use any material from, the bed, channel, or bank of any river, stream, or lake, or
2. deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it may pass into any river, stream, or lake.

The regulatory definition of "stream" is a body of water that flows at least periodically or intermittently through a bed or channel that has banks and supports fish or other aquatic life. This definition includes watercourses with a surface or subsurface flow that supports or has supported riparian vegetation. CDFW's jurisdiction within altered or artificial waterways is based

on the value of those waterways to fish and wildlife. A CDFW streambed alteration agreement must be obtained for any action that would result in an impact on a river, stream, or lake.

Natural Community Conservation Planning Act

The NCCP Act of 1991 is designed to conserve natural communities at the ecosystem scale while accommodating compatible land uses. CDFW is the principal state agency implementing the NCCP program. Section 2800 et seq. of the California Fish and Game Code addresses NCCPs, and a 2835 permit is issued by CDFW for all NCCPs. The act established a process to allow for comprehensive, regional multi-species planning in a manner that satisfies the requirements of the state and federal ESAs (through a companion regional Habitat Conservation Plan). The NCCP program has provided the framework for innovative efforts by the state, local governments, and private interests to plan for the protection of regional biodiversity and the ecosystems upon which it depends. NCCPs seek to ensure the long-term conservation of multiple species while allowing for compatible and appropriate economic activity to proceed.

Native Plant Protection Act

The Native Plant Protection Act (NPPA) (Fish and Game Code Section 1900 et seq.) allows the California Fish and Game Commission to designate plants as rare or endangered. The act prohibits take of endangered or rare native plants but includes exceptions for agricultural and nursery operations; for emergencies; and, after proper notification of CDFW, for vegetation removal from canals, roads, and other building sites; changes in land use; and other situations. CDFW and the California Native Plant Society (CNPS) jointly manage the Rare Plant Status Review groups, which consist of over 300 botanical experts from government agencies, academia, nonprofit organizations, and the private sector. The Rare Plant Status Review groups evaluate plant taxa rarity using NatureServe's element ranking methodology, which uses standardized ranking criteria and definitions, making ranks comparable across organisms and political boundaries. The methodology uses a rank calculator to increase repeatability and transparency of the process. Detailed information on the current element ranking methodology can be found at https://www.natureserve.org/conservation-status-assessment. Designating plants with a CRPR is part of this process.

Oak Woodlands Conservation Act

The Oak Woodlands Conservation Act (Senate Bill 1334, Chapter 732, Statutes of 2004) requires counties to determine whether implementation of a project within their jurisdiction may result in a conversion of oak woodlands that would have a significant adverse effect on the environment (Public Resources Code [PRC] Section 21083.4). If the County determines that implementing a project would result in a significant adverse effect on oak woodlands, mitigation measures to reduce the significant adverse effect of converting oak woodlands to other land uses are required.

Cannabis State Regulations

State Water Resources Control Board Order WQ 2023-0102-DWQ

Attachment A (Section 1, General Requirements and Prohibitions) of SWRCB Order WQ 2023-0102-DWQ, General Waste Discharge Requirements and Waiver of Waste Discharge Requirements for Discharges of Wastes Associated with Cannabis Cultivation Activities, includes the following requirements (terms) for state-licensed cultivation sites that are

associated with biological resources. Section 2.11, “Hydrology and Water Quality,” outlines the requirements associated with protection of water quality and surface water flows.

General Requirements and Prohibitions

1. Prior to commencing any cannabis cultivation activities, including cannabis cultivation land development or alteration, the cannabis cultivator shall comply with all applicable federal, state, and local laws, regulations, and permitting requirements, as applicable, including but not limited to the following:

    - The Clean Water Act (CWA) as implemented through permits, enforcement orders, and self-implementing requirements. When needed per the requirements of the CWA, the cannabis cultivator shall obtain a CWA section 404 (33 U.S.C. § 1344) permit from the United States Army Corps of Engineers (Army Corps) and a CWA section 401 (33 U.S.C. § 1341) water quality certification from the State Water Board or the Regional Water Board with jurisdiction. If the CWA permit cannot be obtained, the cannabis cultivator shall contact the appropriate Regional Water Board or State Water Board prior to commencing any cultivation activities. The Regional Water Board or State Water Board will determine if the cannabis cultivation activity and discharge is covered by the Requirements in the Policy and Cannabis General Waste Discharge Requirements for Discharges of Waste Associated with Cannabis Cultivation Activities (Cannabis General Order).
    - The California Water Code as implemented through applicable water quality control plans (often referred to as Basin Plans), waste discharge requirements (WDRs) or waivers of WDRs, enforcement orders, and self-implementing requirements issued by the State Water Resources Control Board (State Water Board) or Regional Water Quality Control Boards (Regional Water Boards).
    - All applicable state, city, county, or local regulations, ordinances, or license requirements including, but not limited to those for cannabis cultivation, grading, construction, and building.
    - All applicable requirements of the California Department of Fish and Wildlife (CDFW).
    - All applicable requirements of the California Department of Forestry and Fire Protection (CAL FIRE), including the Board of Forestry.
    - California Environmental Quality Act and the National Environmental Policy Act.

3. The cannabis cultivator shall apply for a Lake and Streambed Alteration Agreement (LSA Agreement) or consult with CDFW to determine if an LSA Agreement is needed prior to commencing any activity that may substantially:

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

    “Any river, stream or lake," as defined by CDFW, includes those that are episodic (they are dry for periods of time) as well as those that are perennial (they flow year-round). This includes ephemeral streams, desert washes, and watercourses with a subsurface flow. It may also apply to work undertaken within the flood plain of a body of water.

4. Cannabis cultivators shall not take any action which results in the taking of Special-Status Plants (state listed and California Native Plant Society 1B.1 and 1B.2), Fully Protected species (Fish and Game Code sections 3511, 4700, 5050, and 5515), or a threatened, endangered, or candidate species under either the California Endangered Species Act (CESA) (Fish & Game Code §§ 2050 et seq.) or the federal ESA (16 U.S.C. § 1531 et seq.). If a "take," as defined by the California ESA (Fish and Game Code section 86) or the federal ESA (16 U.S.C. § 1532(21)), may result from any act authorized under this Policy, the cannabis cultivator must obtain authorization from CDFW, National Marine Fisheries Service, and United States Fish and Wildlife Service, as applicable, to incidentally take such species prior to land disturbance or operation associated with the cannabis cultivation activities. The cannabis cultivator is responsible for meeting all requirements under the California ESA and the federal ESA.

7. A California Licensed Timber Operator (LTO) shall be used if any commercial tree species are to be removed from the cannabis cultivation site. All timberland conversions shall be permitted and compliant with the Forest Practice Rules and CAL FIRE permitting requirements.

10. Prior to commencing any cannabis land development or site expansion activities the cannabis cultivator shall retain a qualified biologist to identify sensitive plant, wildlife species, or communities at the proposed development site. If sensitive plant, wildlife species, or communities are identified, the cannabis cultivator and Qualified Biologist shall consult with CDFW and CAL FIRE to designate a no-disturbance buffer to protect identified sensitive plant, wildlife species, and communities. A copy of the report shall be submitted to the appropriate Regional Water Board.

11. To prevent transfer of invasive species, all equipment used at the cannabis cultivation site, including excavators, graders, etc., shall be cleaned before arriving and before leaving the site.

30. In timberland areas, cannabis cultivators shall not remove commercial tree species or other vegetation within 150 feet of fish bearing water bodies or 100 feet of aquatic habitat for nonfish aquatic species (e.g., aquatic insects) prior to obtaining all applicable permits required from CAL FIRE, CDFW (i.e., LSA Agreement), and/or the Regional Water Board Executive Officer.

37. Cannabis cultivators shall comply with the minimum riparian setbacks described below (Table 2.5.7) for all land disturbance, cannabis cultivation activities, and facilities (e.g., material or vehicle storage, petroleum powered pump locations, water storage areas, and chemical toilet placement). The riparian setbacks shall be measured from the waterbody's bankfull stage (high flow water levels that occur every 1.5 to 2 years) or from the top edge of the waterbody bank in incised channels, whichever is more conservative. Riparian setbacks for springheads shall be measured from the springhead in all directions (circular buffer). Riparian setbacks for wetlands shall be measured from the edge of wetland as delineated by a qualified professional with experience implementing the Corps of Engineers Wetlands Delineation Manual (with regional supplements). The Regional Water Board Executive Officer may require additional riparian setbacks or additional requirements, as needed, to meet the performance requirement of protecting surface water from discharges that threaten water quality. If the cannabis cultivation site cannot be managed to protect water quality, the Executive

Officer of the applicable Regional Water Board may revoke authorization for cannabis cultivation activities at the cannabis cultivation site:

Requirements Related to Water Diversions and Waste Discharge for Cannabis

63. Cannabis cultivators shall not disturb aquatic or riparian habitat, such as pools, spawning sites, large wood, or shading vegetation unless authorized under a CWA section 404 permit, CWA section 401 certification, Regional Water Board WDRs (when applicable), or a CDFW LSA Agreement.

64. Cannabis cultivators shall maintain existing, naturally occurring, riparian vegetative cover (e.g., trees, shrubs, and grasses) in aquatic habitat areas to the maximum extent possible to maintain riparian areas for streambank stabilization, erosion control, stream shading and temperature control, sediment and chemical filtration, aquatic life support, wildlife support, and to minimize waste discharge.

2.5.2.3 *Local*

San Diego County General Plan

The San Diego County General Plan was most recently updated in 2011. The policies addressing biological resources that were adopted as part of the 2011 General Plan Update Conservation and Open Space and Land Use elements and are applicable to the project include the following:

- **Policy COS-1.1: Coordinated Preserve System**. Identify and develop a coordinated biological preserve system that includes Pre-Approved Mitigation Areas, Biological Resource Core Areas, wildlife corridors, and linkages to allow wildlife to travel throughout their habitat ranges.
- **Policy COS-1.2: Minimize Impacts**. Prohibit private development within established preserves. Minimize impacts within established preserves when the construction of public infrastructure is unavoidable.
- **Policy COS-1.3: Management**. Monitor, manage and maintain the regional preserve system facilitating the survival of native species and the preservation of healthy populations of rare, threatened, or endangered species.
- **Policy COS-1.9: Invasive Species**. Require new development adjacent to biological preserves to use non-invasive plants in landscaping. Encourage the removal of invasive plants within preserves.
- **Policy COS-2.1: Protection, Restoration and Enhancement**. Protect and enhance natural wildlife habitat outside of preserves as development occurs according to the underlying land use designation. Limit the degradation of regionally important natural habitats within the Semi-Rural and Rural Lands regional categories, as well as within Village lands where appropriate.
- **Policy COS-2.2: Habitat Protection through Site Design**. Require development to be sited in the least biologically sensitive areas and minimize the loss of natural habitat through site design.

- **Policy COS-3.1: Wetland Protection**. Require development to preserve existing natural wetland areas and associated transitional riparian and upland buffers and retain opportunities for enhancement.
- **Policy COS-3.2: Minimize Impacts of Development**. Require development projects to:
  - Mitigate any unavoidable losses of wetlands, including its habitat functions and values; and
  - Protect wetlands, including vernal pools, from a variety of discharges and activities, such as dredging or adding fill material, exposure to pollutants such as nutrients, hydromodification, land and vegetation clearing, and the introduction of invasive species.
- **Policy COS-5.3: Downslope Protection.** Require development to be appropriately sited and to incorporate measures to retain natural flow regimes, thereby protecting downslope areas from erosion, capturing runoff to adequately allow for filtration and/or infiltration, and protecting downstream biological resources.
- **Policy COS-5.4: Invasive Species.** Encourage the removal of invasive species to restore natural drainage systems, habitats, and natural hydrologic regimes of watercourses.
- **Policy COS-5.5: Impacts of Development to Water Quality.** Require development projects to avoid impacts to the water quality in local reservoirs, groundwater resources, and recharge areas, watersheds, and other local water sources.
- **Policy LU-6.1: Environmental Sustainability**. Require the protection of intact or sensitive natural resources in support of the long-term sustainability of the natural environment.
- **Policy LU-6.2: Reducing Development Pressures**. Assign lowest-density or lowest intensity land use designations to areas with sensitive natural resources.
- **Policy LU-6.3: Conservation-Oriented Project Design**. Support conservation-oriented project design. This can be achieved with mechanisms such as, but not limited to, Specific Plans, lot area averaging, and reductions in lot size with corresponding requirements for preserved open space (Planned Residential Developments). Projects that rely on lot size reductions should incorporate specific design techniques, perimeter lot sizes, or buffers, to achieve compatibility with community character. [See applicable community plan for possible relevant policies.]
- **Policy LU-6.6: Integration of Natural Features into Project Design**. Require incorporation of natural features (including mature oaks, indigenous trees, and rock formations) into proposed development and require avoidance of sensitive environmental resources.
- **Policy LU-10.2: Development-Environmental Resource Relationship**. Require development in Semi-Rural and Rural areas to respect and conserve the unique natural features and rural character, and avoid sensitive or intact environmental resources and hazard areas.

San Diego County Zoning Ordinance

The San Diego County Zoning Ordinance (Zoning Ordinance) is the primary regulatory document for land use in the county. Adopted October 18, 1978, and most recently amended

in July 2023, the Zoning Ordinance acts as an implementation vehicle for elements of the General Plan. Land may have a zoning designation or special area regulation with certain restrictions pursuant to the Zoning Ordinance. The Zoning Ordinance also applies other Special Area Regulations with specific restrictions and provisions, including Sections 5300 through 5307, Sensitive Resource Area Regulations (Designator G); Sections 5950 through 5957, Coastal Resource Protection Area Regulations (Designation R); and Sections 5850 through 5856, Vernal Pool Area Regulations (Designator V).

Sensitive Resource Area Regulations

The Sensitive Resource Area designator shall be applied based upon the presence of one or more of the following resources on the property: wetlands, wetland buffers, floodplains, significant habitat lands, and prehistoric and historic sites. The Sensitive Resource Area designator shall also be applied to steep slope areas when at least 1 of the following criteria are met: (1) at least one of the resources in the preceding paragraph is also present on the site, or (2) it is required as a condition of a discretionary permit approval. Activities within the site that meet these qualifications would be required to submit a site plan for approval, except for exempt activities, which include minor building permits and ongoing, existing agricultural operations, such as cultivation, growing, and harvesting of crops.

Vernal Pool Area Regulations

On property subject to the “V” Vernal Pool Area Regulations, no use or activity is permitted unless authorized by a minor use permit. For purposes of this section, “use” or “activity” means any activities that are likely to alter, modify, disturb, or destroy a vernal pool or its associated rare, threatened, or endangered species, including the following activities:

- Modifying or disturbing the soil surface or existing vegetation by grading (including agricultural grading), filling, ditching, plowing, tilling, cultivating, brushing, grubbing, clearing, burning, or applying any herbicide or other substance injurious to plant or animal life.
- Draining or filling a vernal pool.
- Placing an impervious covering on, over, or under the soil or water surface.
- Construction, expansion, alteration, or installation of a structure.

No use permit or other required permit shall be granted for any use, activity, or construction in the area subject to the ordinance unless the applicant demonstrates to the satisfaction of the officer or body having jurisdiction 1 of the following criteria:

- The proposed use, activity, or construction will not have any significant, adverse effects on any identified vernal pool or an associated rare, threatened, or endangered species;
- Adequate mitigating measures will be provided to protect the vernal pool or its associated rare, threatened, or endangered species; or
- There are social and economic benefits that override any adverse effects and there is no reasonably acceptable alternative site that would fulfill the purposes of the proposed use, activity, or construction.

Multiple Species Conservation Program

The MSCP is a regional conservation planning program that is designed to address multiple species' and habitat needs while also streamlining and coordinating existing procedures for review and permitting of project impacts on biological resources. The program establishes a connected preserve system that ensures the long-term survival of sensitive plant and animal species and protects the native vegetation found throughout the unincorporated county. Plans created under this program are both a federal HCP and a state NCCP. The MSCP addresses the potential impacts of urban growth, natural habitat loss, and species endangerment and creates plans to mitigate the potential loss of sensitive species and their habitats.

The County developed and adopted a plan for the unincorporated areas in the southern part of the county (i.e. the South County Subarea Plan). This plan was created as part of a larger plan known as the regional MSCP Plan (August 1998). The MSCP Plan covers 582,243 acres over 12 jurisdictions. Each jurisdiction has its own subarea plan with jurisdictionally specific requirements for implementing the MSCP. The subarea plan for the County's jurisdiction, adopted by the Board of Supervisors (Board) on October 22, 1997, covers 252,132 acres in the southwestern portion of the unincorporated county, as shown in Figure 2.5.7, presented at the end of this section. The documents used to implement the MSCP include the South County Subarea Plan (adopted October 1997), the BMO, the final MSCP Plan (dated August 1998), and the implementing agreement between the County and wildlife agencies (signed March 1998).

The County is currently developing additional MSCP Plans for the North County and East County unincorporated areas. The Public Draft North County Plan and Draft EIR/EIS are planned for public release in 2025. The draft North County Plan covers 40 plant and animal species (many of which overlap the species covered under the South County Subarea Plan) in a 679,259-acre area and around the unincorporated communities of Bonsall, De Luz, Fallbrook, Harmony Grove, Julian, Lilac, Pala, Palomar Mountain, Pauma Valley, Rainbow, Ramona, Rancho Santa Fe, Rincon Springs, Twin Oaks Valley, Valley Center, and Warner Springs within the County's jurisdiction (Figure 2.5.7). The East County Plan Study Area covers approximately 1.2 million acres and is bounded on the west generally by the western boundary of the Cleveland National Forest, on the north by the Riverside County, on the east predominantly by Imperial County, and the south by Mexico (Figure 2.5.7). The timing for a draft East County Plan is currently unknown.

Any habitat set aside for the protection of biological resources in accordance with the MSCP is considered sensitive. MSCP plans and subarea plans may divide habitats into tiers based on sensitivity. Tier I habitats are generally the most sensitive and usually support a high diversity of plant and animal species or occur in limited areas within the unincorporated area of the county. Tier II habitats contain a number of sensitive species but are more likely to occur throughout the unincorporated area of the county or in remote areas where development is not anticipated. Tier III habitats contain natural habitats not included in the other 2 categories, and Tier IV includes disturbed lands.

The MSCP aids in the preservation of sensitive plant and animal species, helping to eliminate the need for future listings of species as endangered under the federal ESA and CESA and reduces the costly permit process for private landowners and public agencies. The overall goal of the MSCP is a large, connected, and managed preserve system that addresses a number of species at the habitat level rather than species by species and area by area. This

will create a more effective preserve system, as well as better protect the rare, threatened, and endangered species.

The program area overlaps the plan area for the MSCP South County Subarea Plan, as well as the future plan areas for the East County and North County Plans. Noncultivation activities, indoor cultivation, and mixed-light cultivation activities would be considered covered activities under the MSCP, whereas outdoor cultivation activities would be considered agricultural activities that would be exempt from regulations under the BMO, as described in Section 86.503 of the BMO, as long as clearing and grading related to outdoor cultivation meet the following requirements:

a. The land is not located within the Pre-Approved Mitigation Area (PAMA) shown on the Wildlife Agencies' Preapproved Mitigation Map, Attachment F of Document No. 0769999 on file with the clerk of the Board.
b. The applicant has farmed the land during 3 of the last 5 years and intends to retain the land in agriculture for the next 5 years, or the applicant intends to establish an agricultural operation on the particular parcel of land within 1 year and to retain the land in agriculture for at least 10 years.
c. The land is not located within a floodplain.

An applicant for an agricultural clearing project meeting these requirements shall provide evidence in writing of the facts that support a through c above. In addition, the number of acres and location of the land for which the exemption is sought shall be provided. As part of the application, the applicant shall sign an agreement to maintain the land in agriculture for the applicable holding period. The BMO is described further below.

County of San Diego Code of Regulatory Ordinances Sections 86.501–86.509, Biological Mitigation Ordinance

The BMO, under the Regulatory Code, provides the regulatory basis for implementing the MSCP South County Subarea Plan. The BMO outlines the sensitive resources of concern and sets forth the specific criteria and mitigation requirements that all private and public projects must follow. The MSCP South County Subarea Plan and BMO provide specific criteria for project design, impact allowances, and mitigation requirements. The BMO includes specific project design criteria that must be incorporated into each project, such as protecting wildlife movement corridors and avoiding resources considered to be significant. The BMO also limits the amount (i.e., acreage) of impacts that can occur to certain sensitive, rare, or endangered species and sets minimum mitigation ratios that must be implemented based on impacts.

Implementing Agreement

The Implementing Agreement is a tool to fulfill the obligations of the MSCP South County Subarea Plan. The agreement was signed on March 17, 1998, between USFWS, CDFW, and the County of San Diego. This 50-year cooperative agreement provides for the conservation of 85 plant and animal "covered species," establishes management conditions, and requires each of the parties to perform certain duties and responsibilities. It also provides for remedies and recourse should any of the parties fail to perform.

Butterflies Habitat Conservation Plan

The San Diego County Butterflies HCP is currently under development and will be a long-term regional plan focused on the recovery of sensitive butterfly populations in the county, including the federally endangered Quino checkerspot, federally endangered Laguna Mountains skipper (*Pyrgus ruralis lagunae*), federally threatened hermes copper, and sensitive Harbison's dun skipper (*Euphyes vestris harbisoni*).

The County's Butterflies HCP will provide the basis for the County to receive a federal incidental take permit to "cover" these sensitive butterfly species. This allows the incidental take permit to be extended to future development projects that comply with the County's Butterflies HCP so these projects do not have to secure their own separate incidental take permits from USFWS. Through this permitting mechanism, the County's Butterflies HCP will facilitate a more efficient regulatory process, providing improved species conservation and permitting for landowners, agricultural operators, businesses, and residents in the unincorporated regions of San Diego County. The plan area for this HCP has not yet been finalized; however, a draft plan area has been established.

County of San Diego Code of Regulatory Ordinances Sections 86.601–86.608, Resource Protection Ordinance

The Resource Protection Ordinance (RPO) was adopted in 1989 and later amended in 1991, 2007, and 2012. The RPO restricts, to varying degrees, impacts on natural resources, including environmentally sensitive lands, such as wetlands, wetland buffers, floodplains, steep slopes, sensitive habitat lands, and historical sites. Certain discretionary permit types are subject to the requirement to prepare resource protection studies under the RPO. Such discretionary permits include Tentative Maps (TMs), Tentative Parcel Maps (TPMs), Revised TMs, Revised TPMs, Rezones, Major Use Permits (MUPs), MUP modifications, and Site Plans.

The RPO requires that wetlands and their adjacent wetland buffers (i.e., 50–200 feet from the wetland edge) be protected on sites where these permits are granted. It also sets forth certain allowable uses within these lands.

The RPO also requires that applicable discretionary projects protect sensitive habitat lands. Sensitive habitat lands include unique vegetation communities and the habitat that is either necessary to support a viable population of sensitive species, is critical to the proper functioning of a balanced natural ecosystem, or serves as a functioning wildlife corridor.

County of San Diego Code of Regulatory Ordinances Sections 67.801–67.814, Watershed Protection, Stormwater Management, and Discharge Control Ordinance

The purpose of the Watershed Protection, Stormwater Management, and Discharge Control Ordinance (WPO), adopted in 2002 and updated in 2016, is to protect water resources and to improve water quality. This ordinance (1) prohibits polluted nonstormwater discharges to the stormwater conveyance system and receiving waters; (2) establishes requirements to prevent and reduce pollution to water resources; (3) establishes requirements for development project site design to reduce stormwater pollution and erosion; (4) establishes requirements for the management of stormwater flows from development projects to prevent erosion and to protect and enhance existing water-dependent habitats; (5) establishes standards for the use of off-site facilities for stormwater management to supplement on-site practices at new development

sites; (6) establishes notice procedures and standards for adjusting stormwater and nonstormwater management requirements; and (7) ensures that the County is compliant with applicable state and federal laws. The ordinance applies to all projects requiring certain discretionary or ministerial approval in the unincorporated county that are not already regulated under a valid facility-specific National Pollutant Discharge Elimination System permit or facility-specific RWQCB Waste Discharge Requirements permit. The ordinance applies to, but is not limited to, projects that require a tentative map, grading permit, or building permit. Projects are required to submit plans demonstrating how the requirements of the WPO would be met in order for the project to be approved.

County of San Diego Code of Regulatory Ordinances Sections 86.501–86.509, Habitat Loss Permit Ordinance

The Habitat Loss Permit (HLP) Ordinance was adopted in March 1994 in response to both the listing of the coastal California gnatcatcher as a federally threatened species and the adoption of the NCCP Act by the State of California. Pursuant to the Special 4(d) Rule under ESA, the County is authorized to issue "take permits" for the coastal California gnatcatcher (in the form of HLPs) in lieu of Section 7 or Section 10(a) permits, which are typically required from USFWS. Although issued by the County, the wildlife agencies (USFWS and CDFW) must concur with the issuance of an HLP for it to become valid as take authorization under ESA. The HLP Ordinance states that projects must obtain an HLP prior to the issuance of a grading permit, clearing permit, or improvement plan if the project will directly or indirectly impact any coastal sage scrub habitat types. The HLP is required if coastal sage scrub or related habitat will be impacted, regardless of whether or not the site is currently occupied by coastal California gnatcatcher. HLPs are not required for projects within the boundaries of an adopted MSCP Plan because take authorization is conveyed to those projects through compliance with the MSCP Plan.

Coastal California gnatcatcher is listed as threatened under ESA, and because cannabis activities are currently illegal under federal law, a federal permit, including an HLP for a federally listed species, may not be issued for cultivation or noncultivation activities associated with the Cannabis Program. Therefore, cultivation and noncultivation activities associated with the program must demonstrate that take of coastal California gnatcatcher would be completely avoided pursuant to this ordinance, which would require complete avoidance of coastal sage scrub habitat. Should cannabis activities be legalized federally in the future, these activities could seek coverage under this ordinance.

San Diego County Board of Supervisors Policy I-123, Conservation Agreement for the MSCP Plan

This policy establishes the process for the County to acquire habitat for MSCP preserve lands at minimal public cost while providing incentives for voluntary landowner participation in the program. The implementing mechanism is a conservation agreement through which a landowner would permanently set aside land that contributes to the County's MSCP preserve in exchange for certain financial and permitting benefits. The property owner would receive Third Party Beneficiary status, be included under the County's MSCP Plan, and would have the potential to qualify for reductions in water availability stand-by charges provided by the Metropolitan Water District of Southern California or the San Diego County Water Authority.

2.5.3 Analysis of Project Impacts and Determination of Significance

2.5.3.1 *Thresholds of Significance*

According to Appendix G of the State CEQA Guidelines, an impact on biological resources is considered significant if implementation of the Cannabis Program would do any of the following:

- have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by CDFW or USFWS;
- have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by CDFW or USFWS;
- have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means;
- interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites;
- conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; or
- conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

2.5.3.2 *Approach to Analysis*

The analysis of potential impacts on biological resources resulting from Cannabis Program implementation is based on the data review described previously in Section 2.5.1, “Existing Conditions.” The program does not apply to the incorporated cities; coastal zone; tribal lands; military lands; or to public lands managed by the US Forest Service, the California Department of Parks and Recreation (California State Parks), the US Bureau of Land Management, or CDFW. Impact mechanisms for development under the program could include clearing of native vegetation; tree removal; grading, trenching, or tilling associated with new buildings or outdoor cultivation areas; ground disturbance from construction of storage ponds; installation of irrigation systems, drainage improvements, and water storage; road and building construction; extension of electrical facilities and infrastructure; installation of fencing; and operation of artificial nighttime lighting and generators. Project implementation associated with cultivation and noncultivation activities may include conversion of natural habitats to developed or agricultural land covers. The “Approach to the Environmental Analysis” section in the introduction of this chapter contains a further description of the development assumptions for the Cannabis Program.

This program-level analysis is based upon the review of the best available data regarding biological resources in San Diego County as described previously in Section 2.5.1, “Existing Conditions.” While the program area is defined, the potential future locations, footprint, and

design details of site-specific cultivation and noncultivation activities would be identified during project-specific CEQA analysis. Program activities would not necessarily occur within every vegetation and habitat type described in Section 2.5.1.1; however, this analysis assumes that development (e.g., buildings, infrastructure, drainage improvements, utilities, cultivation activities) and operation associated with these activities could occur anywhere within the program area (except for aquatic habitats where development would not be possible). The impact analysis assumes that cultivation and noncultivation activities would occur within the maximum possible footprint for each alternative as described in Table 1.4, "Alternative Development Assumptions." This assumption likely represents a conservative overestimate of impacts on natural habitat and associated special-status plants, special-status wildlife, and sensitive natural communities.

Operations for future cultivation and noncultivation activities are assumed to be contained within the identified maximum footprint area for cultivation sites and noncultivation sites. Operational activities that could adversely affect biological resources include the following.

- Cultivation activities: Activities related to the site preparation, planting, maintenance, and harvesting of cannabis (including both outdoors and in structures) through the use of staff, equipment, vehicles, artificial nighttime lighting, and generators, resulting in disturbance (e.g., visual, auditory) to wildlife in the immediate vicinity of the site.
- Noncultivation activities: Employee vehicle, service/delivery vehicle, and customer vehicle and equipment use, resulting in disturbance (e.g., visual, auditory) to wildlife in the immediate vicinity of the project site.

Specific requirements of existing laws and regulations described in Section 2.5.2, "Regulatory Framework," as well as the proposed Zoning Ordinance amendments (see Section 1.6.1.4, "Summary of Proposed Amendments to the San Diego County Zoning Ordinance") were assessed for their ability to avoid or reduce the exposure of biological resources to substantial adverse effects.

Federal agencies, such as USACE and USFWS, cannot issue permits for activities associated with cultivation and noncultivation activities due to the current federal illegal status of these activities. Consequently, future cultivation and noncultivation activities would be required to avoid federally regulated resources, including wildlife species listed under ESA and waters of the United States as required under Attachment A (General Requirements and Prohibitions) of SWRCB Order 2023-0102-DWQ. In addition, cannabis cultivation and noncultivation activities are prohibited in the coastal zone, which rules out impacts on special-status species and habitats that occur exclusively within the coastal zone (e.g., marine and intertidal species). Therefore, these species and habitats were excluded from this analysis.

Cultivation and noncultivation activities associated with the project would be required to participate in the San Diego County MSCP, including the adopted South County Subarea Plan and future North County and East County Plans, which are under development, as well as the San Diego County Butterflies HCP. Participation in these HCPs includes incorporation of mitigation requirements into project design and payment of applicable mitigation fees. The mitigation measures included in the analysis below are consistent with MSCP mitigation requirements where applicable given the federal status of cannabis activities. The identified mitigation measures are structured to provide appropriate mitigation under the existing conditions wherein cannabis activities cannot be treated as a covered activity for federally

listed species, as well as under possible future conditions where cannabis activities are legalized by the federal government.

2.5.3.3 *Issue 1: Special-Status Plant and Wildlife Species*

Guidelines for Determination of Significance

According to Appendix G of the State CEQA Guidelines, the Cannabis Program would result in a significant impact if it would have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by CDFW or USFWS.

Impact Analysis

A total of 292 special-status plants are known to occur within San Diego County and have potential to occur in the program area (Table 2.5.3). Forty-six of these plant species are considered covered species under the San Diego MSCP South County Subarea Plan, and 17 are considered narrow endemic plant species (Table 2.5.3). In addition, 7 critical populations of sensitive plant species are identified in the MSCP South County Subarea Plan and are included in Table 2.5.4. A total of 173 special-status wildlife species are known to occur in San Diego County and have potential to occur in the program area, including reptiles, amphibians, nesting birds, fish, invertebrates, and mammals (Table 2.5.4). Thirty-seven of these special-status wildlife species are considered covered species under the San Diego MSCP South County Subarea Plan, and 17 are considered rare, narrow endemic animal species. Program implementation could result in adverse effects on special-status species if present within or adjacent to the cultivation or noncultivation activity footprint.

Federal, State, and Local Regulations and Existing Regulatory Processes

As noted in Section 2.5.2, “Regulatory Framework,” there are a number of federal, state, and local regulations currently in place that help protect biological resources in the county.

The federal MBTA prohibits the disturbance of migratory birds, including raptors. In addition, the Bald and Golden Eagle Protection Act limits impacts on bald eagles and golden eagles. The federal ESA requires a Section 7 or Section 10 process to be undertaken if a project would result in take of a federally listed species, whereas CESA prohibits take of state-listed species without securing a Section 2081 permit. These permits may also be achieved through NCCP plans, such as the MSCP Plans. As noted above, however, due to the current status of cannabis activities under federal law, applicants cannot currently receive a take permit for federally listed species.

SWRCB Order WQ 2023-0102-DWQ

Licensed cultivation and noncultivation activities would be required to comply with Term 10 of Attachment A (General Requirements and Prohibitions) of SWRCB Order WQ 2023-0102-DWQ, which requires that the special-status plant and wildlife species be avoided and buffers be provided in consultation with CDFW and CAL FIRE. Avoidance of impacts on special-status plant species listed under ESA, CESA, or CRPR 1B.1 and 1B.2 is also provided in Term 4 of Attachment A (Section 1, General Requirements and Prohibitions). Term 11 of Attachment A (Section 1, General Requirements and Prohibitions) provides guidance on equipment use and maintenance to prevent the spread of invasive species. In addition, cannabis activities are

required to comply with Term 3 (General Requirements and Prohibitions), which requires application for an LSA Agreement, and requirements therein, or consultation with CDFW for any activity that may substantially divert, obstruct, alter, or deposit into any river, stream, or lake. In addition, Term 10 of Attachment A (General Requirements and Prohibitions) of SWRCB Order WQ 2023-0102-DWQ requires site evaluations by a qualified biologist to determine whether special-status species have potential to occur on the site before development or site expansion.

Attachment A of SWRCB Order WQ 2023-0102-DWQ uses the California Invasive Plant Council's definition of "invasive species," which defines them as organisms (plants, animals, or microbes) that are not native to an environment and that, once introduced, establish, quickly reproduce and spread, and cause harm to the environment, economy, or human health. For the purposes of this analysis, noxious weeds are also considered to be invasive species. Noxious weeds are designated under California law by the California Department of Food and Agriculture and are defined as likely to be troublesome, aggressive, intrusive, detrimental, or destructive to agriculture, silviculture, or important native species and difficult to control or eradicate (CDFA 2024).

All licensed cultivation and noncultivation activities are required to comply with the numeric and narrative instream flow requirements for all diversions of surface water and groundwater as part of compliance with Attachment A (Section 3, Numeric and Narrative Instream Flow Requirements) of SWRCB Order WQ 2023-0102-DWQ. These requirements include design requirements for fish screens, diversion structures, off-stream storage reservoirs, and storage bladders.

Diversion provisions of the standards are based on 3 types of requirements to ensure sufficient instream flows:

- dry season forbearance period and limitations on the wet season diversions,
- narrative instream flow requirements, and
- numeric instream flow requirements during the wet season.

Instream flow requirements during the wet season were established by SWRCB in consultation with CDFW for the protection of aquatic species' life history needs, including those of endangered anadromous salmonids. Numeric instream flow requirements (minimum instream flows required to protect aquatic species) are established for each region in the state in Attachment A of SWRCB Order WQ 2023-0102-DWQ. Aquatic base flows have also been established to address instream flow impacts from groundwater diversions. The aquatic base flow is the set of chemical, physical, and biological conditions that represent limiting conditions for aquatic life in stream environments.

Surface water and groundwater diversions for commercial cannabis cultivation operations are limited in the following manner:

- Surface water diversions shall be prohibited from April 1 through October 31 each year (forbearance period).
- Surface water diversions may occur from November 1 through March 31 each year subject to the following requirements:

    - Surface water diversions shall not occur until the real-time daily average flow is greater than the minimum monthly instream flow requirement at a compliance gage for 7 consecutive days or after December 15 when flows are greater than the numeric flow requirement.
    - Surface water diversions must bypass a minimum of 50 percent of the streamflow past the point of diversion as estimated based on the commercial cannabis cultivator's visual observation.
- SWRCB shall monitor instream flows during the dry season and evaluate the number or location of groundwater diversions to determine whether a groundwater forbearance period or other measures should be imposed. SWRCB shall notify commercial cannabis cultivators if a groundwater forbearance period or other measures may be imposed to address the low-flow condition.
- SWRCB flow standards and diversion requirements were developed to protect fish spawning, migration, and rearing for endangered anadromous salmonids, as well as flows needed to maintain natural flow variability in each watershed. The diversion requirements would ensure that the individual and cumulative effects of water diversions and discharges associated with commercial cannabis cultivation do not affect instream flows necessary for fish spawning, migration, and rearing for endangered anadromous salmonids, as well as flows needed to maintain natural flow variability (SWRCB 2017a). The policy was scientifically peer-reviewed by 4 experts. The peer review determined that water quality, instream flow, and diversion requirements of the policy were based on sound scientific knowledge, methods, and data (SWRCB 2017b).

In accordance with Attachment A of SWRCB Order WQ 2023-0102-DWQ, for any water diversion or waste discharge related to commercial cannabis cultivation, Terms 1 through 14 (Requirements Related to Water Diversions and Waste Discharge for Cannabis Cultivation) will apply, which include best management practices, including erosion control; commercial cannabis cultivation-related waste disposal, refuse, and human waste disposal; and stream crossing installation and maintenance.

In addition, cannabis activities are required to comply with Term 3 (General Requirements and Prohibitions), which requires application for an LSA Agreement, and requirements therein, or consultation with CDFW for any activity that may substantially divert, obstruct, alter, or deposit into any river, stream, or lake. Furthermore, cannabis activities are required to comply with Term 63 of Attachment A (Requirements Related to Water Diversions and Waste Discharge for Cannabis Cultivation) of SWRCB Order WQ 2023-0102-DWQ, which requires no disturbance of aquatic or riparian habitat, such as pools, spawning sites, large wood, or shading vegetation unless authorized under proper permits (e.g., CDFW LSA Agreement), as well as Term 64 of Attachment A (Requirements Related to Water Diversions and Waste Discharge for Cannabis Cultivation), which requires maintaining riparian habitat.

San Diego County Zoning Ordinance and Amendments

The Zoning Ordinance Vernal Pool Area Regulations would prohibit proposed uses, activities, or construction that would have any significant, adverse effects on any identified vernal pool or an associated rare, threatened, or endangered species. Sensitive Resource Area Regulations would also apply to nonexempt sites that contain wetlands.

The following proposed Zoning Ordinance amendments would apply to the project and reduce impacts on special-status wildlife species, including impacts related to noise, artificial nighttime lighting, and water quality:

- Cannabis uses must be compliant with the noise, odor, signage, water usage, fencing, etc. regulations outlined in the respective sections of the Zoning Ordinance and Regulatory Code.
- Exterior lighting must be operational, full cut-off, shielded, and downward facing. Indoor and mixed-light operations would be fully controlled, such that minimal to no light escapes from within facilities to areas outside of the facilities.
- Use of a generator shall not be used as the sole source of power for a cannabis facility.
- Lighting shall be prohibited in agricultural shade or crop structures.
- Security lighting shall be motion sensor activated in agricultural zones.
- Nighttime light escape from mixed-light cultivation shall be controlled using internal black-out curtains to prevent the facility from emitting nighttime glow.
- Cannabis cultivation shall not occur on slopes 25 percent or greater.
- Generators shall not be used for cultivation except for temporary use in case of emergency.
- Outdoor cannabis cultivation areas must be fenced. Fencing cannot consist of razor wire, barbed wire, electrical-fencing, or similar types of materials.

County of San Diego Code of Regulatory Ordinances

The RPO requires that wetlands and their adjacent wetland buffers (i.e., 50–200 feet from the wetland edge) be protected on sites where these permits are granted. It also sets forth certain allowable uses within these lands. The RPO also requires protection of sensitive habitat lands (i.e., unique vegetation communities, habitat that is necessary to support a viable population of sensitive species, habitat that is critical to the proper functioning of a balanced natural ecosystem, habitat that serves as a functioning wildlife corridor).

The HLP Ordinance requires projects to obtain an HLP prior to the issuance of a grading permit, clearing permit, or improvement plan if the project will directly or indirectly affect any coastal sage scrub habitat types. The HLP is a type of take permit for the coastal California gnatcatcher issued by the County pursuant to the Special 4(d) Rule under ESA. USFWS and CDFW must concur with the issuance of an HLP for it to become valid as take authorization under ESA. As described above, coastal California gnatcatcher is listed as threatened under ESA, and because cannabis activities are currently illegal under federal law, a federal permit, including an HLP for a federally listed species, may not be issued for cultivation or noncultivation activities associated with the project under current federal law.

San Diego County BMO

The BMO outlines the sensitive resources of concern under the MSCP and sets forth the specific criteria and mitigation requirements that all private and public projects must follow. The MSCP South County Subarea Plan and BMO provide specific criteria for project design, impact allowances, and mitigation requirements. The BMO includes specific project design criteria that

must be incorporated into each project, such as protecting wildlife movement corridors and avoiding resources considered to be significant.

Details regarding the special-status species that may occur in the program area, including plants and wildlife, are included below. Specific regulations that would reduce impacts on some species, that may not apply to all species, are also noted, where applicable. Finally, the residual impacts after application of the existing regulations are described for each species or group of species.

Special-Status Plants

The 292 special-status plant species that are known to occur in San Diego County may occur in the program area and are associated with a wide variety of habitat types, including scrub and chaparral, coastal sage scrub, dune communities, woodlands, forests, grasslands, wetlands, marshes, and riparian habitats (Table 2.5.3). Cultivation and noncultivation activities associated with the program may include ground disturbance, vegetation removal, and grading.

Pursuant to Terms 10 and Term 4 of Attachment A (General Requirements and Prohibitions) of SWRCB Order WQ 2023-0102-DWQ, applicants are required to avoid impacts on special-status plants, and pursuant to Term 11 of Attachment A (Section 1, General Requirements and Prohibitions), applicants are required to prevent the spread of invasive species that may result in indirect impacts on special-status plants. However, the locations of all special-status plants in San Diego County are not known, and these requirements do not include details regarding methodology for identifying special-status plants.

Requirements under the BMO, including species-specific mitigation and payment of fees, would reduce impacts on special-status plants covered under the MSCP. Applicants would be required to participate in the plan, implement habitat-based measures, and pay associated fees for activities that are not exempt under the MSCP (i.e., indoor cultivation, noncultivation activities, outdoor cultivation that does not meet the requirements in the BMO to qualify for exemption).

Many of the special-status plant species that may occur in the program area are not covered under the MSCP, and some outdoor cultivation activities would be exempt from the requirements of the MSCP. As a result, and because surveys for special-status plants have not been conducted throughout the entire program area, cultivation and noncultivation activities could result in the direct, unmitigated loss of special-status plants or their habitat if present. Invasive plant species could be introduced and could proliferate due to some cultivation-related activities, such as ground disturbance, which could result in indirect effects on special-status plants and direct loss of their habitats. The loss of special-status plants and their habitat could substantially affect the abundance, distribution, and viability of local and regional populations of these species.

Special-Status Wildlife

The special-status wildlife known to occur in San Diego County and that have potential to occur in the program area are provided in Table 2.5.4 and described below by species group (i.e., amphibians, reptiles, birds, fish, insects, fairy shrimp, mammals). Species listed under ESA or CESA are noted (because of the additional avoidance requirements for these listed species pursuant to Attachment A of SWRCB Order WQ 2023-0102-DWQ), as well MSCP-covered species and rare, narrow endemic animal species.

Term 10 of Attachment A (General Requirements and Prohibitions) of SWRCB Order WQ 2023-0102-DWQ requires that special-status wildlife species be avoided and buffers be provided in consultation with CDFW and CAL FIRE. However, for the most part, surveys for special-status wildlife have not been conducted in the program area, and the exact locations of these resources are not known.

Special-Status Amphibians

Seven special-status amphibian species are known to occur in San Diego County and have potential to occur in the program area: arroyo toad, California red-legged frog (*Rana draytonii*), Coast Range newt (*Taricha torosa*), Desert slender salamander (*Batrachoseps major aridus*), large-blotched salamander (*Ensatina eschscholtzii klauberi*), southern mountain yellow-legged frog (*Rana muscosa*), and western spadefoot (*Spea hammondii*) (Table 2.5.4). Arroyo toad and California red-legged frog are listed as endangered and threatened, respectively, under ESA, and western spadefoot is proposed for listing under ESA. Arroyo toad and California red-legged frog are also MSCP-covered species and rare, narrow endemic animal species. These special-status amphibian species are typically found close to water; however, they use upland habitats adjacent to water at varying distances depending on the species. Southern mountain yellow-legged frog is listed as endangered under both CESA and ESA. This species is considered a Group I animal species on the County of San Diego sensitive animal list. Although the historic range of this species overlapped San Diego County, southern mountain yellow-legged frogs are no longer known to occur in the county. Therefore, impacts on this species would not occur, and mitigation would not be required.

As described above, SWRCB Order WQ 2023-0102 Term 37 of Attachment A (Section 1, General Requirements and Prohibitions) requires setback areas from the edge of surface water of at least 50 feet of surface water, dependent on the type of stream (e.g., ephemeral, perennial), as well as water quality control measures, and the RPO requires protection of wetlands and adjacent buffers of 50–200 feet. These regulations would likely prevent direct effects on special-status amphibians in aquatic habitat and in some riparian areas but would not fully prevent direct effects on these species in upland habitat beyond 50–200 feet from water. Arroyo toads have been documented using upland habitats approximately 0.6 miles (1 kilometer) from aquatic habitat (USFWS 1999). California red-legged frogs remain close to breeding habitat during the breeding season and typically do not move more than approximately 300 feet into upland habitats (Bulger et al. 2003; Fellers and Kleeman 2007). However, adult and juvenile California red-legged frog are known to travel through upland habitat (e.g., riparian, woodland, grassland) to move between breeding and nonbreeding sites (e.g., other ponds, deep pools in streams, moist and cool riparian understory, burrows) for access to refugia and foraging habitat or to disperse to new breeding locations. During migration, California red-legged frogs may travel long distances from aquatic habitat and typically travel in straight lines irrespective of vegetation types and have been documented to move more than 1.7 miles between aquatic habitat sites (Bulger et al. 2003). One recent study demonstrated that western spadefoot adults may burrow in upland habitat up to approximately 860 feet from breeding ponds (Baumberger et al. 2019). Coast range newts have been documented migrating approximately 2 miles between breeding and upland estivation sites.

Requirements under the BMO, including species-specific mitigation and payment of fees, would reduce impacts on amphibians covered under the MSCP. While both MSCP-covered amphibian species (arroyo toad and California red-legged frog) are federally listed and applicants would not be able to obtain take coverage for these species under the MSCP due to

the federal legal status of cannabis activities, applicants would still be required to participate in the plan and pay associated fees for activities that are not exempt under the MSCP (i.e., indoor cultivation activities, noncultivation activities, outdoor cultivation that does not meet the requirements in the BMO to qualify for exemption).

Coast range newt and western spadefoot are not covered under the MSCP, and some outdoor cultivation activities would be exempt from the requirements of the MSCP. As a result, and because impacts on these species in upland areas cannot be discounted, cultivation and noncultivation activities associated with the program could result in loss of or injury of special-status amphibians within upland habitats, if the species are present, through ground disturbance and vegetation removal. Individual frogs, toads, or newts could be crushed by heavy equipment or personnel on foot. In addition, the use of plastic for cultivation activities (e.g., polyethylene plastic for agricultural shade or crop structures) may result in indirect effects on wildlife (e.g., through entrapment, entanglement, or ingestion) if these materials are introduced into the environment.

Special-Status Reptiles

Twenty-four special-status reptile species are known to occur in San Diego County and have potential to occur in the program area (Table 2.5.4). Southwestern pond turtle (*Actinemys marmorata pallida*) is proposed for listing under ESA, and barefoot banded gecko (*Coleonyx switaki*) is listed as threatened under CESA. In addition,3 reptile species are MSCP-covered species (coast horned lizard [*Phrynosoma blainvillii*], orange-throated whiptail [*Aspidoscelis hyperythra*], and western pond turtle), and western pond turtle is also considered an MSCP rare, narrow endemic animal species.

These special-status reptile species, including lizards and snakes, are associated with various habitats in the program area, including chaparral, coastal sage scrub, grassland, woodland, and sand dunes, as well as desert wash, marshes, and riparian habitats. Western pond turtles are associated with ponds, marshes, rivers, streams, and irrigation ditches but can also occur in upland habitats up to approximately 0.3 miles from aquatic habitat.

Cultivation and noncultivation activities are required to comply with SWRCB Order WQ 2023-0102 Term 37 of Attachment A (Section 1, General Requirements and Prohibitions), which requires setback areas of at least 50 feet of surface water, dependent on the type of stream (e.g., ephemeral, perennial), as well as water quality control measures, and the RPO requires protection of wetlands and adjacent buffers of 50–200 feet. Compliance with the general order would likely prevent some direct effects on special-status reptiles associated with aquatic, marsh, or riparian habitats; however, all of these species occur in upland habitat beyond 50–200 feet from water.

Requirements under the BMO, including species-specific mitigation and payment of fees, would reduce impacts on western pond turtle. Western pond turtle is currently proposed for listing under ESA, and if the species is listed, applicants would not be able to obtain take coverage for this species under the MSCP due to the federal legal status of cannabis activities. However, applicants would still be required to participate in the plan and pay associated fees for activities that are not exempt under the MSCP (i.e., indoor cultivation activities, noncultivation activities, outdoor cultivation that does not meet the requirements in the BMO to qualify for exemption).

Most of the special-status reptile species that may occur in the program area are not covered under the MSCP, and some outdoor cultivation activities would be exempt from the requirements of the MSCP. As a result, cultivation and noncultivation activities associated with the program could result in unmitigated loss of or injury to special-status reptiles, if the species occur at an individual project site, through ground disturbance and vegetation removal. Individual snakes, lizards, turtles, or occupied underground burrows could be crushed by heavy equipment or personnel on foot. In addition, western pond turtle eggs in underground burrows could be crushed and destroyed by the same activities. In addition, the use of plastic for cultivation activities (e.g., polyethylene plastic for agricultural shade or crop structures) may result in indirect effects on wildlife (e.g., through entrapment, entanglement, or ingestion) if these materials are introduced into the environment.

Special-Status Birds

Forty-one special-status bird species are known to occur in San Diego County and have potential to occur in the program area (Table 2.5.4). Eight of these species are listed or proposed for listing under ESA, and 13 species are listed under CESA or designated as fully protected under California Fish and Game Code. In addition, 25 bird species are MSCP-covered species, and 11 are considered MSCP rare, endemic animal species (Table 2.5.4).

Raptors

Special-status raptors that are known to occur in San Diego County and may occur in the program area are described in Table 2.5.4. Nesting habitat suitable for these species includes trees, snags, cliffs, burrows, marshes, grasslands, and human-made structures (e.g., utility poles). In addition, other raptor species (e.g., red-tailed hawk [*Buteo jamaicensis*]) are known to nest in San Diego County, and these species and their nests are protected under California Fish and Game Code. Raptors are generally considered to be more sensitive to human disturbance than other bird species, although this is not always the case.

Other Special-Status Birds

Several additional special-status bird species are known to occur in San Diego County and may occur in the program area (see Table 2.5.4). Habitat suitable for these species, including woodland, forest, riparian habitat, grassland, coastal sage scrub, and scrub and chaparral habitat, is present throughout the program area. Many of these species are associated very closely to certain habitats; for example, coastal California gnatcatcher is found exclusively in coastal sage scrub habitats. In addition, native migratory bird nests are protected by the California Fish and Game Code, and common bird species nest in many different habitats in San Diego County, including developed and disturbed habitats.

Requirements under the BMO, including species-specific mitigation and payment of fees, would reduce impacts on bird species covered under the MSCP. While several MSCP-covered bird species are federally listed (California least tern, coastal California gnatcatcher, least Bell's vireo, light-footed Ridgway's rail, southwestern willow flycatcher, western snowy plover, western yellow-billed cuckoo) and while applicants would not be able to obtain take coverage for these species under the MSCP due to the federal legal status of cannabis activities, applicants would still be required to participate in the plan and pay associated fees for activities that are not exempt under the MSCP (i.e., indoor cultivation activities, noncultivation activities, outdoor cultivation that does not meet the requirements in the BMO to qualify for exemption).

Many of the special-status bird species that may occur in the program area are not covered under the MSCP, and some outdoor cultivation activities would be exempt from the requirements of the MSCP. As a result, cultivation and noncultivation activities associated with the program could result in unmitigated loss of special-status birds, active nests, eggs, or young through removal or trees or other vegetation. Construction activities and facility operation (e.g., cultivation activities, human activity associated with noncultivation activities) could result in direct disturbance (i.e., due to noise, visual stimuli) of nesting special-status birds, if located near these activities, potentially resulting in disruption of breeding activities, nest abandonment, and loss of eggs or chicks. In addition, the use of plastic for cultivation activities (e.g., polyethylene plastic for agricultural shade or crop structures) may result in indirect effects on wildlife (e.g., through entrapment, entanglement, or ingestion) if these materials are introduced into the environment.

Special-Status Fish

Five special-status fish species are known to occur in San Diego County and have potential to occur in the program area (Table 2.5.4). Four of these species are listed under both ESA and CESA; however, no fish species are covered under the MSCP.

As noted above, cultivation and noncultivation activities are required to comply with SWRCB Order WQ 2023-0102 Term 37 of Attachment A (Section 1, General Requirements and Prohibitions), which requires setback areas from the edge of surface water of at least 50 feet of surface water, dependent on the type of stream (e.g., ephemeral, perennial) and requires water quality control measures. The RPO also requires protection of wetlands and adjacent buffers of 50–200 feet. Furthermore, cultivation and noncultivation activities associated with the project would be subject to SWRCB numeric and narrative instream flow requirements or required to obtain coverage under the waiver of WDRs (i.e., sites smaller than 2,000 square feet in area).

Because cultivation and noncultivation activities associated with the project would be subject to the numeric and narrative instream flow requirements and other requirements noted above, these activities would not create new surface water flow impacts on fisheries. For these reasons, direct impacts on special-status fish are not expected to occur. However, the use of plastic for cultivation activities (e.g., polyethylene plastic for agricultural shade or crop structures) may result in indirect effects on wildlife (e.g., through entrapment, entanglement, or ingestion) if these materials are introduced into the environment.

Special-Status Terrestrial Invertebrates

Twenty-five special-status terrestrial invertebrate species, consisting of 12 butterflies, 7 beetles, 2 snails, 1 bumble bee, 1 fly, 1 weevil, and 1 slug, are known to occur in San Diego County and have potential to occur in the program area (Table 2.5.4). Laguna Mountains skipper and Quino checkerspot butterfly are listed as endangered, hermes copper butterfly is listed as threatened, and monarch is proposed for listing under ESA. Two butterfly species, Thorne's hairstreak (*Callophrys thornei*) and wandering skipper (*Panoquina errans*), are MSCP-covered species. Crotch's bumble bee is a candidate for listing under CESA. These species occur in a variety of habitats in the program area, including grassland, coastal sage scrub, scrub and chaparral, forest, woodland, and salt marshes (Table 2.5.4). Many monarch overwintering sites have been documented in San Diego County (Xerces Society 2018).

Requirements under the BMO, including species-specific mitigation and payment of fees, would reduce impacts on the butterfly species covered under the MSCP (Thorne's hairstreak and wandering skipper) for activities that are not exempt under the MSCP (i.e., indoor cultivation activities, noncultivation activities, outdoor cultivation that does not meet the requirements in the BMO to qualify for exemption). However, several other butterfly species and Crotch's bumble bee are not covered under the MSCP, and some outdoor cultivation activities would be exempt from the requirements of the MSCP. As a result, cultivation and noncultivation activities associated with the program could result in direct mortality of special-status insects, removal of host plants for special-status butterflies, destruction of underground Crotch's bumble bee nests, or removal of habitat for these species, if present on an individual project site, through vegetation removal or ground disturbance. In addition, the use of plastic for cultivation activities (e.g., polyethylene plastic for agricultural shade or crop structures) may result in indirect effects on wildlife (e.g., through entrapment, entanglement, or ingestion) if these materials are introduced into the environment.

Special-Status Fairy Shrimp

Three special-status fairy shrimp species—California linderiella (*Linderiella occidentalis*), Riverside fairy shrimp, and San Diego fairy shrimp—are known to occur in San Diego County and have potential to occur in the program area (Table 2.5.4). Riverside fairy shrimp and San Diego fairy shrimp are listed as endangered under ESA, and are MSCP-covered species and rare, endemic animal species.

Term 10 of Attachment A (Section 1, General Requirements and Prohibitions) of SWRCB Order WQ 2023-0102-DWQ requires site evaluations by a qualified biologist to determine whether sensitive communities, which would include vernal pools, occur on the site before development. Because the SWRCB Order WQ 2023-0102-DWQ is intended to apply statewide, project specifics (e.g., bloom dates for potential wetland plants, locations of wetlands, quality of wetlands) were not considered. In addition, Term 37 of Attachment A (Section 1, General Requirements and Prohibitions) of SWRCB Order WQ 2023-0102 requires delineation of wetlands using the USACE Wetlands Delineation Manual and 100-foot riparian setbacks for any wetlands delineated. Furthermore, the RPO also requires protection of wetlands and adjacent buffers of 50–200 feet. There may be instances in which wetlands identified will not receive sufficient protection from the 50–200-foot setback due to conditions such as topography or quality of wetland (e.g., habitat suitable for endangered species).

The Zoning Ordinance Vernal Pool Area Regulations would prohibit proposed uses, activities, and construction that would have any significant, adverse effects on any identified vernal pool or an associated rare, threatened, or endangered species. However, it is possible that vernal pool habitat that has not been identified may be present in areas proposed for development for cultivation or noncultivation activities, and these areas would not have been previously identified as being subject to these regulations.

Cultivation and noncultivation activities associated with the program may include ground disturbance that could result in direct loss of special-status fairy shrimp or interruption of the hydrology of vernal pool habitat, leading to loss of fairy shrimp if the species occur at an individual project site, especially if the location of vernal pools has not been previously documented. In addition, the use of plastic for cultivation activities (e.g., polyethylene plastic for agricultural shade or crop structures) may result in indirect effects on wildlife (e.g., through entrapment, entanglement, or ingestion) if these materials are introduced into the environment.

Special-Status Mammals

Thirty-two special-status mammal species are known to occur in San Diego County and have potential to occur in the program area (Table 2.5.4).

Special-Status Bats

Sixteen special-status bat species are known to occur in San Diego County and have potential to occur in the program area (see Table 2.5.4). No bat species are listed under ESA or covered under the MSCP.

These special-status bats use a variety of roosting habitats, including trees, caves, crevices, mines, bridges, culverts, hollow trees, and buildings. Cultivation and noncultivation activities that include removal of trees, removal of existing buildings, or road work (i.e., bridge or culvert removal) could result in the direct loss of special-status bat roosts and potential loss of individuals, including flightless young in maternity roosts. In addition, the use of plastic for cultivation activities (e.g., polyethylene plastic for agricultural shade or crop structures) may result in indirect effects on wildlife (e.g., through entrapment, entanglement, or ingestion) if these materials are introduced into the environment.

Special-Status Rodents and Rabbits

Ten special-status rodent species are known to occur in San Diego County and have potential to occur in the program area (see Table 2.5.4). One special-status rabbit, San Diego black-tailed jackrabbit (*Lepus californicus bennettii*), has potential to occur in the program area. Pacific pocket mouse (*Perognathus longimembris pacificus*) is listed as endangered under ESA, and Stephens's kangaroo rat (*Dipodomys stephensi*) is listed as threatened under ESA and CESA. Pacific pocket mouse is also an MSCP rare, narrow endemic animal species. Habitat suitable for these special-status rodent species include grassland, scrub and chaparral, deserts, and rocky areas.

Requirements under the BMO, including habitat-based mitigation and payment of fees, would reduce impacts on the Pacific pocket mouse for activities that are not exempt under the MSCP (i.e., indoor cultivation, noncultivation activities, outdoor cultivation that does not meet the requirements in the BMO to qualify for exemption). However, most of the special-status rodents that may occur in the program area are not covered under the MSCP, and some outdoor cultivation activities would be exempt from the requirements of the MSCP. As a result, cultivation and noncultivation activities associated with the program could result in direct mortality of special-status rodents, destruction of occupied underground burrows, destruction of above-ground nests (i.e., San Diego desert woodrat, San Diego black-tailed jackrabbit), or removal of habitat for these species, if present on an individual project site, through vegetation removal or ground disturbance. In addition, the use of plastic for cultivation activities (e.g., polyethylene plastic for agricultural shade or crop structures) may result in indirect effects on wildlife (e.g., through entrapment, entanglement, or ingestion) if these materials are introduced into the environment.

Special-Status Carnivores and Mesocarnivores

Mountain lion, American badger (*Taxidea taxus*), and southern California ringtail (*Bassariscus astutus octavus*) are known to occur in San Diego County and have potential to occur in the program area (Table 2.5.4). Mountain lions in southern California, including San Diego, are candidates for listing under CESA, and southern California ringtail is designated as fully

protected under California Fish and Game Code. American badger and mountain lion are MSCP-covered species.

Mountain lions occur in a variety of habitats except for the easternmost deserts of San Diego County but are most abundant in riparian areas and brushy stages of most habitats (CWHR 2024a). American badgers may occur in grasslands, shrublands (e.g., coastal sage scrub, scrub and chaparral), and open forests and woodlands. Southern California ringtails also occur in a variety of habitats, including deserts, rocky areas, shrublands, woodlands, forests, and riparian areas.

Requirements under the BMO, including habitat-based mitigation and payment of fees, would reduce impacts on American badger and mountain lion, which are covered under the MSCP. However, southern California ringtail is not covered under the MSCP, and some outdoor cultivation activities would be exempt from the requirements of the MSCP.

Cultivation and noncultivation activities are not likely to result in direct loss of adult mountain lions, American badgers, or ringtails because individuals would likely avoid or flee areas where construction activities or operation of these facilities was occurring. However, if construction or operation activities are conducted near an existing reproductive den with young (i.e., rocky areas, caves, dense shrubs, or downed logs for mountain lions; burrows for American badgers; tree cavities, downed logs, rock piles, or dense shrubs for ringtail), disturbance associated with these activities (e.g., noise, visual stimuli) could result in abandonment of the den, leading to loss of young through exposure to predation. Furthermore, if immobile young are present in dens and construction activities result in removal or destruction of the den habitat, these immobile young could be injured or killed. In addition, the use of plastic for cultivation activities (e.g., polyethylene plastic for agricultural shade or crop structures) may result in indirect effects on wildlife (e.g., through entrapment, entanglement, or ingestion) if these materials are introduced into the environment.

Special-Status Ungulates

Two special-status ungulate species are known to occur in San Diego County and may occur in the program area: peninsular bighorn sheep DPS and southern mule deer (*Odocoileus hemionus fuliginatus*). Peninsular bighorn sheep is listed as endangered under ESA, threatened under CESA, and also designated as fully protected under California Fish and Game Code. Southern mule deer is a covered species under the MSCP. Habitat for peninsular bighorn sheep includes steep-walled canyons and ridges bisected by rocky or sandy washes with available water. Habitat for southern mule deer is more variable, including woodlands, shrublands, meadows, grasslands, and riparian areas. Desert bighorn sheep are likely to avoid areas with human activity, whereas mule deer are often observed near homes and other development.

Cultivation and noncultivation activities associated with the program are unlikely to result in direct loss of peninsular desert bighorn sheep or southern mule deer because these species would likely avoid areas with human activity or flee from construction or operation of these sites. Furthermore, these species are not associated with nests or dens, and young are precocial and can walk quickly after birth, which makes them potentially less vulnerable to disturbance or at least better equipped to flee from disturbance. However, these activities could result in indirect effects on these species through disruption of movement corridors through construction of new buildings, removal of natural habitat, or construction of fences. The Zoning Ordinance amendments require outdoor cannabis cultivation operations to be

fenced but prohibit fencing that consists of razor wire, barbed wire, electrical fencing, or similar types of materials. This requirement would reduce potential adverse effects from entanglement or entrapment on special-status ungulates. The BMO requires an assessment of whether a site qualifies as a Biological Resource Core Area, which includes areas that serve as regional linkage or corridors for wildlife. The RPO also requires protection of sensitive habitat lands, including areas that function as wildlife corridors. Although these requirements would likely reduce the potential for indirect effects on peninsular desert bighorn sheep and southern mule deer resulting from disruption of movement corridors, the requirements do not include enough detail to ensure that fencing would be "wildlife friendly" (i.e., reduce the risk of entanglement or entrapment) or performance measures. In addition, the use of plastic for cultivation activities (e.g., polyethylene plastic for agricultural shade or crop structures) may result in indirect effects on wildlife (e.g., through entrapment, entanglement, or ingestion) if these materials are introduced into the environment.

Alternative 1: No Project—Retention of Current Cannabis Regulations

Under Alternative 1, the Cannabis Program would not be adopted. The existing 5 commercial cannabis facilities in the unincorporated areas of El Cajon, Escondido, and Ramona would be allowed to continue to operate as well as potentially expand their existing facilities and operations to a total of 10,000 square feet of building area for each site. Based on review satellite imagery, these five sites have been developed with buildings, parking areas, and infrastructure. Given the disturbed conditions of these sites, no significant impacts on special-status species are anticipated.

Impacts on special-status species would be less than significant under Alternative 1.

Alternative 2: Proposed Project—Cannabis Program Consistent with State Requirements

Under Alternative 2, outdoor cultivation activities could occur on up to 472 acres of land, with a total of up to 1,772,120 square feet (i.e., approximately 41 acres) of building area. Mixed-light cultivation activities could occur on up to 293 acres of land, with a total of up to 668,184 square feet (i.e., approximately 15 acres) of building area. Indoor cultivation activities could occur on up to 8 acres of land, with a total of up to 240,000 square feet (i.e., approximately 5.5 acres) of building area. Noncultivation uses could occur on up to 259 acres of land, with a total of up to 2,030,400 square feet (i.e., approximately 47 acres) of building area. This would result in a total development footprint (i.e., cultivation activities, buildings, caretaker housing, storage buildings, on-site nurseries, agricultural shade or crop structures, water tanks, ponds, parking, cannabis operation buildings, other associated improvements) of approximately 1,032 acres, with approximately 108 acres (4,710,704 square feet) of building area for Alternative 2. Cannabis facilities would be required to observe a 600-foot buffer from certain state-defined sensitive uses, including schools, daycares, and youth centers.

The specific locations of future cultivation and noncultivation activities are not known at this time and have not been evaluated as part of this programmatic environmental analysis other than the zoning areas where these activities would be allowed and the buffers described above. Therefore, quantifying the potential impact of these future activities on vegetation and habitat types and resultant impacts on special-status species would occur at the individual project level. As a result, it is assumed that cultivation and noncultivation activities could occur in habitats occupied by the special-status plant and wildlife species described above.

As described above, cultivation and noncultivation activities associated with the program may include ground disturbance, vegetation removal, and grading, which could result in the direct loss of special-status plants or their habitat if present. Invasive plant species could be introduced and could proliferate due to some cultivation-related activities, such as ground disturbance, which could result in indirect effects on special-status plants and direct loss of their habitats. The loss of special-status plants and their habitat could substantially affect the abundance, distribution, and viability of local and regional populations of these species. In addition, cultivation and noncultivation activities associated with the program could result in direct loss of special-status wildlife, active dens or nests, or young through ground disturbance, removal of trees, or removal of other vegetation. Construction activities and facility operation (e.g., cultivation activities, human activity associated with noncultivation activities) could also result in direct disturbance (i.e., due to noise, visual stimuli) of special-status mammals, if located near these activities, potentially resulting in abandonment of dens or loss of young. Although peninsular bighorn sheep and southern mule deer are not expected to be directly affected by cultivation and noncultivation activities, indirect effects resulting from installation of fencing could result in disruption of movement corridors and incidental entanglement or entrapment of sheep or deer. Artificial nighttime lighting and noise are not expected to result in adverse effects on special-status wildlife because existing regulations and proposed Zoning Ordinance amendments require all interior lighting to be contained within buildings, limit the types of outdoor lighting, and require limits on generator use for noise abatement.

Impacts on special-status species would be potentially significant under Alternative 2.

Alternative 3: Cannabis Program with Expanded County Regulations

Under Alternative 3, the total development footprint acreage and building area acreage would be the same as described above for Alternative 2. Under Alternative 3, the definition of “sensitive uses” would be expanded, and the sensitive uses relevant to biological resources are regional parks, local parks, trails, recreation facilities, and preserves with visitor-serving amenities, among other locations. The buffer observed from these sensitive uses from any cultivation or noncultivation activity would be expanded to 1,000 feet, from the 600 feet required by Alternative 2. Cannabis billboards would also be prohibited within 1,000 feet of these sensitive uses.

The potential impact mechanisms related to special-status species under Alternative 3 would be the same as described above for Alternative 2. The expanded sensitive uses described above include regional parks, local parks, trails, recreation facilities, and preserves with visitor-serving amenities, which encompass large areas of open space and natural habitat in San Diego County. These areas likely provide habitat for special-status plant and wildlife species. Including a 1,000-foot buffer surrounding these areas may reduce the magnitude of potential effects on special-status plants and wildlife from cultivation and noncultivation activities. Plant species in these areas may be less likely to be indirectly affected through erosion or introduction of invasive plant species, and disturbance to special-status wildlife from noise or visual stimuli from these activities may be less likely to occur. However, parks, trails, recreation facilities, and preserves do not encompass all habitat for special-status species in the county, so impacts would not be completely avoided.

Impacts on special-status species would be potentially significant under Alternative 3.

Alternative 4: Cannabis Program with Outdoor Cannabis Cultivation Prohibition

Under Alternative 4, outdoor cannabis cultivation would be prohibited. Mixed-light cultivation activities could occur on up to 445 acres of land, with a total of up to 1,022,524 square feet (i.e., approximately 23 acres) of building area. Indoor cultivation activities could occur on up to 34 acres of land, with a total of up to 980,000 square feet (i.e., approximately 22.5 acres) of building area. Noncultivation uses could occur on up to 259 acres of land, with a total of up to 2,030,400 square feet (i.e., approximately 47 acres) of building area. This would result in a total development footprint (i.e., cultivation activities, buildings, caretaker housing, storage buildings, on-site nurseries, agricultural shade or crop structures, water tanks, ponds, parking, cannabis operation buildings, other associated improvements) of approximately 748 acres, with approximately 92.5 acres (4,032,924 square feet) of building area for Alternative 4. The 1,000-foot buffer and expanded sensitive uses described above for Alternative 3 would also apply under Alternative 4.

The potential impact mechanisms related to special-status species under Alternative 4 would be the same as described above for Alternative 2, and the potential reduction in impact magnitude due to the expanded sensitive uses and increased buffer size under Alternative 4 would be the same as described above for Alternative 3. The prohibition of outdoor cannabis cultivation under Alternative 4 may result in a small reduction in disturbance potential for special-status wildlife because the noise and visual stimuli (e.g., employees) associated with cultivation activities in outdoor facilities may be more impactful for nearby nesting or denning wildlife than the same activities conducted in a building or agricultural shade or crop structure, where these activities would be muffled (i.e., noise) or shielded (i.e., visual stimuli) by walls or tarps. However, the physical impact of indoor and outdoor cultivation activities would be functionally identical in relation to impacts on special-status species because they would both potentially involve ground disturbance, vegetation removal, and conversion of natural habitats.

Impacts on special-status species would be potentially significant under Alternative 4.

Alternative 5: Cannabis Program with Maximum 1 Acre of Outdoor Cannabis Cultivation Canopy

Under Alternative 5, the total development footprint acreage and building area acreage would be the same as described above for Alternative 2. The 1,000-foot buffer and expanded sensitive uses described above for Alternative 3 would also apply under Alternative 5. Alternative 5 also limits the size of outdoor cannabis cultivation canopy to 1 acre.

The potential impact mechanisms related to special-status species under Alternative 5 would be the same as described above for Alternative 2, and the potential reduction in impact magnitude due to the expanded sensitive uses and increased buffer size under Alternative 5 would be the same as described above for Alternative 3. Because the total development footprint, including for outdoor cultivation activities, would be the same for Alternative 5 as for Alternatives 2 and 3, the potential for impact would be similar. The actual distribution of the 1-acre lots in the program area is difficult to predict. It is possible that this requirement would prevent large areas of outdoor cultivation from being established, potentially retaining movement corridors and patches of undeveloped land for use by wildlife. It is also possible that 1-acre lots would be concentrated in areas near each other, resulting in functionally the same condition on the ground as a larger lot with multiple acres of outdoor cultivation. As a result, the acreage limit for outdoor cultivation would not necessarily reduce impacts on special-status species.

Impacts on special-status species would be potentially significant under Alternative 5.

2.5.3.4 *Issue 2: Riparian Habitat and Other Sensitive Natural Communities*

Guidelines for Determination of Significance

According to Appendix G of the State CEQA Guidelines, the Cannabis Program would result in a significant impact if it would have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by CDFW or USFWS.

Impact Analysis

Twenty-three sensitive natural communities have been mapped in San Diego County and are therefore known to occur, and 32 sensitive natural communities have potential to occur in San Diego County (Table 2.5.5). These communities are either known to occur or may occur in the program area. In addition, 26 legacy (i.e., using the Holland classification system, as described above) sensitive natural communities have been mapped in the county (Table 2.5.6), several of which correspond to communities mapped in the county using the state's current vegetation mapping and classification standards. See "Sensitive Natural Communities," under Section 2.5.1, "Existing Conditions," for more detail. Riparian habitat in the county can be found adjacent to aquatic habitat, such as streams and rivers, including near the Santa Margarita, San Luis Rey, and San Diego Rivers and their tributaries. Approximately 20,443 acres of riparian and bottomland habitat and 46,920 acres of oak woodland habitat have been mapped in the program area (Table 2.5.2; Figure 2.5.1).

Federal, State, and Local Regulations and Existing Regulatory Processes

As noted above in Issue 1, numerous federal, state, and local regulations exist to protect sensitive natural communities identified in local or regional plans, policies, regulations or by CDFW or USFWS. In addition, there are a number of federal, state, and local regulations in place to protect riparian habitat. The CWA regulates certain impacts on federally protected wetlands, as well as nonwetland waters of the United States. The California Lake and Streambed Alteration Program (California Fish and Game Code Section 1602) requires written notification to CDFW prior to altering a riparian area supported by a lake, river, or stream. On the local level, the County's RPO restricts certain impacts on wetlands, wetland buffers, floodways, and floodplain fringe areas. The WPO is applied to development permits to minimize impacts on wetlands and water bodies. In addition, in accordance with the Zoning Ordinance, some sensitive lands have Special Area Designators for floodplains, flood channels, or vernal pools.

Cultivation and noncultivation activities are required to comply with Attachment A of SWRCB Order WQ 2023-0102-DWQ Term 37 (Section 1, General Requirements and Prohibitions), which requires setback areas of at least 50 feet of surface water, dependent upon the type of stream (e.g., ephemeral, perennial) and requires water quality control measures. In addition, cultivation and noncultivation activities are required to comply with Term 3 (Section 1, General Requirements and Prohibitions), which requires application for an LSA Agreement, and requirements therein, or consultation with CDFW for any activity that may substantially divert, obstruct, alter, or deposit into any river, stream, or lake. Furthermore, cultivation and noncultivation activities are required to comply with Term 63 of Attachment A (Section 2, Requirements Related to Water Diversions and Waste Discharge for Cannabis Cultivation) of SWRCB Order WQ 2023-0102-DWQ, which requires no disturbance of aquatic or riparian

habitat, such as pools, spawning sites, large wood, or shading vegetation unless authorized under proper permits (e.g., CDFW LSA Agreement), as well as Term 64 of Attachment A (Section 2, Requirements Related to Water Diversions and Waste Discharge for Cannabis Cultivation), which requires maintaining riparian habitat. However, these setbacks may not always capture all riparian habitat present. Streams supporting riparian and wetland vegetation are regulated by CDFW under Section 1600 et seq. of the Fish and Game Code, which provides for the protection of fish, wildlife, and native plant resources.

Approximately 48,503 acres of woodland habitat occurs in the county, 46,920 acres of which are classified as oak woodlands. Oak woodlands are considered under the state Oak Woodlands Conservation Act, which requires the County to determine whether proposed development would result in conversion of oak woodlands that would have a significant adverse effect on the environment. The project would need to comply with Term 10 of Attachment A (General Requirements and Prohibitions) of SWRCB Order WQ 2023-0102-DWQ, which requires that sensitive habitats be avoided and buffers be provided in consultation with CDFW and CAL FIRE. In addition, Term 10 of Attachment A (General Requirements and Prohibitions) of SWRCB Order WQ 2023-0102-DWQ requires site evaluations by a qualified biologist to determine whether sensitive habitats occur on the site before development or site expansion.

Cultivation and noncultivation activities associated with the program may result in ground disturbance, vegetation removal, and grading, which could result in the direct loss of riparian habitat, sensitive natural communities, and oak woodland if present on an individual project site. In addition, although Term 37 in Attachment A (Section 1, General Requirements and Prohibitions) of SWRCB Order WQ 2023-0102-DWQ requires setback areas from the edge of a surface water feature up to 150 feet from the surface water feature, dependent upon the type of stream (e.g., ephemeral, perennial), these setbacks may not always capture all riparian habitat present. Similarly, although Terms 63 and 64 of Attachment A (Section 2, Requirements Related to Water Diversions and Waste Discharge for Cannabis Cultivation) of SWRCB Order WQ 2023-0102-DWQ require no disturbance of riparian habitat and retention of riparian vegetation in aquatic habitat, without mapping the vegetation on-site, some riparian vegetation may still be adversely affected. For the same reason, impacts on sensitive natural communities and oak woodlands may still occur. Lastly, although individual projects are required to comply with Term 3 of Attachment A (General Requirements and Prohibitions), which requires an LSA Agreement and requirements therein, or consultation with CDFW, this is only required for activities that may substantially divert, obstruct, alter, or deposit into any river, stream, or lake.

Alternative 1: No Project—Retention of Current Cannabis Regulations

Under Alternative 1, the Cannabis Program would not be adopted. The existing 5 commercial cannabis facilities in the unincorporated areas of El Cajon, Escondido, and Ramona would be allowed to continue to operate as well as potentially expand their existing facilities and operations to a total of 10,000 square feet of building area for each site. Based on review satellite imagery, these five sites have been developed with buildings, parking areas, and infrastructure. Given the disturbed conditions of these sites, no significant impacts on riparian habitat or other sensitive natural communities are anticipated. However, no new commercial cannabis operations would be allowed.

There would be no impact related to loss of riparian habitat, sensitive natural communities, or oak woodlands under Alternative 1.

Alternative 2: Proposed Project—Cannabis Program Consistent with State Requirements

Under Alternative 2, outdoor cultivation activities could occur on up to 472 acres of land, with a total of up to 1,772,120 square feet (i.e., approximately 41 acres) of building area. Mixed-light cultivation activities could occur on up to 293 acres of land, with a total of up to 668,184 square feet (i.e., approximately 15 acres) of building area. Indoor cultivation activities could occur on up to 8 acres of land, with a total of up to 240,000 square feet (i.e., approximately 5.5 acres) of building area. Noncultivation uses could occur on up to 259 acres of land, with a total of up to 2,030,400 square feet (i.e., approximately 47 acres) of building area. This would result in a total development footprint (i.e., cultivation activities, buildings, caretaker housing, storage buildings, on-site nurseries, agricultural shade or crop structures, water tanks, ponds, parking, cannabis operation buildings, other associated improvements) of approximately 1,032 acres, with approximately 108 acres (4,710,704 square feet) of building area. Cannabis facilities would be required to observe a 600-foot buffer from certain state-defined sensitive uses, including schools, daycares, and youth centers.

The specific locations of future cultivation and noncultivation activities are not known at this time and have not been evaluated as part of this programmatic environmental analysis. Therefore, quantifying the potential impact of these future activities on mapped riparian habitat, sensitive natural communities, and oak woodlands would occur at the individual project level. As a result, it is assumed that cultivation and noncultivation activities could occur in areas where these sensitive habitats exist. While several existing regulations require protection of these resources, most of these habitats are not mapped in the program area, and habitats that have not been identified cannot be effectively avoided. In addition, the setbacks and buffers required under existing regulations may not always capture all riparian habitat if this habitat exists outside of the extent of the setbacks and buffers.

Impacts on riparian habitat, sensitive natural communities, and oak woodlands would be potentially significant under Alternative 2.

Alternative 3: Cannabis Program with Expanded County Regulations

Under Alternative 3, the total development footprint acreage and building area acreage would be the same as described above for Alternative 2. Under Alternative 3, the definition of “sensitive uses” would be expanded, and the sensitive uses relevant to biological resources are regional parks, local parks, trails, recreation facilities, and preserves with visitor-serving amenities, among other locations. The buffer observed from these sensitive uses from any cultivation or noncultivation activity would be expanded to 1,000 feet, from the 600 feet required by Alternative 2. Cannabis billboards would also be prohibited within 1,000 feet of these sensitive uses.

The potential impact mechanisms related to riparian habitat, sensitive natural communities, and oak woodlands under Alternative 3 would be the same as described above for Alternative 2. The expanded sensitive uses described above for Alternative 3 include regional parks, local parks, trails, recreation facilities, and preserves with visitor-serving amenities, which encompass large areas of open space and natural habitat in San Diego County. These areas have been designated as open spaces, parks, or preserves because of the presence of natural habitats, and they likely contain riparian habitat (especially regional parks near rivers), sensitive natural communities, and oak woodlands. Including a 1,000-foot buffer surrounding these areas may reduce the magnitude of potential indirect effects on these habitats from

cultivation and noncultivation activities, including erosion, hydrological interruption, or introduction of invasive plant species. However, parks, trails, recreation facilities, and preserves do not encompass all occurrences of these sensitive habitats in the county, so impacts would not be completely avoided.

Impacts on riparian habitat, sensitive natural communities, and oak woodlands would be potentially significant under Alternative 3.

Alternative 4: Cannabis Program with Outdoor Cannabis Cultivation Prohibition

Under Alternative 4, outdoor cannabis cultivation would be prohibited. Mixed-light cultivation activities could occur on up to 445 acres of land, with a total of up to 1,022,524 square feet (i.e., approximately 23 acres) of building area. Indoor cultivation activities could occur on up to 34 acres of land, with a total of up to 980,000 square feet (i.e., approximately 22.5 acres) of building area. Noncultivation uses could occur on up to 259 acres of land, with a total of up to 2,030,400 square feet (i.e., approximately 47 acres) of building area. This would result in a total development footprint (i.e., cultivation activities, buildings, caretaker housing, storage buildings, on-site nurseries, agricultural shade or crop structures, water tanks, ponds, parking, cannabis operation buildings, other associated improvements) of approximately 748 acres, with approximately 92.5 acres (44,032,924 square feet) of building area. The 1,000-foot buffer and expanded sensitive uses described above for Alternative 3 would also apply under Alternative 4.

The potential impact mechanisms related to riparian habitat, sensitive natural communities, and oak woodlands under Alternative 4 would be the same as described above for Alternative 2, and the potential reduction in impact magnitude due to the expanded sensitive uses and increased buffer size under Alternative 4 would be the same as described above for Alternative 3. The prohibition of outdoor cannabis cultivation under Alternative 4 would not have a beneficial or adverse effect on riparian habitat, sensitive natural communities, or oak woodlands. The physical impact of indoor and outdoor cultivation activities would be functionally identical in relation to impacts on these habitats because they would both potentially involve ground disturbance, vegetation removal, and conversion of natural habitats. However, impacts would not be completely avoided.

Impacts on riparian habitat, sensitive natural communities, and oak woodlands would be potentially significant under Alternative 4.

Alternative 5: Cannabis Program with Maximum 1 Acre of Outdoor Cannabis Cultivation Canopy

Under Alternative 5, the total development footprint acreage and building area acreage would be the same as described above for Alternative 2. The 1,000-foot buffer and expanded sensitive uses described above for Alternative 3 would also apply under Alternative 5. Alternative 5 also limits the size of outdoor cannabis cultivation canopy to 1 acre.

The potential impact mechanisms related to riparian habitat, sensitive natural communities, and oak woodlands under Alternative 5 would be the same as described above for Alternative 2, and the potential reduction in impact magnitude due to the expanded sensitive uses and increased buffer size under Alternative 5 would be the same as described above for Alternative 3. Because the total development footprint, including for outdoor cultivation activities, would be the same for Alternative 5 as for Alternatives 2 and 3, the potential for impact would be similar.

As a result, the acreage limit for outdoor cultivation would not reduce impacts on riparian habitat, sensitive natural communities, and oak woodlands.

Impacts on riparian habitat, sensitive natural communities, and oak woodlands would be potentially significant under Alternative 5.

2.5.3.5 *Issue 3: State and Federally Protected Wetlands*

Guidelines for Determination of Significance

According to Appendix G of the State CEQA Guidelines, the Cannabis Program would result in a significant impact if it would have a substantial adverse effect on state or federally protected wetlands through direct removal, filling, hydrological interruption, or other means.

Impact Analysis

The program area contains approximately 3,970 acres of lakes and ponds, 155 acres of reservoirs, 241 acres of swamp and marsh habitat, 85 miles of perennial stream habitat (including major rivers [e.g., San Diego, San Luis Rey, Santa Margarita] and their tributaries), 416 miles of intermittent streams, and 3,555 miles of ephemeral stream habitat (Table 2.5.2; Figure 2.5.3). Many of these features likely qualify as state or federally protected wetlands or both. In addition, the program area contains approximately 78 miles of human-made features, including pipelines, ditches, and aqueducts (Table 2.5.2; Figure 2.5.3). Although some of these features may not qualify as waters of the United States, they may be considered waters of the state.

Cultivation and noncultivation activities associated with the project may include ground disturbance, vegetation removal, and grading, which could result in the direct loss of state or federally protected wetlands if they are present.

Federal, State, and Local Regulations and Existing Regulatory Processes

As identified in the Section 2.5.2, “Regulatory Framework,” and further discussed in Section 2.5.3.4, “Issue 2: Riparian Habitat and Other Sensitive Natural Communities,” there are a number of federal, state, and local regulations in place to limit impacts on federally protected wetlands in the county. At the federal level, the CWA prohibits the discharge of pollutants or fill materials in waters of the United States without obtaining a Section 404 permit from the USACE and a Section 401 certification from the RWQCB. At the state level, the Lake and Streambed Alteration Program requires written notification to CDFW prior to altering a riparian area (a type of wetland) supported by a lake, river, or stream, including federally protected wetlands. For water quality impacts on all wetlands, the California Porter-Cologne Water Quality Control Act directs the RWQCBs to develop regional Basin Plans, which, for the San Diego Region, are designed to preserve and enhance the quality of water resources in the region.

SWRCB Order WQ 2023-0102-DWQ

Term 10 of Attachment A (Section 1, General Requirements and Prohibitions) of SWRCB Order WQ 2023-0102-DWQ requires site evaluations by a qualified biologist to determine whether sensitive communities occur on the site before development or site expansion. Because the SWRCB Order WQ 2023-0102-DWQ is intended to apply statewide, project

specifics (e.g., bloom dates for potential wetland plants, locations of wetlands, quality of wetlands) were not considered. In addition, Term 37 of Attachment A (Section 1, General Requirements and Prohibitions) of SWRCB Order WQ 2023-0102 requires delineation of wetlands using the USACE Wetlands Delineation Manual and 100-foot riparian setbacks for any wetlands delineated. There may be instances in which wetlands identified will not receive sufficient protection from the 100-foot setback due to conditions such as topography or quality of wetland (e.g., habitat suitable for endangered species).

All licensed commercial cannabis cultivation operations are required to comply with the numeric and narrative instream flow requirements for all diversions of surface water and groundwater as part of compliance with Attachment A (Section 3, Numeric and Narrative Instream Flow Requirements) of SWRCB Order WQ 2023-0102-DWQ. These requirements include design requirements for fish screens, diversion structures, off-stream storage reservoirs, and storage bladders.

Diversion provisions of the standards are based on 3 types of requirements to ensure sufficient instream flows:

- dry season forbearance period and limitations on the wet season diversions,
- narrative instream flow requirements, and
- numeric instream flow requirements during the wet season.

Instream flow requirements during the wet season were established by SWRCB in consultation with CDFW for the protection of aquatic species life history needs, including those of endangered anadromous salmonids. Numeric instream flow requirements (minimum instream flows required to protect aquatic species) are established for each region in the state in Attachment A of SWRCB Order WQ 2023-0102-DWQ. Aquatic base flows have also been established to address instream flow impacts from groundwater diversions. The aquatic base flow is the set of chemical, physical, and biological conditions that represent limiting conditions for aquatic life in stream environments.

Surface water and groundwater diversions for commercial cannabis cultivation operations are limited in the following manner:

- Surface water diversions shall be prohibited from April 1 through October 31 each year (forbearance period).
- Surface water diversions may occur from November 1 through March 31 each year subject to the following requirements:
    - Surface water diversions shall not occur until the real-time daily average flow is greater than the minimum monthly instream flow requirement at a compliance gage for 7 consecutive days or after December 15 when flows are greater than the numeric flow requirement.
    - Surface water diversions must bypass a minimum of 50 percent of the streamflow past the point of diversion as estimated based on the commercial cannabis cultivator’s visual observation.
- SWRCB shall monitor instream flows during the dry season and evaluate the number or location of groundwater diversions to determine whether a groundwater forbearance

period or other measures should be imposed. SWRCB shall notify commercial cannabis cultivators if a groundwater forbearance period or other measures may be imposed to address the low-flow condition.

- SWRCB flow standards and diversion requirements were developed to protect fish spawning, migration, and rearing for endangered anadromous salmonids, as well as flows needed to maintain natural flow variability in each watershed. The diversion requirements would ensure that the individual and cumulative effects of water diversions and discharges associated with commercial cannabis cultivation do not affect instream flows necessary for fish spawning, migration, and rearing for endangered anadromous salmonids, as well as flows needed to maintain natural flow variability (SWRCB 2017a). The policy was scientifically peer-reviewed by 4 experts. The peer review determined that water quality, instream flow, and diversion requirements of the policy were based on sound scientific knowledge, methods, and data (SWRCB 2017b).

In accordance with Attachment A of SWRCB Order WQ 2023-0102-DWQ, for any water diversion or waste discharge related to commercial cannabis cultivation, Terms 1 through 14 (Requirements Related to Water Diversions and Waste Discharge for Cannabis Cultivation) will apply, which include best management practices, including erosion control, commercial cannabis cultivation-related waste disposal, refuse and human waste disposal, and stream-crossing installation and maintenance.

In addition, cultivation and noncultivation activities are required to comply with Term 3 (General Requirements and Prohibitions), which requires application for an LSA Agreement, and requirements therein, or consultation with CDFW for any activity that may substantially divert, obstruct, alter, or deposit into any river, stream, or lake. Furthermore, cultivation and noncultivation activities are required to comply with Term 63 of Attachment A (Requirements Related to Water Diversions and Waste Discharge for Cannabis Cultivation) of SWRCB Order WQ 2023-0102-DWQ, which requires no disturbance of aquatic or riparian habitat, such as pools, spawning sites, large wood, or shading vegetation unless authorized under proper permits (e.g., CDFW LSA Agreement), as well as Term 64 of Attachment A (Requirements Related to Water Diversions and Waste Discharge for Cannabis Cultivation), which requires maintaining riparian habitat.

Section 2.11, “Hydrology and Water Quality,” contains further discussion of potential alteration in surface water flows and water quality from cultivation and noncultivation activities.

San Diego County Zoning Ordinance and Amendments

The Zoning Ordinance Vernal Pool Area Regulations would prohibit proposed uses, activities, or construction that would have any significant, adverse effects on any identified vernal pool or an associated rare, threatened, or endangered species. Sensitive Resource Area Regulations would also apply to nonexempt sites that contain wetlands.

County of San Diego Code of Regulatory Ordinances

The RPO requires that wetlands and their adjacent wetland buffers (i.e., 50–200 feet from the wetland edge) be protected on sites where these permits are granted. It also sets forth certain allowable uses within these lands.

Alternative 1: No Project—Retention of Current Cannabis Regulations

Under Alternative 1, the Cannabis Program would not be adopted. The existing 5 commercial cannabis facilities in the unincorporated areas of El Cajon, Escondido, and Ramona would be allowed to continue to operate as well as potentially expand their existing facilities and operations to a total of 10,000 square feet of building area for each site. Based on review satellite imagery, these five sites have been developed with buildings, parking areas, and infrastructure. Given the disturbed conditions of these sites, no significant impacts on state or federally protected wetlands are anticipated. However, no new commercial cannabis operations would be allowed.

There would be no impact related to loss of state or federally protected wetlands under Alternative 1.

Alternative 2: Proposed Project—Cannabis Program Consistent with State Requirements

Under Alternative 2, outdoor cultivation activities could occur on up to 472 acres of land, with a total of up to 1,772,120 square feet (i.e., approximately 41 acres) of building area. Mixed-light cultivation activities could occur on up to 293 acres of land, with a total of up to 668,184 square feet (i.e., approximately 15 acres) of building area. Indoor cultivation activities could occur on up to 8 acres of land, with a total of up to 240,000 square feet (i.e., approximately 5.5 acres) of building area. Noncultivation uses could occur on up to 259 acres of land, with a total of up to 2,030,400 square feet (i.e., approximately 47 acres) of building area. This would result in a total development footprint (i.e., cultivation activities, buildings, caretaker housing, storage buildings, on-site nurseries, agricultural shade or crop structures, water tanks, ponds, parking, cannabis operation buildings, other associated improvements) of approximately 1,032 acres, with approximately 108 acres (4,710,704 square feet) of building area. Cannabis facilities would be required to observe a 600-foot buffer from certain state-defined sensitive uses, including schools, daycares, and youth centers.

The specific locations of future cultivation and noncultivation activities are not known at this time and have not been evaluated as part of this programmatic environmental analysis. Therefore, quantifying the potential impact of these future activities on mapped state and federally protected wetlands would occur at the individual project level. As a result, it is assumed that cultivation and noncultivation activities could occur in areas where these sensitive habitats exist. While several existing regulations require protection of these resources, most of these habitats are not mapped in the program area, and habitats that have not been identified cannot be effectively avoided. In addition, the setbacks and buffers required under existing regulations may not fully avoid impacts on these resources, including interruption of the hydrology of vernal pools. However, since cannabis activities are currently illegal under federal law, a federal permit, including a CWA Section 404 permit for dredge or discharge in waters of the United States, may not be issued for cultivation or noncultivation activities associated with the project, and no impacts would occur on relatively permanent waters or wetlands that could potentially be under the jurisdiction of the USACE.

Impacts on state and federally protected wetlands would be potentially significant under Alternative 2.

Alternative 3: Cannabis Program with Expanded County Regulations

Under Alternative 3, the total development footprint acreage and building area acreage would be the same as described above for Alternative 2. Under Alternative 3, the definition of "sensitive uses" would be expanded, and the sensitive uses relevant to biological resources are regional parks, local parks, trails, recreation facilities, and preserves with visitor-serving amenities, among other locations. The buffer observed from these sensitive uses from any cultivation or noncultivation activity would be expanded to 1,000 feet, from the 600 feet required by Alternative 2. Cannabis billboards would also be prohibited within 1,000 feet of these sensitive uses.

The potential impact mechanisms related to state and federally protected wetlands under Alternative 3 would be the same as described above for Alternative 2. The expanded sensitive uses described above for Alternative 3 include regional parks, local parks, trails, recreation facilities, and preserves with visitor-serving amenities, which encompass large areas of open space and natural habitat in San Diego County. These areas have been designated as open spaces, parks, or preserves because of the presence of natural habitats, and they likely contain some state and federally protected wetlands. Including a 1,000-foot buffer surrounding these areas may reduce the magnitude of potential indirect effects on these resources from cultivation and noncultivation activities, including erosion and hydrological interruption from ground disturbance. However, parks, trails, recreation facilities, and preserves do not encompass all state and federally protected wetlands in the county, so impacts would not be completely avoided.

Impacts on state and federally protected wetlands would be potentially significant under Alternative 3.

Alternative 4: Cannabis Program with Outdoor Cannabis Cultivation Prohibition

Under Alternative 4, outdoor cannabis cultivation would be prohibited. Mixed-light cultivation activities could occur on up to 445 acres of land, with a total of up to 1,022,524 square feet (i.e., approximately 23 acres) of building area. Indoor cultivation activities could occur on up to 34 acres of land, with a total of up to 980,000 square feet (i.e., approximately 22.5 acres) of building area. Noncultivation uses could occur on up to 259 acres of land, with a total of up to 2,030,400 square feet (i.e., approximately 47 acres) of building area. This would result in a total development footprint (i.e., cultivation activities, buildings, caretaker housing, storage buildings, on-site nurseries, agricultural shade or crop structures, water tanks, ponds, parking, cannabis operation buildings, other associated improvements) of approximately 748 acres, with approximately 92.5 acres (4,032,924 square feet) of building area. The 1,000-foot buffer and expanded sensitive uses described above for Alternative 3 would also apply under Alternative 4.

The potential impact mechanisms related to state and federally protected wetlands under Alternative 4 would be the same as described above for Alternative 2, and the potential reduction in impact magnitude due to the expanded sensitive uses and increased buffer size under Alternative 4 would be the same as described above for Alternative 3. The prohibition of outdoor cannabis cultivation under Alternative 4 would not have a beneficial or adverse effect on state or federally protected wetlands. The physical impact of indoor and outdoor cultivation activities would be functionally identical in relation to impacts on these resources because they would both potentially involve ground disturbance, vegetation removal, and conversion of natural habitats.

Impacts on state and federally protected wetlands would be potentially significant under Alternative 4.

Alternative 5: Cannabis Program with Maximum 1 Acre of Outdoor Cannabis Cultivation Canopy

Under Alternative 5, the total development footprint acreage and building area acreage would be the same as described above for Alternative 2. The 1,000-foot buffer and expanded sensitive uses described above for Alternative 3 would also apply under Alternative 5. Alternative 5 also limits the size of outdoor cannabis cultivation canopy to 1 acre.

The potential impact mechanisms related to state and federally protected wetlands under Alternative 5 would be the same as described above for Alternative 2, and the potential reduction in impact magnitude due to the expanded sensitive uses and increased buffer size under Alternative 5 would be the same as described above for Alternative 3. Because the total development footprint, including for outdoor cultivation activities, would be the same for Alternative 5 as for Alternatives 2 and 3, the potential for impact would be similar.

Impacts on state and federally protected wetlands would be potentially significant under Alternative 5.

2.5.3.6 *Issue 4: Wildlife Movement Corridors and Nursery Sites*

Guidelines for Determination of Significance

According to Appendix G of the State CEQA Guidelines, the Cannabis Program would result in a significant impact if it would interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors or impede the use of native wildlife nursery sites.

Impact Analysis

As described above in Section 2.5.1, “Existing Conditions,” Natural Landscape Blocks have been identified throughout much of the eastern half of San Diego County, and large ECAs connect natural habitats in the western portion of the county with the larger natural areas to the east (Figure 2.5.5). These ECAs are mostly consistent with the linkages modeled for the MSCP (Figure 2.5.5). Additional habitat connectivity modeling for mountain lions, shown in Figure 2.5.6, modeled the eastern half of San Diego County as a “high connectivity” area and urban areas in the western portion of the county as “no connectivity” areas for mountain lions. The locations of future cultivation and noncultivation activities are not known; however, these activities may be proposed in areas that have been modeled as important wildlife movement corridors. Furthermore, the program area likely contains native wildlife nursery sites that have not been identified and mapped.

Federal, State, and Local Regulations and Existing Regulatory Processes

There are a number of federal, state, and local regulations in place to protect wildlife movement corridors in the county. At the state level, the NCCP Act facilitates region-wide conservation efforts. As part of the process in determining natural community conservation areas, wildlife movement corridors are considered. The County has one approved NCCP, which is the MSCP South County Subarea Plan in the southwest portion of the unincorporated county. Regional

habitat linkages and corridors have been identified in this conservation plan (see Figure 2.5.5). Pursuant to the BMO, development projects must generally avoid corridors and linkages within the MSCP to the maximum extent practicable. The County is preparing NCCP plans (north and east) to cover the remaining lands under the County's jurisdiction. Potential habitat linkages and corridors have been identified for the draft North County Plan (see Figure 2.5.5); however, these features will not be formally designated until the plan is adopted. Linkages and corridors have not yet been identified for the draft East County Plan. Until these plans are in effect, the County will continue to use all available biological data and mapping applications to identify potential movement paths and nursery sites. The County's Guidelines for Determining Significance for Biological Resources are then used to evaluate the potential effects of private and public projects on wildlife movement, corridors, and nursery sites.

Alternative 1: No Project—Retention of Current Cannabis Regulations

Under Alternative 1, the Cannabis Program would not be adopted. The existing 5 commercial cannabis facilities in the unincorporated areas of El Cajon, Escondido, and Ramona would be allowed to continue to operate as well as potentially expand their existing facilities and operations to a total of 10,000 square feet of building area for each site. Based on review satellite imagery, these five sites have been developed with buildings, parking areas, and infrastructure. Given the disturbed conditions of these sites, no significant impacts on wildlife movement corridors or wildlife nursery sites are anticipated. However, no new commercial cannabis operations would be allowed.

There would be no impact related to interference with native resident or migratory wildlife corridors or native wildlife nursery sites under Alternative 1.

Alternative 2: Proposed Project—Cannabis Program Consistent with State Requirements

Under Alternative 2, outdoor cultivation activities could occur on up to 472 acres of land, with a total of up to 1,772,120 square feet (i.e., approximately 41 acres) of building area. Mixed-light cultivation activities could occur on up to 293 acres of land, with a total of up to 668,184 square feet (i.e., approximately 15 acres) of building area. Indoor cultivation activities could occur on up to 8 acres of land, with a total of up to 240,000 square feet (i.e., approximately 5.5 acres) of building area. Noncultivation uses could occur on up to 259 acres of land, with a total of up to 2,030,400 square feet (i.e., approximately 47 acres) of building area. This would result in a total development footprint (i.e., cultivation activities, buildings, caretaker housing, storage buildings, on-site nurseries, agricultural shade or crop structures, water tanks, ponds, parking, cannabis operation buildings, other associated improvements) of approximately 1,032 acres, with approximately 108 acres (4,710,704 square feet) of building area. Cannabis facilities would be required to observe a 600-foot buffer from certain state-defined sensitive uses, including schools, daycares, and youth centers.

The specific locations of future cultivation and noncultivation activities are not known at this time and have not been evaluated as part of this programmatic environmental analysis other than the zoning areas where these activities will be allowed and the buffers described above. Therefore, quantifying the potential impact of these future activities on modeled ECAs, linkages, or core areas, as well as wildlife nursery sites (many of which have not been mapped) would occur at the individual project level. As a result, it is assumed that cultivation and noncultivation activities could occur in areas where these wildlife movement corridors exist. There are several existing regulations that require protection of these resources, and it is

likely that cultivation and noncultivation activities would not be permitted within an important linkage or core area. However, wildlife movement occurs at different scales, and even if modeled regional corridors are avoided, local movement corridors may still be adversely affected, for example, through installation of fences. Furthermore, wildlife nursery sites are largely not mapped in the program area, and resources that have not been identified cannot be effectively avoided.

Impacts related to interference with native resident or migratory wildlife corridors and wildlife nursery sites would be potentially significant under Alternative 2.

Alternative 3: Cannabis Program with Expanded County Regulations

Under Alternative 3, the total development footprint acreage and building area acreage would be the same as described above for Alternative 2. Under Alternative 3, the definition of "sensitive uses" would be expanded, and the sensitive uses relevant to biological resources are regional parks, local parks, trails, recreation facilities, and preserves with visitor-serving amenities, among other locations. The buffer observed from these sensitive uses from any cultivation or noncultivation activity would be expanded to 1,000 feet, from the 600 feet required by Alternative 2. Cannabis billboards would also be prohibited within 1,000 feet of these sensitive uses.

The potential impact mechanisms related to wildlife movement corridors and wildlife nursery sites under Alternative 3 would be the same as described above for Alternative 2. The expanded sensitive uses described above for Alternative 3 include regional parks, local parks, trails, recreation facilities, and preserves with visitor-serving amenities, which encompass large areas of open space and natural habitat in San Diego County. These areas have been designated as open spaces, parks, or preserves because of the presence of natural habitats, and they likely contain some of the modeled ECAs, core areas, and linkages, as well as wildlife nursery sites. Including a 1,000-foot buffer surrounding these areas may reduce the magnitude of potential indirect effects on these resources from cultivation and noncultivation activities, including disturbance to wildlife and wildlife nursery sites from noise or visual stimuli. However, parks, trails, recreation facilities, and preserves do not encompass all wildlife movement corridors and wildlife nursery sites in the county, so impacts would not be completely avoided.

Impacts related to interference with native resident or migratory wildlife corridors and wildlife nursery sites would be potentially significant under Alternative 3.

Alternative 4: Cannabis Program with Outdoor Cannabis Cultivation Prohibition

Under Alternative 4, outdoor cannabis cultivation would be prohibited. Mixed-light cultivation activities could occur on up to 445 acres of land, with a total of up to 1,022,524 square feet (i.e., approximately 23 acres) of building area. Indoor cultivation activities could occur on up to 34 acres of land, with a total of up to 980,000 square feet (i.e., approximately 22.5 acres) of building area. Noncultivation uses could occur on up to 259 acres of land, with a total of up to 2,030,400 square feet (i.e., approximately 47 acres) of building area. This would result in a total development footprint (i.e., cultivation activities, buildings, caretaker housing, storage buildings, on-site nurseries, agricultural shade or crop structures, water tanks, ponds, parking, cannabis operation buildings, other associated improvements) of approximately 748 acres, with approximately 92.5 acres (4,032,925 square feet) of building area. The 1,000-foot buffer and expanded sensitive uses described above for Alternative 3 would also apply under Alternative 4.

The potential impact mechanisms related to wildlife movement corridors and wildlife nursery sites under Alternative 4 would be the same as described above for Alternative 2, and the potential reduction in impact magnitude due to the expanded sensitive uses and increased buffer size under Alternative 4 would be the same as described above for Alternative 3. The prohibition of outdoor cannabis cultivation under Alternative 4 may result in a small reduction in disturbance potential for wildlife using movement corridors or nearby wildlife nursery sites because the noise and visual stimuli (e.g., employees) associated with cultivation activities in outdoor facilities may be more impactful for nearby nesting or denning wildlife than the same activities conducted in a building or agricultural shade or crop structure, where these activities would be muffled (i.e., noise) or shielded (i.e., visual stimuli) by walls or tarps. However, the physical impact of indoor and outdoor cultivation activities would be functionally identical in relation to impacts on wildlife movement corridors and wildlife nursery sites because they would both potentially involve ground disturbance, vegetation removal, and conversion of natural habitats.

Impacts related to interference with native resident or migratory wildlife corridors and wildlife nursery sites would be potentially significant under Alternative 4.

Alternative 5: Cannabis Program with Maximum 1 Acre of Outdoor Cannabis Cultivation Canopy

Under Alternative 5, the total development footprint acreage and building area acreage would be the same as described above for Alternative 2. The 1,000-foot buffer and expanded sensitive uses described above for Alternative 3 would also apply under Alternative 5. Alternative 5 also limits the size of outdoor cannabis cultivation canopy to 1 acre.

The potential impact mechanisms related to wildlife movement corridors and wildlife nursery sites under Alternative 5 would be the same as described above for Alternative 2, and the potential reduction in impact magnitude due to the expanded sensitive uses and increased buffer size under Alternative 5 would be the same as described above for Alternative 3. Because the total development footprint, including for outdoor cultivation activities, would be the same for Alternative 5 as for Alternatives 2 and 3, the potential for impact would be similar. However, the actual distribution of these 1-acre lots in the program area is difficult to predict. It is possible that this requirement would prevent large areas of outdoor cultivation from being established, potentially retaining movement corridors and patches of undeveloped land for use by wildlife. It is also possible that 1-acre lots would be concentrated in areas near each other, resulting in functionally the same condition on the ground as a larger lot with multiple acres of outdoor cultivation. As a result, the acreage limit for outdoor cultivation would not necessarily reduce impacts on wildlife movement corridors and wildlife nursery sites.

Impacts related to interference with native resident or migratory wildlife corridors and wildlife nursery sites would be potentially significant under Alternative 5.

2.5.3.7 *Issue 5: Conflict with Local Policies and Ordinances*

Guidelines for Determination of Significance

According to Appendix G of the State CEQA Guidelines, the Cannabis Program would result in a significant impact if it would conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.

Impact Analysis

The requirements of the proposed amendments to the Zoning Ordinance that are part of the Cannabis Program would include development standards to be applied to all cultivation and noncultivation activities. Cultivation and noncultivation activities would be required to comply with local ordinances, including the San Diego General Plan policies, San Diego County Zoning Ordinance (and proposed amendments), the County of San Diego Code of Regulatory Ordinances (including the RPO), and the BMO. Compliance with SWRCB Order WQ 2023-0102-DWQ, with the MSCP, and with mitigation measures provided in this PEIR, which will be included as performance standards under the program, would result in additional protection of biological resources and would avoid most conflicts with the local policies and ordinances described above.

The HLP Ordinance under the Regulatory Code requires projects to obtain an HLP prior to the issuance of a grading permit, clearing permit, or improvement plan if the project will directly or indirectly affect any coastal sage scrub habitat types. The HLP is a type of take permit for the coastal California gnatcatcher issued by the County pursuant to the Special 4(d) Rule under ESA. USFWS and CDFW must concur with the issuance of an HLP for it to become valid as take authorization under ESA. As described above, coastal California gnatcatcher is listed as threatened under ESA, and because cannabis activities are currently illegal under federal law, a federal permit, including an HLP for a federally listed species, may not be issued for cultivation or noncultivation activities associated with the program under current federal law. Therefore, applicants under the program would not be able to comply with the terms of the HLP Ordinance. Cultivation and noncultivation activities that occur within coastal sage scrub habitat would therefore result in a conflict with the HLP Ordinance.

Federal, State, and Local Regulations and Existing Regulatory Processes

There are no state or federal regulations that apply to this issue. However, some projects would require consultation with USFWS or CDFW depending on the resources affected and the jurisdictional regulations in place. All local regulations apply to this issue. See Section 2.5.2, “Regulatory Setting,” above for the full list of local regulations.

Alternative 1: No Project—Retention of Current Cannabis Regulations

Under Alternative 1, the Cannabis Program would not be adopted. The existing 5 commercial cannabis facilities in the unincorporated areas of El Cajon, Escondido, and Ramona would be allowed to continue to operate as well as potentially expand their existing facilities and operations to a total of 10,000 square feet of building area per site. Based on review satellite imagery, these five sites have been developed with buildings, parking areas, and infrastructure. Given the disturbed conditions of these sites, no significant impacts related to local policies or ordinances are anticipated. However, no new commercial cannabis operations would be allowed.

There would be no impact related to conflict with local policies or ordinances under Alternative 1.

Alternative 2: Proposed Project—Cannabis Program Consistent with State Requirements

Under Alternative 2, outdoor cultivation activities could occur on up to 472 acres of land, with a total of up to 1,772,120 square feet (i.e., approximately 41 acres) of building area. Mixed-light

cultivation activities could occur on up to 293 acres of land, with a total of up to 668,184 square feet (i.e., approximately 15 acres) of building area. Indoor cultivation activities could occur on up to 8 acres of land, with a total of up to 240,000 square feet (i.e., approximately 5.5 acres) of building area. Noncultivation uses could occur on up to 259 acres of land, with a total of up to 2,030,400 square feet (i.e., approximately 47 acres) of building area. This would result in a total development footprint (i.e., cultivation activities, buildings, caretaker housing, storage buildings, on-site nurseries, agricultural shade or crop structures, water tanks, ponds, parking, cannabis operation buildings, other associated improvements) of approximately 1,032 acres, with approximately 108 acres (4,710,704 square feet) of building area. Cannabis facilities would be required to observe a 600-foot buffer from certain state-defined sensitive uses, including schools, daycares, and youth centers.

The specific locations of future cultivation and noncultivation activities are not known at this time and have not been evaluated as part of this programmatic environmental analysis other than the zoning areas where these activities will be allowed and the buffers described above. Therefore, it is not known whether activities associated with individual projects would occur in coastal sage scrub habitat. As a result, it is assumed that cultivation and noncultivation activities could occur in coastal sage scrub habitat. Any cultivation or noncultivation activities that occur on parcels that contain coastal sage scrub habitat would conflict with the HLP Ordinance because cannabis activities are currently illegal under federal law and a federal permit (including an HLP for a federally listed species) may not be issued for cultivation or noncultivation activities associated with the program under current federal law.

Impacts related to conflict with local policies or ordinances would be potentially significant under Alternative 2.

Alternative 3: Cannabis Program with Expanded County Regulations

Under Alternative 3, the total development footprint acreage and building area acreage would be the same as described above for Alternative 2. Under Alternative 3, the definition of “sensitive uses” would be expanded, and the sensitive uses relevant to biological resources are regional parks, local parks, trails, recreation facilities, and preserves with visitor-serving amenities, among other locations. The buffer observed from these sensitive uses from any cultivation or noncultivation activity would be expanded to 1,000 feet, from the 600 feet required by Alternative 2. Cannabis billboards would also be prohibited within 1,000 feet of these sensitive uses.

The potential impact related to conflict with local policies or ordinances under Alternative 3 would be the same as described above for Alternative 2. The expanded sensitive uses described above for Alternative 3 include regional parks, local parks, trails, recreation facilities, and preserves with visitor-serving amenities, which encompass large areas of open space and natural habitat in San Diego County. These areas have been designated as open spaces, parks, or preserves because of the presence of natural habitats, and they likely contain some coastal sage scrub habitat. While these areas would be avoided by a 1,000-foot buffer, parks, trails, recreation facilities, and preserves do not encompass all coastal sage scrub habitat in the county, so impacts would not be completely avoided. The HLP Ordinance applies to projects that would directly or indirectly affect any coastal sage scrub habitat; therefore, the magnitude of the effect (i.e., number of acres) is not relevant, and the 1,000-foot buffer under Alternative 3 would not reduce the impact related to conflict with local policies or ordinances. Any cultivation or noncultivation activities that occur on parcels that contain coastal sage scrub

habitat would conflict with the HLP Ordinance because cannabis activities are currently illegal under federal law and a federal permit (including an HLP for a federally listed species) may not be issued for cultivation or noncultivation activities associated with the program under current federal law.

Impacts related to conflict with local policies or ordinances would be potentially significant under Alternative 3.

Alternative 4: Cannabis Program with Outdoor Cannabis Cultivation Prohibition

Under Alternative 4, outdoor cannabis cultivation would be prohibited. Mixed-light cultivation activities could occur on up to 445 acres of land, with a total of up to 1,022,524 square feet (i.e., approximately 23 acres) of building area. Indoor cultivation activities could occur on up to 34 acres of land, with a total of up to 980,000 square feet (i.e., approximately 22.5 acres) of building area. Noncultivation uses could occur on up to 259 acres of land, with a total of up to 2,030,400 square feet (i.e., approximately 47 acres) of building area. This would result in a total development footprint (i.e., cultivation activities, buildings, caretaker housing, storage buildings, on-site nurseries, agricultural shade or crop structures, water tanks, ponds, parking, cannabis operation buildings, other associated improvements) of approximately 748 acres, with approximately 92.5 acres (4,032,924 square feet) of building area. The 1,000-foot buffer and expanded sensitive uses described above for Alternative 3 would also apply under Alternative 4.

The potential impact mechanisms related to conflict with local policies or ordinances under Alternative 4 would be the same as described above for Alternative 2, and the potential effect of the expanded sensitive uses and increased buffer size under Alternative 4 would be the same as described above for Alternative 3. The prohibition of outdoor cannabis cultivation under Alternative 4 would not have a beneficial or adverse effect related to conflict with local policies or ordinances. The physical impact of indoor and outdoor cultivation activities would be functionally identical in relation to impacts on these resources because they both would potentially involve direct or indirect impacts on coastal sage scrub habitat.

The HLP Ordinance applies to projects that would directly or indirectly affect any coastal sage scrub habitat; therefore, the magnitude of the effect (i.e., number of acres) is not relevant, and the reduced footprint under Alternative 4 would not reduce the impact related to conflict with local policies or ordinances. Any cultivation or noncultivation activities that occur on parcels that contain coastal sage scrub habitat would conflict with the HLP Ordinance because cannabis activities are currently illegal under federal law and a federal permit (including an HLP for a federally listed species) may not be issued for cultivation or noncultivation activities associated with the program under current federal law.

Impacts related to conflict with local policies or ordinances would be potentially significant under Alternative 4.

Alternative 5: Cannabis Program with Maximum 1 Acre of Outdoor Cannabis Cultivation Canopy

Under Alternative 5, the total development footprint acreage and building area acreage would be the same as described above for Alternative 2. The 1,000-foot buffer and expanded sensitive uses described above for Alternative 3 would also apply under Alternative 5. Alternative 5 also limits the size of outdoor cannabis cultivation canopy to 1 acre.

The potential impact mechanisms related to conflict with local policies or ordinances under Alternative 5 would be the same as described above for Alternative 2, and the potential effect of the expanded sensitive uses and increased buffer size under Alternative 5 would be the same as described above for Alternative 3. The HLP Ordinance applies to projects that would directly or indirectly affect any coastal sage scrub habitat; therefore, the magnitude of the effect (i.e., number of acres) and distribution of impacts is not relevant. The lot size and canopy area limits under Alternative 5 would not reduce the impact related to conflict with local policies or ordinances. Any cultivation or noncultivation activities that occur on parcels that contain coastal sage scrub habitat would conflict with the HLP Ordinance because cannabis activities are currently illegal under federal law and a federal permit (including an HLP for a federally listed species) may not be issued for cultivation or noncultivation activities associated with the project under current federal law.

Impacts related to conflict with local policies or ordinances would be potentially significant under Alternative 5.

2.5.3.8 *Issue 6: Conflict with Adopted Habitat Conservation Plans and Natural Community Conservation Plans*

Guidelines for Determination of Significance

According to Appendix G of the State CEQA Guidelines, the Cannabis Program would result in a significant impact if it would conflict with the provisions of an adopted HCP, NCCP, or other approved local, regional, or state habitat conservation plan.

Impact Analysis

The program area overlaps with the plan area for the adopted MSCP South County Subarea Plan. As described above, indoor cultivation activities, mixed-light cultivation activities, noncultivation activities, and outdoor cultivation that does not meet the requirements in the BMO to qualify for exemption would be considered covered activities under the MSCP, whereas some outdoor cultivation activities would be considered agricultural activities that would be exempt from regulations under the BMO, as described in Section 86.503 of the BMO, as long as clearing and grading related to outdoor cultivation meet the requirements described in the BMO. The program area also overlaps the proposed future plan areas for the East County and North County Plans, as well as the San Diego County Butterflies HCP, which are currently in development and have not been adopted.

Cultivation and noncultivation activities associated with the Cannabis Program could result in adverse effects on species covered under the MSCP, as described above under Section 2.5.3.3, “Issue 1: Special-Status Plant and Wildlife Species,” as well as species covered under the East County and North County Plans and San Diego County Butterflies HCP in the future.

Federal, State, and Local Regulations and Existing Regulatory Processes

There are no state or federal regulations that apply to this issue. However, some projects would require consultation with USFWS or CDFW depending on the resources affected and the jurisdictional regulations in place.

The BMO provides the regulatory basis for implementing the MSCP South County Subarea Plan. The BMO outlines the sensitive resources of concern and sets forth the specific criteria and mitigation requirements that all private and public projects must follow. The MSCP South County Subarea Plan and BMO provide specific criteria for project design, impact allowances, and mitigation requirements. The BMO includes specific project design criteria that must be incorporated into each project, such as protecting wildlife movement corridors and avoiding resources considered to be significant. The BMO also limits the impacts that can occur to certain sensitive, rare, or endangered species, and sets the minimum amount of mitigation that must be implemented.

Alternative 1: No Project—Retention of Current Cannabis Regulations

Under Alternative 1, the Cannabis Program would not be adopted. The existing 5 commercial cannabis facilities in the unincorporated areas of El Cajon, Escondido, and Ramona would be allowed to continue to operate as well as potentially expand their existing facilities and operations to a total of 10,000 square feet of building area for each site. Based on review satellite imagery, these five sites have been developed with buildings, parking areas, and infrastructure. Given the disturbed conditions of these sites, no significant impacts related to resources regulated under the MSCP are anticipated. Where these existing sites overlap the plan area of the MSCP, participation in the MSCP would be required. However, no new commercial cannabis operations would be allowed.

There would be no impact related to conflict with adopted HCPs or NCCPs under Alternative 1.

Alternative 2: Proposed Project—Cannabis Program Consistent with State Requirements

Under Alternative 2, outdoor cultivation activities could occur on up to 472 acres of land, with a total of up to 1,772,120 square feet (i.e., approximately 41 acres) of building area. Mixed-light cultivation activities could occur on up to 293 acres of land, with a total of up to 668,184 square feet (i.e., approximately 15 acres) of building area. Indoor cultivation activities could occur on up to 8 acres of land, with a total of up to 240,000 square feet (i.e., approximately 5.5 acres) of building area. Noncultivation uses could occur on up to 259 acres of land, with a total of up to 2,030,400 square feet (i.e., approximately 47 acres) of building area. This would result in a total development footprint (i.e., cultivation activities, buildings, caretaker housing, storage buildings, on-site nurseries, agricultural shade or crop structures, water tanks, ponds, parking, cannabis operation buildings, other associated improvements) of approximately 1,032 acres, with approximately 108 acres (4,710,704 square feet) of building area. Cannabis facilities would be required to observe a 600-foot buffer from certain state-defined sensitive uses including schools, day cares, and youth centers.

As described above, cultivation and noncultivation activities that occur within the MSCP South County Subarea Plan area would be required to participate in the plan, except for some outdoor cultivation activities, which may be considered agricultural activities, and if certain requirements under the BMO are met, may be exempt under the MSCP. Exempt activities, as well as projects outside the South County Subarea Plan area, would be required to implement mitigation measures for special-status species and sensitive habitats, as described below, which are consistent or more protective than the mitigation requirements in the MSCP. Furthermore, as a condition for exemption under the MSCP, as described in Section 86.503 of the BMO, outdoor cultivation activities would be prohibited in areas designated as PAMAs under the MSCP. Therefore, there would be no conflict with the adopted MSCP South County Subarea Plan.

Because the North County and East County Plans and Butterflies HCP have not been adopted, there would be no conflict with these plans under Alternative 2. Regardless, as described in Mitigation Measure M-BI.1-2 below, applicants would be required to participate in these plans when they are adopted.

Impacts related to conflict with adopted HCPs or NCCPs would be less than significant under Alternative 2.

Alternative 3: Cannabis Program with Expanded County Regulations

Under Alternative 3, the total development footprint acreage and building area acreage would be the same as described above for Alternative 2. Under Alternative 3, the definition of "sensitive uses" would be expanded, and the sensitive uses relevant to biological resources are regional parks, local parks, trails, recreation facilities, and preserves with visitor-serving amenities, among other locations. The buffer observed from these sensitive uses from any cultivation or noncultivation activity would be expanded to 1,000 feet, from the 600 feet required by Alternative 2. Cannabis billboards would also be prohibited within 1,000 feet of these sensitive uses.

The potential impact related to conflict with adopted HCPs or NCCPs under Alternative 3 would be the same as described above for Alternative 2. The expanded sensitive uses described above for Alternative 3 include regional parks, local parks, trails, recreation facilities, and preserves with visitor-serving amenities, which encompass large areas of open space and natural habitat in San Diego County. These expanded buffers would not result in a change in the impact related to conflict with adopted HCPs or NCCPs.

As described above, cultivation and noncultivation activities that occur within the MSCP South County Subarea Plan area would be required to participate in the plan, except for some outdoor cultivation activities, which may be considered agricultural activities, and if certain requirements under the BMO are met, may be exempt under the MSCP. Exempt activities, as well as projects outside the South County Subarea Plan area, would be required to implement mitigation measures for special-status species and sensitive habitats, as described below, which are consistent or more protective than the mitigation requirements in the MSCP. Furthermore, as a condition for exemption under the MSCP, as described in Section 86.503 of the BMO, outdoor cultivation activities would be prohibited in areas designated as PAMAs under the MSCP. Therefore, there would be no conflict with the adopted MSCP South County Subarea Plan.

Because the North County and East County Plans and Butterflies HCP have not been adopted, there would be no conflict with these plans under Alternative 3. Regardless, as described in Mitigation Measure M-BI.1-2 below, applicants would be required to participate in these plans when they are adopted.

Impacts related to conflict with adopted HCPs or NCCPs would be less than significant under Alternative 3.

Alternative 4: Cannabis Program with Outdoor Cannabis Cultivation Prohibition

Under Alternative 4, outdoor cannabis cultivation would be prohibited. Mixed-light cultivation activities could occur on up to 445 acres of land, with a total of up to 1,022,524 square feet (i.e., approximately 23 acres) of building area. Indoor cultivation activities could occur on up to

34 acres of land, with a total of up to 980,000 square feet (i.e., approximately 22.5 acres) of building area. Noncultivation uses could occur on up to 259 acres of land, with a total of up to 2,030,400 square feet (i.e., approximately 47 acres) of building area. This would result in a total development footprint (i.e., cultivation activities, buildings, caretaker housing, storage buildings, on-site nurseries, agricultural shade or crop structures, water tanks, ponds, parking, cannabis operation buildings, other associated improvements) of approximately 748 acres, with approximately 92.5 acres (4,032,924 square feet) of building area. The 1,000-foot buffer and expanded sensitive uses described above for Alternative 3 would also apply under Alternative 4.

The potential impact mechanisms related to conflict with adopted HCPs or NCCPs under Alternative 4 would be the same as described above for Alternative 2, and the potential effect of the expanded sensitive uses and increased buffer size under Alternative 4 would be the same as described above for Alternative 3. The prohibition of outdoor cannabis cultivation under Alternative 4 would result in all cultivation and noncultivation activities associated with the project that are within the South County Subarea Plan area being required to participate in the plan (i.e., there would be no exempt activities).

Although this smaller development footprint may result in fewer impacts on resources protected under the MSCP, the reduced footprint under Alternative 4 would not reduce the impact related to conflict with adopted HCPs or NCCPs because all applicants subject to the South County Subarea Plan under all alternatives would be required to participate in the plan, implement any required measures, and pay associated fees. There would be no conflict with the adopted MSCP South County Subarea Plan.

Because the North County and East County Plans and Butterflies HCP have not been adopted, there would be no conflict with these plans under Alternative 4. Regardless, as described in Mitigation Measure M-BI.1-2 below, applicants would be required to participate in these plans when they are adopted.

Impacts related to conflict with adopted HCPs or NCCPs would be less than significant under Alternative 4.

Alternative 5: Cannabis Program with Maximum 1 Acre of Outdoor Cannabis Cultivation Canopy

Under Alternative 5, the total development footprint acreage and building area acreage would be the same as described above for Alternative 2. The 1,000-foot buffer and expanded sensitive uses described above for Alternative 3 would also apply under Alternative 5. Alternative 5 also limits the size of outdoor cannabis cultivation canopy to 1 acre.

The potential impact mechanisms related to conflict with adopted HCPs or NCCPs under Alternative 5 would be the same as described above for Alternative 2, and the potential effect of the expanded sensitive uses and increased buffer size under Alternative 5 would be the same as described above for Alternative 3. The lot size and canopy area limits under Alternative 5, compared to the other alternatives, may result in outdoor cultivation activities being more dispersed throughout the program area. However, this potential difference in distribution would not have a beneficial or adverse effect related to conflict with HCPs or NCCPs. As described above, cultivation and noncultivation activities that occur within the MSCP South County Subarea Plan area would be required to participate in the plan, except for

some outdoor cultivation activities, which may be considered agricultural activities, and if certain requirements under the BMO are met, may be exempt under the MSCP. Exempt activities, as well as projects outside the South County Subarea Plan area, would be required to implement mitigation measures for special-status species and sensitive habitats, as described below, which are consistent or more protective than the mitigation requirements in the MSCP. Furthermore, as a condition for exemption under the MSCP, as described in Section 86.503 of the BMO, outdoor cultivation activities would be prohibited in areas designated as PAMAs under the MSCP. Therefore, there would be no conflict with the adopted MSCP South County Subarea Plan.

Because the North County and East County Plans and Butterflies HCP have not been adopted, there would be no conflict with these plans under Alternative 5. Regardless, as described in Mitigation Measure M-BI.1-2 below, applicants would be required to participate in these plans when they are adopted.

Impacts related to conflict with adopted HCPs or NCCPs would be less than significant under Alternative 5.

2.5.4 Cumulative Impacts

The geographic scope of cumulative impact analysis for biological resources includes San Diego County and adjacent migration and movement corridors, including rivers and streams and the Pacific Flyway for migratory birds. In addition, the cumulative context includes the Pacific Ocean to account for migration of anadromous fish (e.g., steelhead).

2.5.4.1 *Issue 1: Special-Status Plant and Wildlife Species*

The San Diego County General Plan Update Draft EIR identified cumulatively considerable impacts on special-status plant and wildlife species from implementation of the General Plan (County of San Diego 2009).

Under Alternative 1, there could be expansion of existing sites; however, these sites are already developed and disturbed. Therefore, there would be no contribution to cumulative impacts on special-status plant and wildlife species. Alternatives 2, 3, 4, and 5 could involve ground disturbance, vegetation removal, and conversion of natural habitat to developed or agricultural uses, which could result in the direct loss or disturbance of special-status plants and wildlife or associated habitat. Compliance with existing regulations, including the SWRCB Order WQ 2023-0102-DWQ, San Diego County RPO, and San Diego County BMO, would offset the project's contribution to this impact because it would require applicants to avoid special-status species, implement species-based and habitat-based mitigation pursuant to the MSCP, and contribute to preservation of habitat through participation in the MSCP. However, the project could result in direct loss of special-status species or habitat modification that would result in a substantial adverse effect on these species. Thus, the contribution of cultivation and noncultivation activities associated with the program to significant cumulative impacts on special-status plants and wildlife would be cumulatively considerable under Alternatives 2, 3, 4, and 5.

2.5.4.2 *Issue 2: Riparian Habitat and Other Sensitive Natural Communities*

The San Diego County General Plan Update Draft EIR identified cumulatively considerable impacts on riparian habitat and other sensitive natural communities from implementation of the General Plan (County of San Diego 2009).

Under Alternative 1, there could be expansion of existing sites; however, these sites are already developed and disturbed. Therefore, there would be no contribution to cumulative impacts on riparian habitat sensitive natural communities, and oak woodlands. Alternatives 2, 3, 4, and 5 could adversely affect riparian habitat, sensitive natural communities, and oak woodlands if they are present on project sites. This would contribute to significant cumulative impacts in San Diego County. Compliance with existing regulations, including the SWRCB Order WQ 2023-0102-DWQ, San Diego County RPO, and San Diego County BMO, would offset the project's contribution to this impact because it would require applicants to avoid sensitive habitats, implement setbacks, and contribute to preservation of habitat through participation in the MSCP. While several existing regulations require protection of these resources, most of these habitats are not mapped in the program area, and habitats that have not been identified cannot be effectively avoided. In addition, the setbacks and buffers required under existing regulations may not always capture all riparian habitat if this habitat exists outside of the extent of the setbacks and buffers. Thus, the contribution of cultivation and noncultivation activities associated with the program to significant cumulative impacts on riparian habitat, sensitive natural communities, and oak woodlands would be cumulatively considerable under Alternatives 2, 3, 4, and 5.

2.5.4.3 *Issue 3: State and Federally Protected Wetlands*

The San Diego County General Plan Update Draft EIR did not identify any cumulatively considerable impacts on wetlands from implementation of the General Plan (County of San Diego 2009).

Under Alternative 1, could be expansion of existing sites; however, these sites are already developed and disturbed. Therefore, there would be no contribution to cumulative impacts on state and federally protected wetlands. Alternatives 2, 3, 4, and 5 could adversely affect waters of the United States and waters of the state, such as streams, rivers, lakes, and wetlands. This would contribute to significant cumulative impacts in San Diego County. Compliance with existing regulations, including the SWRCB Order WQ 2023-0102-DWQ, San Diego County RPO, and San Diego County BMO, would offset the project's contribution to this impact because it would require applicants to avoid state and federally protected wetlands, implement setbacks, and contribute to preservation of habitat through participation in the MSCP. Although several existing regulations require protection of these resources, most of these habitats are not mapped in the program area, and habitats that have not been identified cannot be effectively avoided. In addition, the setbacks and buffers required under existing regulations may not fully avoid impacts on these resources, including interruption of the hydrology of vernal pools. However, since cannabis activities are currently illegal under federal law, a federal permit, including a CWA Section 404 permit for dredge or discharge in waters of the United States, may not be issued for cultivation or noncultivation activities associated with the program, and no impacts would occur on relatively permanent waters or wetlands that could potentially be under the jurisdiction of the USACE. Thus, the contribution of cultivation and noncultivation

activities associated with the program to significant cumulative impacts on state and federally protected wetlands would be cumulatively considerable under Alternatives 2, 3, 4, and 5.

2.5.4.4 *Issue 4: Wildlife Movement Corridors and Nursery Sites*

The San Diego County General Plan Update Draft EIR identified cumulatively considerable impacts on wildlife movement corridors and nursery sites from implementation of the General Plan (County of San Diego 2009).

Under Alternative 1, could be expansion of existing sites; however, these sites are already developed and disturbed. Therefore, there would be no contribution to cumulative impacts on wildlife movement corridors or wildlife nursery sites. Alternatives 2, 3, 4, and 5 could adversely affect resident or migratory wildlife corridors through habitat fragmentation, degradation of aquatic habitat (e.g., streams, rivers), interference with wildlife corridors from fencing and improper siting of buildings, and disturbance or loss of wildlife nursery sites. This would contribute to significant cumulative impacts in San Diego County. Compliance with existing regulations, including the SWRCB Order WQ 2023-0102-DWQ, San Diego County RPO, and San Diego County BMO, would offset the project's contribution to this impact because it would require applicants to avoid impacts on modeled regional wildlife linkages. However, wildlife movement occurs at different scales, and even if modeled regional corridors are avoided, local movement corridors may still be adversely affected, for example, through installation of fences. Furthermore, wildlife nursery sites are largely not mapped in the program area, and resources that have not been identified cannot be effectively avoided. Thus, the contribution of cultivation and noncultivation activities associated with the program to significant cumulative impacts on wildlife movement corridors and wildlife nursery sites would be cumulatively considerable under Alternatives 2, 3, 4, and 5.

2.5.4.5 *Issue 5: Conflict with Local Policies and Ordinances*

The San Diego County General Plan Update Draft EIR did not identify any cumulatively considerable impacts associated with local policy and ordinance conflicts from implementation of the General Plan (County of San Diego 2009).

Under Alternative 1, could be expansion of existing sites; however, these sites are already developed and disturbed. Therefore, there would be no contribution to cumulative impacts related to local policies and ordinances. Alternatives 2, 3, 4, and 5 could conflict with local policies and ordinances protecting biological resources. This would contribute to significant cumulative impacts in San Diego County. Cultivation and noncultivation activities associated with the program would be required to comply with existing local policies and ordinances, including San Diego County RPO, and San Diego County BMO; however, due to the current legal status of cannabis under federal law, applicants would not be able to comply with the San Diego County HLP Ordinance. Although there would potentially be a conflict with the San Diego County HLP Ordinance (because a federal permit may not be issued for cultivation or noncultivation activities associated with the project under federal law), this conflict would not contribute to cumulative impacts on the species or habitat protected by the ordinance (i.e., coastal sage scrub, coastal California gnatcatcher) because the potential conflict would not result in any physical impacts, only an administrative issue.

Thus, the contribution of cultivation and noncultivation activities associated with the program to significant cumulative impacts from conflicts with local policies would not be cumulatively considerable under Alternatives 2, 3, 4, and 5.

2.5.4.6 *Issue 6: Conflict with Adopted Habitat Conservation Plans and Natural Community Conservation Plans*

The San Diego County General Plan Update Draft EIR did not identify any cumulatively considerable impacts associated with conflicts with adopted HCPs and NCCPs from implementation of the General Plan (County of San Diego 2009).

Under Alternative 1, could be expansion of existing sites; however, these sites are already developed and disturbed. Therefore, there would be no contribution to cumulative impacts related to conflicts with the MSCP. Cultivation and noncultivation activities associated with Alternatives 2 through 5 would be required to participate in the MSCP, including payment of associated fees and implementation of species-based and habitat-based mitigation, which would offset the project's contribution to this significant cumulative impact, and no conflict with the MSCP would occur; therefore, this impact would be less than significant. Thus, the contribution of cultivation and noncultivation activities associated with the program to significant cumulative impacts from conflicts with adopted HCPs or NCCPs would be less than cumulatively considerable under Alternatives 2, 3, 4, and 5.

2.5.5 Significance of Impact prior to Mitigation

2.5.5.1 *Issue 1: Special-Status Plant and Wildlife Species*

The Cannabis Program would have no direct impacts on special-status plant or wildlife species under Alternative 1.

The proposed Cannabis Program would result in potentially significant direct and indirect impacts on special-status plant and wildlife species under Alternatives 2 through 5. It would also have the potential to result in significant cumulative impacts associated with special-status plant and wildlife species.

2.5.5.2 *Issue 2: Riparian Habitat and Other Sensitive Natural Communities*

The Cannabis Program would have no direct impacts on riparian habitat and other sensitive natural communities under Alternative 1.

The proposed Cannabis Program would result in potentially significant direct and indirect impacts on riparian habitat and other sensitive natural communities under Alternatives 2 through 5. It would also have the potential to result in significant cumulative impacts associated with riparian habitat and other sensitive natural communities.

2.5.5.3 *Issue 3: State and Federally Protected Wetlands*

The Cannabis Program would have no direct impacts on state and federally protected wetlands under Alternative 1.

The proposed Cannabis Program would result in potentially significant direct impacts to state and federally protected wetlands under Alternatives 2 through 5. It would also have the potential to result in significant cumulative impacts associated with state and federally protected wetlands.

2.5.5.4 *Issue 4: Wildlife Movement Corridors and Nursery Sites*

The Cannabis Program would have no direct impacts on wildlife movement corridors and nursery sites under Alternative 1.

The proposed Cannabis Program would result in potentially significant impacts on wildlife movement corridors and wildlife nursery sites under Alternatives 2 through 5. It would also have the potential to result in significant cumulative impacts associated with wildlife movement corridors and nursery sites.

2.5.5.5 *Issue 5: Conflict with Local Policies and Ordinances*

The Cannabis Program would not conflict with local policies and ordinances under Alternative 1. The proposed Cannabis Program would result in a potentially significant conflict with local policies and ordinances under Alternatives 2 through 5. It would not result in significant cumulative impacts associated with local policies and ordinances.

2.5.5.6 *Issue 6: Conflict with Adopted Habitat Conservation Plans and Natural Community Conservation Plans*

The Cannabis Program would result in no conflicts with adopted HCPs or NCCPs under Alternatives 1 through 5. It would not result in significant cumulative impacts associated with adopted HCPs or NCCPs.

2.5.6 Mitigation

2.5.6.1 *Issue 1: Special-Status Plant and Wildlife Species*

No mitigation is required for Alternative 1.

The following mitigation is identified for Alternatives 2, 3, 4, and 5.

M-BI.1-1: Conduct Preapproval Reconnaissance-Level Surveys for Biological Resources

The following shall be included as a performance standard for the licensing of new cultivation and noncultivation activities in unincorporated San Diego County under the program. Compliance documentation will be provided to the County as part of the application materials and may be combined with required compliance with SWRCB Order WQ 2023-0102-DWQ:

Reconnaissance-Level Survey

A reconnaissance-level survey for biological resources shall be conducted on the parcel of the cannabis use by a qualified biologist (i.e., familiar with wildlife, plants, and habitats in San Diego County) and approved by the County (i.e., on the County-approved CEQA consultant list) prior to any staging or development activities. A qualified biologist would:

- hold a wildlife biology, botany, ecology, forestry, or other relevant degree from an accredited university;
- be knowledgeable in relevant species life histories and ecology;
- be able to correctly identify relevant species and habitats;
- be knowledgeable about survey protocols;
- be knowledgeable about state and federal laws regarding the protection of special-status species; and
- have experience with CDFW's CNDDB and Biogeographic Information and Observation System (BIOS).

The reconnaissance-level survey shall include the following elements:

- Prior to the reconnaissance-level survey, the qualified biologist shall conduct a data review to determine the special-status plants; special-status wildlife; rare, narrow endemic plant and animal species; critical populations of sensitive plant species; sensitive habitats (e.g., federally protected wetlands, waters of the state, riparian habitat, sensitive natural communities); and regional linkages/wildlife movement corridors that have the potential to occur within the proposed activity footprint of the cannabis use. This will include review of the best available, current data, including vegetation mapping data, the San Diego MSCP, the BMO, and database searches of the CNDDB, the CNPS Inventory of Rare and Endangered Plants of California, and the USFWS Inventory for Planning and Consultation.
- Prior to the reconnaissance-level survey, the qualified biologist shall determine whether the project constitutes an agricultural activity (i.e., cultivation) that would be exempt under the San Diego County MSCP, whether the project site is located within a PAMA or a Biological Resource Core Area as defined in the San Diego MSCP and BMO, and the tier level of vegetation on the project site ("List of San Diego County Vegetation Communities and Tier Levels within the San Diego MSCP").
- The qualified biologist shall map land cover, identify natural communities, and assess the habitat suitability of the proposed activity footprint of the cannabis use for special-status plants, special-status wildlife, and sensitive habitats identified as having potential to occur, consistent with the requirements of the San Diego MSCP and BMO for species covered by the plan, and consistent with Term 10 under Attachment A (General Requirements and Prohibitions) of SWRCB Order WQ 2023-0102-DWQ and Section 86.504 (Administrative Process and Evaluations; Environmental Initial Study) of the BMO.
- The biologist shall provide a report to the applicant and San Diego County Planning & Development Services with evidence to support a conclusion as to whether special-status species and sensitive habitats are present or are likely to occur within the proposed activity footprint of the cannabis use. The type of report will depend on the type of permit (i.e., ministerial, discretionary) and the size of the project, at the discretion of the County.
- If the reconnaissance-level survey identifies no potential for special-status plants, special-status wildlife, or sensitive habitats to occur, the applicant may not be subject to additional biological resources protection measures.

- If special-status plants, special-status wildlife, habitat suitable for these species, or sensitive habitats are identified within or adjacent to the proposed activity footprint of the cannabis use, then additional mitigation measures would apply.

M-BI.1-2: Participate in the San Diego MSCP Including Payment of Fees and Implementation of Mitigation Measures for Covered Species

The following shall be included as a performance standard for the licensing of new cultivation and noncultivation activities in unincorporated San Diego County. Compliance documentation will be provided to the County as part of the application materials and may be combined with the following required compliance with SWRCB Order WQ 2023-0102-DWQ.

Species Covered under the San Diego MSCP

If species covered under the San Diego MSCP are determined to be present or likely to be present within the proposed activity footprint of the cannabis use, the applicant shall assume presence of these species and satisfy the requirements of the San Diego MSCP and the BMO. This measure applies to species currently covered under the South County Subarea Plan and species covered in the future under the North County Plan, East County Plan, and Butterfly HCP. This measure applies to cultivation and noncultivation activities that are not exempt from participation in the MSCP.

- If species covered under the San Diego MSCP that are not listed under CESA or ESA or are only listed under CESA could occur within the proposed activity footprint of the cannabis use, payment of HCP/NCCP mitigation fees, dependent on the habitat on the project site that will be converted, and implementation of applicable MSCP and BMO habitat-based and species-based mitigation measures are required.
- If species covered under the San Diego MSCP that are listed under ESA could occur within the proposed activity footprint of the cannabis use, the applicant must avoid impacts by implementing no-disturbance buffers or redesigning the project until such time as federal permits, authorizations, and procedures/protocols under the HCP portion of the San Diego MSCP can be applied.
- Because some outdoor cultivation activities may be exempt from participation in the MSCP, potential impacts on species covered under the MSCP shall be addressed outside of the mitigation structure of the MSCP and through implementation of the measures described below.

Special-Status Species Not Covered under the San Diego County MSCP

If species not covered under the San Diego MSCP are determined to be present or likely to be present within the proposed activity footprint of the cannabis use that is not exempt from participation in the MSCP, the applicant shall apply additional mitigation measures consistent with state and local requirements. This measure applies to all species not currently covered under the South County Subarea Plan. Should any of these species become subsequently covered under the North County Plan, East County Plan, or Butterfly HCP, the previous measure shall apply.

M-BI.1-3: Conduct Special-Status Plant Surveys and Implement Avoidance Measures and Mitigation for Plant Species Not Covered under the San Diego MSCP

The following shall be included as a performance standard for the licensing of new cultivation and noncultivation activities in unincorporated San Diego County. Compliance documentation will be provided to the County as part of the application materials and may be combined with required compliance with SWRCB Order WQ 2023-0102-DWQ.

- Prior to commencement of development activities associated with cultivation and noncultivation activities and during the blooming period for the special-status plant species with potential to occur on the site, a qualified botanist approved by the County shall conduct protocol-level surveys for special-status plants in all proposed disturbance areas following the survey methods from CDFW's *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities* (CDFW 2018).

  A qualified botanist would:

  - be knowledgeable about plant taxonomy;
  - be familiar with plants of the region, including special-status plants and sensitive natural communities;
  - have experience conducting floristic botanical field surveys as described in the CDFW *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Sensitive Natural Communities* or experience conducting such botanical field surveys under the direction of an experienced botanical field surveyor;
  - be familiar with the *California Manual of Vegetation* (Sawyer et al. 2009 or current version, including updated natural communities data at http://vegetation.cnps.org/); and
  - be familiar with federal, state, and local statutes and regulations related to plants and plant collecting.
- If special-status plants are not found, the botanist shall document the findings in a report to CDFW, USFWS, the County, and the applicant, and no further mitigation will be required.
- If special-status plant species are found, the qualified botanist shall consult with CDFW to designate a no-disturbance buffer and/or redesign of the commercial cannabis cultivation site improvements that shall be reflected in application materials to the County. If special-status plants cannot be avoided, then the applicant shall consult with CDFW to determine if an incidental take permit should be obtained (i.e., for special-status species listed under CESA) or if compensatory mitigation would be required (for special-status plants with a CRPR of 1 or 2, and/or on the County of San Diego sensitive plant List A or List B). Impacts on these special-status plant species would be mitigated such that there would be no net loss of occupied habitat or individuals. Mitigation measures shall include, at a minimum, preserving and enhancing existing populations, establishing populations through seed collection or transplantation from the site that is to be affected, and/or restoring or creating habitat in sufficient quantities to achieve no net loss of occupied habitat or individuals. Habitat and individual plants lost shall be mitigated at a minimum 1:1 ratio (up to a 3:1 ratio), considering acreage as well as function and value. Success criteria for preserved and compensatory populations will include the following requirements:

- The extent of occupied area and plant density (number of plants per unit area) in compensatory populations will be equal to or greater than the affected occupied habitat.
- Compensatory and preserved populations will be self-producing. Populations will be considered self-producing when:
  - plants reestablish annually for a minimum of 5 years with no human intervention such as supplemental seeding; and
  - reestablished and preserved habitats contain an occupied area and flower density comparable to existing occupied habitat areas in similar habitat types in the project vicinity.
- If off-site mitigation includes dedication of conservation easements, purchase of mitigation credits, or other off-site conservation measures, the details of these measures will be included in the mitigation plan, including information on responsible parties for long-term management, conservation easement holders, long-term management requirements, success criteria such as those listed above, and other details, as appropriate to target the preservation of long-term viable populations.
- Any mitigation plan for unavoidable impacts on special-status plants must be reviewed and approved by the County, USFWS, and CDFW.

- If special-status plant species are found that have a CRPR of 3 or 4 and/or are on the County of San Diego sensitive plant List C or List D, the qualified botanist shall determine whether implementation of cultivation and noncultivation activities on the site would threaten the local long-term survival of these plant species and shall prepare a report that contains evidence supporting the conclusion.
  - If the qualified botanist determines that implementation of cultivation and noncultivation activities on the site would not threaten the local long-term survival of these plant species, the botanist shall submit the report documenting this conclusion to the County and CDFW for approval. If the County and CDFW concur with the conclusion, then further mitigation for impacts on these special-status species would not be required.
  - If the qualified botanist determines that implementation of cultivation and noncultivation activities on the site would threaten the local long-term survival of these plant species, the botanist shall consult with CDFW to designate a no-disturbance buffer and/or redesign of the commercial cannabis cultivation site improvements that shall be reflected in application materials to the County. Impacts on these special-status plant species may need to be mitigated such that there would be no net loss of occupied habitat or individuals, as determined by the qualified biologist in consultation with the County and CDFW.

M-BI.1-4: Implement Measures to Avoid Introduction or Spread of Invasive Plant Species

This measure shall be included as a performance standard for the licensing of new cultivation and noncultivation activities in unincorporated San Diego County. Compliance documentation shall be provided to the County as part of the application materials and may be combined with required compliance with SWRCB Order WQ 2023-0102-DWQ to avoid the introduction or spread of plants classified as invasive plant species by the California Invasive Plant Council.

- The application will include identification of invasive plant species that occur on the site and where they are located. The application will identify specific measures to be employed for the removal of invasive species and on-site management practices.
- All invasive plant species shall be removed from the site using measures appropriate to the species. For example, species that cannot easily reroot, resprout, or disperse seeds may be left on-site in a debris pile. Species that resprout readily or disperse seeds (e.g., Pampas grass) should be hauled off-site and disposed of appropriately at a landfill site.
- Heavy equipment and other machinery shall be inspected for the presence of invasive species before on-site use and shall be cleaned before entering the site to reduce the risk of introducing invasive plant species.

M-BI.1-5: Conduct Preconstruction Surveys for Special-Status Amphibians

The following shall be included as a performance standard for the licensing of new cultivation and noncultivation activities in unincorporated San Diego County. Compliance documentation will be provided to the County as part of the application materials and may be combined with required compliance with SWRCB Order WQ 2023-0102-DWQ.

- If arroyo toads or California red-legged frogs are detected during the initial biological survey (see M-BI.1-1) or are determined to be likely to occur (i.e., aquatic or upland habitats potentially suitable for the species are present on the site), then it shall be assumed that cultivation and noncultivation activities could result in take of these federally listed species, and the application shall be denied.
- If western spadefoot toads are detected during the initial biological survey (see M-BI.1-1) or are determined to be likely to occur (i.e., aquatic or upland habitats potentially suitable for the species are present on the site) and this species (which is currently proposed for listing) is listed under ESA at the time of the survey, then it shall be assumed that cultivation and noncultivation activities could result in take of the species, and the application shall be denied.
- If special-status amphibians other than arroyo toad, California red-legged frog, and western spadefoot (if listed under ESA at the time of the survey) are detected during the initial biological survey (see M-BI.1-1) or are determined to be likely to occur, consultation with CDFW shall be initiated to determine whether mitigation measures, such as project design modifications, relocation of the site, relocation of individual animals, or installation of exclusionary fencing, shall be necessary and appropriate.
- Regardless of detection during the initial biological survey, if habitat suitable for special-status amphibians other than arroyo toad, California red-legged frog, and western spadefoot (if listed under ESA at the time of the survey) is present in the proposed development area, a qualified biologist familiar with the life cycle of these species (i.e., coast range newt, western spadefoot [if not listed under ESA at the time of the survey]) shall conduct preconstruction surveys of proposed new development activities 48 hours before new development activities. Preconstruction surveys for special-status amphibian species shall be conducted throughout the proposed construction area and a minimum 400-foot buffer around the proposed development area or other buffer size as recommended by CDFW. Surveys shall consist of “walk and turn” surveys of areas beneath surface objects (e.g., rocks, leaf litter, moss mats, coarse woody debris) for salamanders and visual searches for frogs. Preconstruction surveys shall be conducted

during the appropriate season to maximize potential for observation for each species, and appropriate surveys shall be conducted for the applicable life stages (i.e., eggs, larvae, adults).

- If special-status amphibians are not detected during the preconstruction survey and, for arroyo toad, California red-legged frog, or western spadefoot (if listed under ESA at the time of the survey), the species is determined to be unlikely to occur, then further mitigation is not required.
- If special-status amphibians other than arroyo toad, California red-legged frog, and western spadefoot (if listed under ESA at the time of the survey) are detected during the preconstruction survey, work on the site shall not commence until the applicant has consulted with CDFW as described above. Injury to or mortality of special-status amphibians shall be avoided by modifying project design, relocating the site, or relocating individual animals.

M-BI.1-6: Conduct Surveys for Special-Status Reptiles and Implement Avoidance Measures

The following shall be included as a performance standard for the licensing of new cultivation and noncultivation activities in unincorporated San Diego County. Compliance documentation will be provided to the County as part of the application materials and may be combined with required compliance with SWRCB Order WQ 2023-0102-DWQ.

- If southwestern pond turtles are detected during the initial biological survey (see M-BI.1-1) or are determined to be likely to occur (i.e., aquatic or upland habitats potentially suitable for the species are present on the site) and this species (which is currently proposed for listing) is listed under ESA at the time of the survey, then it shall be assumed that cultivation and noncultivation activities could result in take of the species, and the application shall be denied.
- If special-status reptiles other than southwestern pond turtle (if listed under ESA at the time of the survey) are detected during the initial biological survey (see M-BI.1-1) or are determined to be likely to occur, consultation with CDFW shall be initiated to determine whether mitigation measures, such as project design modifications, relocation of the site, relocation of individual animals, or installation of exclusionary fencing, shall be necessary and appropriate.
- Regardless of detection during the initial biological survey, if habitat suitable for special-status reptiles other than southwestern pond turtle (if listed under ESA at the time of the survey) and including southwestern pond turtle (if not listed under ESA at the time of the survey) is present in the proposed development area, a qualified biologist familiar with the life cycle of these species shall conduct preconstruction surveys of proposed new development activities 48 hours before new development activities. Preconstruction surveys for special-status reptile species shall be conducted throughout the proposed construction area, and a minimum 400-foot buffer, or other buffer size as recommended by CDFW, shall be established around the proposed development area. Surveys shall consist of “walk and turn” surveys of areas beneath surface objects (e.g., rocks, leaf litter, moss mats, coarse woody debris) for reptiles and visual searches for southwestern pond turtles in aquatic habitat and potential burrows.

- If special-status reptiles are not detected during the preconstruction survey and, for southwestern pond turtle (if listed under ESA at the time of the survey), the species is determined to be unlikely to occur, then further mitigation is not required.
- If special-status reptiles other than southwestern pond turtle (if listed under ESA at the time of the survey) are detected during the preconstruction survey, work on the site shall not commence until the applicant has consulted with CDFW as described above. Injury to or mortality of special-status reptiles shall be avoided by modifying project design, relocating the site, or relocating individual animals.

M-BI.1-7: Conduct Preconstruction California Spotted Owl Surveys and Establish Protective Buffers

The following shall be included as a performance standard for the licensing of new cultivation and noncultivation activities in unincorporated San Diego County. Compliance documentation will be provided to the county as part of the application materials and may be combined with required compliance with SWRCB Order WQ 2023-0102-DWQ.

- If a qualified biologist determines that the project site contains or is adjacent to habitat suitable for California spotted owls (*Strix occidentalis occidentalis*) during the initial biological survey (see M-BI.1-1), the qualified biologist will determine whether a documented California spotted owl nesting occurrence is present within 0.25 miles of a project site by reviewing California spotted owl occurrence data in the CNDDB and contacting biologists from adjacent public lands (e.g., US Forest Service land), as applicable, to obtain any recent survey and occurrence data for California spotted owl that have not been made publicly available (e.g., in the CNDDB).
- If a nesting occurrence is determined to be present or if nesting habitat suitable for California spotted owl as determined by a biologist during the initial biological survey (see M-BI.1-1) is present within or within 0.25 miles of a project site, then the following measures will be followed:
    - Protocol-level surveys for California spotted owl will be conducted by a qualified biologist within a 0.25-mile radius surrounding the project site prior to any construction or staging activities where a documented nest or nesting habitat is present within 0.25 miles of the project site. Surveys for California spotted owl will be conducted pursuant to the *Protocol for Surveying for Spotted Owls in Proposed Management Activity Areas and Habitat Conservation Areas* (US Forest Service 1993) or any protocol subsequently developed by USFWS should the species be listed.
    - If California spotted owls are determined to be absent within 0.25 miles from the site, then further mitigation is not required.
    - If nesting California spotted owls are identified during protocol-level surveys and determined to be present within 0.25 miles of the project site, then it is presumed that cultivation and noncultivation activities, including development and operation, could result in take of California spotted owls through habitat modification or disturbance. Therefore, if California spotted owls are determined to be present within 0.25 miles of the project site, proposed cultivation and noncultivation activities will not be permitted.

M-BI.1-8: Conduct Take Avoidance Survey for Burrowing Owl and Implement Avoidance Measures

The following shall be included as a performance standard for the licensing of new cultivation and noncultivation activities in unincorporated San Diego County. Compliance documentation will be provided to the County as part of the application materials and may be combined with required compliance with SWRCB Order WQ 2023-0102-DWQ.

- If habitat suitable for burrowing owls (*Athene cunicularia*) is determined to be present on the site during the initial biological survey (see M-BI.1-1), a qualified biologist shall conduct a focused survey for burrowing owls in areas of habitat suitable for the species (e.g., grasslands, agricultural areas) on and within a minimum of 1,640 feet (500 meters) of the cultivation or noncultivation site using survey methods described in Appendix D of the *Staff Report on Burrowing Owl Mitigation* (CDFW 2012). Inaccessible areas (e.g., adjacent private property) will not be surveyed directly, but the biologist may use binoculars or a spotting scope to survey these areas. A minimum of 4 surveys shall be conducted to determine whether burrowing owls occupy the site. If feasible, at least 1 survey should be conducted between February 15 and April 15, and the remaining surveys should be conducted between April 15 and July 15 and at least 3 weeks apart. Because burrowing owls may recolonize a site after only a few days, 1 of the surveys, or an additional survey, shall be conducted no less than 14 days before initiating ground disturbance activities to verify that take of burrowing owl would not occur.
- If no occupied burrows are found, the qualified biologist shall submit a report documenting the survey methods and results to the applicant, the County, and CDFW, and no further mitigation shall be required.
- If an active burrow is found within a minimum of 1,640 feet of ground-disturbing activities that would occur during the nonbreeding season (September 1 through January 31), the applicant shall establish and maintain a minimum protection buffer of 164 feet (50 meters) around the occupied burrow throughout construction. The actual buffer size shall be determined by the qualified biologist based on the time of year and level of disturbance in accordance with guidance provided in the *Staff Report on Burrowing Owl Mitigation* (CDFW 2012). The protection buffer shall be adjusted if, during consultation with the County and CDFW, a qualified biologist determines that an alternative buffer would not disturb burrowing owl use of the burrow because of particular site features or other buffering measures.
- If an active burrow is found during the breeding season (February 1 through August 31), occupied burrows shall not be disturbed and shall be provided with a protective buffer at a minimum of 1,640 feet (500 meters). There is an option for the size of the buffer to be adjusted depending on the time of year and level of disturbance as outlined in the burrowing owl staff report. The size of the buffer shall be reduced if a broad-scale, long-term monitoring program acceptable to the County and CDFW is implemented so that burrowing owls are not adversely affected.

M-BI.1-9: Conduct Preconstruction Special-Status Nesting Raptor Surveys and Establish Protective Buffers

The following shall be included as a performance standard for the licensing of new cultivation and noncultivation activities in unincorporated San Diego County. Compliance documentation

will be provided to the County as part of the application materials and may be combined with required compliance with SWRCB Order WQ 2023-0102-DWQ.

- To minimize the potential for loss of nesting raptors, tree and other vegetation removal activities shall occur only during the nonbreeding season (September 1 through January 31), if feasible.
- If removal of trees and other vegetation cannot be avoided during the breeding season, before removal of any trees or ground-disturbing activities between February 1 and August 31, a qualified biologist shall conduct preconstruction surveys for nesting raptors and shall identify active nests within a certain distance, depending on the species that are known or have potential to be present. The survey radius for American peregrine falcon (*Falco peregrinus anatum*), bald eagle, and golden eagle shall be a minimum of 0.5 miles from the proposed development area boundary. The survey radius for Swainson's hawk (*Buteo swainsoni*) and white-tailed kite (*Elanus leucurus*) shall be a minimum of 0.25 miles from the proposed development area boundary. The survey radius for all other raptor species shall be a minimum of 500 feet from the proposed development area boundary. The surveys shall be conducted between February 1 and August 31.
- If nesting special-status raptors are determined to be absent, then further mitigation is not required.
- If active nests are identified during preconstruction raptor surveys, then impacts on nesting raptors shall be avoided by establishing appropriate buffers around the nests. Factors to be considered for determining buffer size shall include the presence of natural buffers provided by vegetation or topography, nest height, locations of foraging territory, and baseline levels of noise and human activity. Buffer size may be adjusted if the qualified biologist and the applicant, in consultation with CDFW, determine that such an adjustment would not be likely to adversely affect the nest. Typical buffer sizes are 0.5 miles for American peregrine falcon, bald eagle, and golden eagle; 0.25 miles for Swainson's hawk and white-tailed kite; and 500 feet for other raptor species. No activity shall occur within the buffer areas until the qualified biologist has determined, in coordination with CDFW, that the young have fledged, the nest is no longer active, or reducing the buffer would not likely result in nest abandonment. Monitoring of the nest by a qualified biologist during and after construction activities (e.g., ground disturbance, vegetation removal) shall be required if the activity has potential to adversely affect the nest.
- Removal of bald and golden eagle nests is prohibited regardless of their occupancy status under the federal Bald and Golden Eagle Protection Act. If bald or golden eagle nests are found during preconstruction surveys, then the nest tree shall not be removed.
- Trees shall not be removed during the breeding season for nesting raptors unless a survey by the qualified biologist verifies that there is not an active nest in the tree.

M-BI.1-10: Conduct Preconstruction Special-Status Nesting Bird Surveys and Establish Protective Buffers

The following shall be included as a performance standard for the licensing of new cultivation and noncultivation activities in unincorporated San Diego County. Compliance documentation

will be provided to the County as part of the application materials and may be combined with required compliance with SWRCB Order WQ 2023-0102-DWQ.

- To minimize the potential for disturbance to or loss of special-status birds or other bird nests, vegetation removal activities shall occur only during the nonbreeding season (September 15 through January 31), if feasible.
- Because coastal California gnatcatcher is a resident species and may be present year-round, there is no reliable season during which all impacts on non-nesting coastal California gnatcatchers could be avoided. Coastal California gnatcatcher is listed under ESA, and USFWS requires protocol-level surveys to determine presence or absence of the species, and these surveys must be conducted by a Section 10(a)(1)(A) permitted biologist. Because of the current federal legal status of cannabis activities, USFWS would not permit these surveys. Furthermore, the San Diego County HLP Ordinance requires issuance of a take permit for coastal California gnatcatcher pursuant to the Special 4(d) Rule under ESA for projects that would directly or indirectly affect any coastal sage scrub habitat types. For the same reasons, cultivation and noncultivation activities would not be permitted on parcels that contain coastal sage scrub habitat (see M-BI.5-1).
- If removal of trees and other vegetation cannot be avoided during the breeding season, before removal of any trees or vegetation or ground-disturbing activities between February 1 and August 31, a qualified biologist shall conduct preconstruction surveys for special-status and common nesting birds on the site and within 1,000 feet of the site. The surveys shall be conducted no more than 3 days before construction begins.
- Surveys will follow established protocols, where these protocols exist (e.g., surveys for least Bell's vireo will follow the protocols in *Least Bell's Vireo Survey Guidelines* [USFWS 2001]).
- Because the nests of least Bell's vireo, southwestern willow flycatcher, and other riparian nesting birds are small and difficult to find, occupancy of habitat suitable for this species will be determined by a qualified RPF or biologist familiar with the life history and calls of these species. If least Bell's vireos, southwestern willow flycatcher, or other riparian nesting birds are observed calling, exhibiting territorial displays, carrying nest materials, carrying prey, or other signs of breeding behavior, the habitat will be considered occupied.
- If no active nests are found during focused surveys, then further mitigation is not required.
- If nests associated with species listed under both CESA and ESA or only under ESA (i.e., California least tern, coastal California gnatcatcher, least Bell's vireo, light-footed Ridgway's rail, southwestern willow flycatcher, western snowy plover, western yellow-billed cuckoo) are found during surveys, the applicant must avoid impacts by implementing no-disturbance buffers or redesigning the project until such time as federal permits, authorizations, and procedures/protocols can be applied. No-disturbance buffers for these species shall be at least 1,000 feet.
- If active nests of species not listed under ESA are located during the preconstruction surveys, the biologist shall notify CDFW. If deemed necessary by CDFW, modifications to the project design to avoid removal of occupied habitat while still achieving project objectives may be required. If the County determines, in consultation with CDFW, that

avoidance is not feasible or conflicts with project objectives, construction shall be prohibited within a no-disturbance buffer, the size of which shall be determined by the qualified biologist in consultation with CDFW. No-disturbance buffers shall be a minimum of 100 feet from the nest to avoid disturbance, depending on the species identified, until the nest is no longer active. No-disturbance buffers surrounding tricolored blackbird colonies shall be a minimum of 500 feet.

M-BI.1-11: Conduct Preconstruction Crotch's Bumble Bee Habitat Suitability Surveys and Focused Surveys

The following shall be included as a performance standard for the licensing of new cultivation and noncultivation activities in unincorporated San Diego County. Compliance documentation will be provided to the County as part of the application materials and may be combined with required compliance with SWRCB Order WQ 2023-0102-DWQ.

- Before implementation of ground-disturbing activities, a qualified biologist shall conduct a habitat assessment for Crotch's bumble bee following the guidance in *Survey Considerations for California Endangered Species Act (CESA) Candidate Bumble Bee Species* (CDFW 2023). Results of the habitat assessment shall be submitted to the applicant, the County, and CDFW before initiating ground-disturbing activities. If the area of proposed new development activities contains habitat suitable for Crotch's bumble bee (e.g., nesting habitat, foraging habitat, overwintering habitat), the following measures shall be followed:
  - To avoid impacts on nesting Crotch's bumble bee, cultivation and noncultivation activities shall not occur in habitats suitable for this species from April through September (i.e., flight season) if feasible.
  - Focused surveys for Crotch's bumble bees shall be conducted following the guidance in the *Survey Considerations for California Endangered Species Act (CESA) Candidate Bumble Bee Species* (CDFW 2023). Crotch's bumble bee presence may also be assumed. If Crotch's bumble bees are determined to be absent during focused surveys, then further mitigation is not required. If Crotch's bumble bees are detected during focused surveys or presence is assumed, the following measure shall be implemented:
    - If Crotch's bumble bees are detected during review and surveys or presence is assumed, the qualified biologist shall contact CDFW for coordination regarding avoidance and mitigation. Avoidance and mitigation measures may include seasonal avoidance or physical avoidance of nest or overwintering sites.

M-BI.1-12: Conduct Preconstruction Special-Status Butterfly Habitat Suitability Surveys and Focused Surveys

The following shall be included as a performance standard for the licensing of new cultivation and noncultivation activities in unincorporated San Diego County. Compliance documentation will be provided to the County as part of the application materials and may be combined with required compliance with SWRCB Order WQ 2023-0102-DWQ.

- To avoid impacts on overwintering monarch butterflies, new development related to cultivation and noncultivation activities shall not occur in monarch overwintering sites

(Xerces Society 2018) and within a buffer surrounding the overwintering site, the size of which will be determined by the qualified biologist to avoid disturbance to the site (but at least 100 feet).

- If, during implementation of M-BI.1-1, a previously undetected monarch overwintering site is found by a qualified biologist, cultivation and noncultivation activities shall be prohibited in the overwintering site and within a buffer surrounding the overwintering site, the size of which will be determined by the qualified biologist to avoid disturbance to the site (but at least 100 feet).
- If, during implementation of M-BI.1-1, a qualified biologist determines that habitat suitable for overwintering monarchs is present on a site, a qualified biologist familiar with monarchs and monarch overwintering habitat will conduct focused surveys for monarch colonies in these areas between October 1 and March 31 and will identify any colonies found within the treatment area. Any identified colonies shall be avoided as described above. If no overwintering colonies are found, further mitigation to protect overwintering monarchs will not be required.
- Quino checkerspot butterfly is associated with coastal sage scrub habitats. Pursuant to M-BI.5-1, cultivation and noncultivation activities would not be permitted on parcels that contain coastal sage scrub habitat, which would help maintain habitat function and avoid impacts on this species.
- Established survey protocols for federally listed butterfly species, including *Quino Checkerspot Butterfly Survey Guidelines* (USFWS 2014), *Survey Guidelines for the Laguna Mountains Skipper* (USFWS 2004), and *Hermes Copper Butterfly Survey Protocol* (USFWS 2024b), require surveyors to have recovery permits for these species pursuant to Section10(a)(1)(A) of ESA. If monarch butterfly is listed, a similar protocol and similar permit requirements may be established. Because of the current federal legal status of cannabis activities, USFWS would not permit these surveys for the project. Therefore, if habitat suitable for special-status butterflies is determined to be present on a site during the initial biological survey (see M-BI.1-1), before commencing any development related to cultivation and noncultivation activities, a qualified biologist shall conduct an additional habitat assessment to determine whether (1) the project site is within the limited range of any federally listed butterfly species and (2) the project site contains the microhabitat features suitable for these species (e.g., vegetation and habitat type, host plant availability, food plant availability). Surveys to determine host plant and food plant availability shall be conducted during the typical bloom period for these species to increase the chances of detecting the plants if present.
- Because surveys (i.e., capture surveys) for nonfederally listed butterfly species (i.e., Thorne's hairstreak, wandering skipper, alkali skipper [*Pseudocopaeodes eunus eunus*], Harbison's dun skipper [*Euphyes vestris harbisoni*], Hilda greenish blue [*Plebejus saepiolus hilda*], peninsular metalmark [*Apodemia virgulti peninsularis*], two-tailed swallowtail [*Papilio multicaudata*], yucca giant-skipper [*Megathymus yuccae*]) could result in take of federally listed species where the ranges of these species overlap, this above protocol shall also apply to these species.
- If habitat for special-status butterflies is determined not to be present on a project site by the qualified biologist, a report shall be prepared by the qualified biologist and submitted to the County for approval. If approved, then further mitigation is not required.

- If habitat potentially suitable for Thorne's hairstreak, wandering skipper, alkali skipper, Harbison's dun skipper, Hilda greenish blue, peninsular metalmark, two-tailed swallowtail, yucca giant-skipper, or monarch (if the species is not listed under ESA at the time of the survey) and habitat for federally listed butterfly species is not present on the project site, then the host plants for the nonfederally listed species shall be avoided and retained on the project site.
- If habitat suitable for Quino checkerspot, Laguna Mountains skipper, Hermes copper, or monarch (if the species is listed under ESA at the time of the survey) is present on a project site, the habitat will be considered occupied, and because these species are listed under ESA, the applicant must avoid impacts by implementing no-disturbance buffers or redesigning the project until such time as federal permits, authorizations, and procedures/protocols can be applied. If the project cannot be redesigned to avoid all habitat suitable for these species and potential edge effects, then the application shall be denied.

M-BI.1-13: Conduct Habitat Assessment for Special-Status Terrestrial Invertebrates and Implement Avoidance Measures

The following shall be included as a performance standard for the licensing of new cultivation and noncultivation activities in unincorporated San Diego County. Compliance documentation will be provided to the County as part of the application materials and may be combined with required compliance with SWRCB Order WQ 2023-0102-DWQ.

- If habitat suitable for special-status terrestrial invertebrates (non-butterflies) is determined to be present on the site during the initial biological survey (see M-BI.1-1), the following measures shall apply.
    - If special-status terrestrial invertebrate species are found that are in the County of San Diego sensitive animal Group II (i.e., all non-butterfly terrestrial invertebrate species that could occur in the program area), the qualified biologist shall determine whether implementation of cultivation and noncultivation activities on the site would threaten the local long-term survival of these species and shall prepare a report that contains evidence supporting the conclusion.
        - If the qualified biologist determines that implementation of cultivation and noncultivation activities on the site would not threaten the local long-term survival of these species, the biologist shall submit the report documenting this conclusion to the County and CDFW for approval. If the County and CDFW concur with the conclusion, then further mitigation for impacts on these special-status species would not be required.
        - If the qualified biologist determines that implementation of cultivation and noncultivation activities on the site would threaten the local long-term survival of these species, the biologist shall consult with CDFW to designate a no-disturbance buffer and/or redesign of the commercial cannabis cultivation site that shall be reflected in application materials to the County. Impacts on these special-status invertebrate species may need to be mitigated such that there would be no net loss of occupied habitat or individuals, as determined by the qualified biologist in consultation with the County and CDFW.

M-BI.1-14: Avoid Special-Status Fairy Shrimp Habitat

The following shall be included as a performance standard for the licensing of new cultivation and noncultivation activities in unincorporated San Diego County. Compliance documentation will be provided to the County as part of the application materials and may be combined with required compliance with SWRCB Order WQ 2023-0102-DWQ.

- If vernal pool habitat suitable for special-status fairy shrimp is determined to be present on a site during the initial biological survey (see M-BI.1-1), a no-disturbance buffer will be implemented surrounding all vernal pool habitat, the size of which will be determined by a qualified biologist, and the project will be redesigned to completely avoid this habitat. If the project cannot be redesigned to avoid all habitat suitable for these species, then the application shall be denied.

M-BI.1-15: Conduct Preconstruction Bat Survey and Establish Protective Buffers

The following shall be included as a performance standard for the licensing of new cultivation and noncultivation activities in unincorporated San Diego County. Compliance documentation will be provided to the County as part of the application materials and may be combined with required compliance with SWRCB Order WQ 2023-0102-DWQ.

- Before commencing any development related to cultivation and noncultivation activities, a qualified biologist shall conduct surveys for roosting bats. If evidence of bat use is observed, the species and number of bats using the roost shall be determined. Bat detectors may be used to supplement survey efforts. If no evidence of bat roosts is found, then no further mitigation will be required.
- If special-status bats are found in the surveys, a mitigation program addressing mitigation for the specific occurrence shall be submitted to the County and CDFW by the qualified biologist subject to the review and approval of the County in consultation with CDFW. Implementation of the mitigation plan shall be a condition of project approval. The mitigation plan shall establish a buffer area around the nest that is large enough to prevent disturbance to the colonies during hibernation or while females in maternity colonies are nursing young.

M-BI.1-16: Conduct Preconstruction Survey for Special-Status Rodents and Rabbits and Establish Protective Buffers

The following shall be included as a performance standard for the licensing of new cultivation and noncultivation activities in unincorporated San Diego County. Compliance documentation will be provided to the County as part of the application materials and may be combined with required compliance with SWRCB Order WQ 2023-0102-DWQ.

- Before commencing any development related to cultivation and noncultivation activities, a qualified biologist shall conduct focused surveys for kangaroo rat burrows or burrow complexes, rodent burrows (i.e., for pocket mice and grasshopper mice), woodrat nests, and jackrabbit nests no more than 14 days prior to development and staging activities associated with cultivation and noncultivation activities.
- If rodent burrows suitable for Pacific pocket mouse are found on a site within the limited range of the species (i.e. near Escondido Creek and the San Dieguito River) or kangaroo

rat burrows and burrow complexes suitable for Stephen's kangaroo rat are found on a site within the limited range of this species (i.e., the northern half of the county) (CWHR 2024b), the applicant must avoid impacts by implementing no-disturbance buffers or redesigning the project until such time as federal permits, authorizations, and procedures/protocols can be applied. If the project cannot be redesigned to avoid all habitat suitable for these species, then the application shall be denied.

- While these burrows may be associated with other mouse or kangaroo rat species that are not listed under ESA, live trapping surveys would be required to determine the species, which could result in take of ESA-listed species. Because of the current federal legal status of cannabis activities, USFWS would not permit these surveys.
- If rodent burrows outside of the range of Pacific pocket mouse and not associated with kangaroo rats, woodrat nests, or jackrabbit nests are detected during focused surveys, a no-disturbance buffer would be established around the burrow, the size of which would be determined by the qualified biologist to prevent burrow collapse and disturbance from cultivation and noncultivation development activities, and no project activities would occur within this buffer.

M-BI.1-17: Conduct Preconstruction American Badger Survey and Establish Protective Buffers

The following shall be included as a performance standard for the licensing of new cultivation and noncultivation activities in unincorporated San Diego County. Compliance documentation will be provided to the County as part of the application materials and may be combined with required compliance with SWRCB Order WQ 2023-0102-DWQ.

- Before commencing any development related to cultivation and noncultivation activities, a qualified biologist shall conduct surveys of grassland or agricultural habitats within the site to identify any American badger burrows/dens. These surveys shall be conducted no more than 30 days prior to the start of construction.
- If occupied burrows are not found, further mitigation shall not be required.
- If occupied burrows are found, impacts on active badger dens shall be avoided by establishing exclusion zones around all active badger dens, within which construction related activities shall be prohibited until denning activities are complete or the den is abandoned. The qualified biologist shall monitor each den once per week to track the status of the den and to determine when it is no longer occupied.

M-BI.1-18: Conduct Preconstruction Southern California Ringtail Survey and Establish Protective Buffers

The following shall be included as a performance standard for the licensing of new cultivation and noncultivation activities in unincorporated San Diego County. Compliance documentation will be provided to the County as part of the application materials and may be combined with required compliance with SWRCB Order WQ 2023-0102-DWQ.

- Prior to commencement of development related to cultivation and noncultivation activities occurring within the southern California ringtail nesting season (April 15 through June 30), including tree or shrub removal, a qualified biologist shall conduct

pre-construction surveys of all habitat suitable within the site and shall record sightings of individual ringtails, as well as potential dens.

- If individuals or potential for occupied dens are not found, further mitigation will not be required.
- If ringtails are detected or if potential dens of this species are detected, an appropriate method shall be used by the qualified biologist to confirm whether a ringtail is occupying the den. This may involve use of remote field cameras, track plates, or hair snares. Other devices, such as a fiber optic scope, may be utilized to determine occupancy. If no ringtail occupies the potential den, the entrance will be temporarily blocked so that no other animals occupy the area during ground disturbance, vegetation removal, or installation of cultivation sites, but only after it has been fully inspected. The blockage will be removed once these activities have been completed.
- If a den is found to be occupied by a ringtail, a no-disturbance buffer will be placed around the occupied den location. The no-disturbance buffer will include the nest tree (or other structure) plus a buffer the size of which shall be determined by the qualified biologist in coordination with CDFW. Construction activities in the no-disturbance buffer will be avoided until the den is unoccupied as determined by a qualified biologist in coordination with CDFW.

M-BI.1-19: Conduct Preconstruction Mountain Lion Survey and Establish Protective Buffers

The following shall be included as a performance standard for the licensing of new cultivation and noncultivation activities in unincorporated San Diego County. Compliance documentation will be provided to the County as part of the application materials and may be combined with required compliance with SWRCB Order WQ 2023-0102-DWQ.

- If potential nursey den habitat suitable for mountain lions is determined to be present on the site during the initial biological survey (see M-BI.1-1) within 7 days before commencement of development related to cultivation and noncultivation activities, a qualified biologist with familiarity with mountain lion and experience using survey methods for the species will conduct focused surveys in nursery den habitat suitable for the species adjacent to (i.e., within 2,000 feet of) the site to identify any potential mountain lion nurseries, as property access allows. Surveys will be conducted during dawn or dusk to increase the likelihood of detecting mountain lions.
- If no signs of a mountain lion nursery are found, then further mitigation would not be required for this species.
- If signs of a mountain lion nursery are found during surveys, further investigation will be required to determine if a mountain lion nursery is present. No staging or construction activities will occur in the area while further investigation is occurring. Survey methods will include the use of trail cameras, track plates, hair snares, and/or other noninvasive methods. Surveys using these noninvasive methods will be conducted for 3 days and 3 nights to determine whether a nursery may be present.
- If a nursery is known to occur in the area or further signs of a nursery are detected based on the surveys described above (e.g., lactating adult females or cubs on camera, repeated detections of an adult female in the area, growls or calls from cubs), a no-

disturbance buffer of at least 2,000 feet will be implemented for a minimum of 10 weeks. Staging and construction activities will not occur within this buffer during this time to avoid disturbance of mountain lion nurseries or injury or mortality of young. CDFW will be notified of the nursery and buffer location.

2.5.6.2 *Issue 2: Riparian Habitat and Other Sensitive Natural Communities*

No mitigation is required for Alternative 1.

The following mitigation is identified for Alternatives 2, 3, 4, and 5.

M-BI.2-1: Identify, Avoid, and Protect Riparian Habitat, Sensitive Natural Communities, and Oak Woodlands or Provide Compensation

As part of compliance with SWRCB Order WQ 2023-0102-DWQ (Attachment A, Section 1, General Requirements and Prohibitions, Terms 10 and 37), San Diego County shall require applicants to demonstrate compliance with the following measures for the protection of riparian habitat, sensitive natural communities, and oak woodlands from proposed cultivation and noncultivation activities:

- For cultivation and noncultivation activities that could disturb riparian habitat, sensitive natural communities, or oak woodlands, the application shall include a report prepared by a qualified biologist that summarizes the potential presence of any of these sensitive resources as identified during the biological survey conducted under M-BI.1-1. Furthermore, the qualified biologist shall perform a protocol-level survey following the survey methods from CDFW's *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Sensitive Natural Communities* (current version dated March 20, 2018) of the site before the start of any development or staging related to cultivation or noncultivation activities. Sensitive natural communities shall be identified using the best means possible, including keying them out using the most current edition of *A Manual of California Vegetation* (including updated natural communities data at http://vegetation.cnps.org/) or referring to relevant reports (e.g., reports found on the VegCAMP website).
- All sensitive habitats identified during the protocol-level survey described above shall be flagged or fenced with brightly visible construction flagging and/or fencing under the direction of the qualified biologist before development or staging activities associated with cannabis activities begin. Grading, excavation, other ground-disturbing activities, and vegetation removal shall not occur in these areas. Foot traffic by construction personnel shall also be limited in these areas to prevent the introduction of invasive or weedy species. Periodic inspections during construction shall be conducted by the qualified biologist to maintain the integrity of exclusion fencing/flagging throughout the period of construction involving ground disturbance.
- Impacts on habitat, including sensitive habitats, on the site shall be subject to mitigation ratios described in the MSCP and BMO (County of San Diego 2010a; see M-BI.1-2), as well as habitat mitigation ratios described in the *County of San Diego Guidelines for Determining Significance and Report Format and Content Requirement – Biological Resources* (County of San Diego 2010b).

- If the report documents that site development would affect the bed, bank, channel, or associated riparian habitat subject to CDFW jurisdiction under Fish and Game Code Section 1602, a Streambed Alteration Notification shall be submitted to CDFW, pursuant to Section 1600 et seq. of the Fish and Game Code. If proposed activities are determined to be subject to CDFW jurisdiction, the applicant shall abide by the conditions of any executed agreement before any ground disturbance.
- In consultation with CDFW, applicants shall compensate for permanent loss of riparian habitat at a minimum of a 2:1 ratio through contributions to a CDFW-approved wetland mitigation bank or through the development and implementation of a Compensatory Stream and Riparian Mitigation and Monitoring Plan for creating or restoring in-kind habitat in the surrounding area. If mitigation credits are not available, stream and riparian habitat compensation shall include establishment of riparian vegetation on currently unvegetated bank portions of streams affected by the project and enhancement of riparian habitat through removal of nonnative species, where appropriate, and planting of additional native riparian plants to increase the cover, continuity, and width of the riparian corridor along streams in the site and surrounding areas. Construction activities and compensatory mitigation shall be conducted in accordance with the terms of a streambed alteration agreement, as required under Section 1602 of the Fish and Game Code and SWRCB Order WQ 2023-0102-DWQ.

The Compensatory Stream and Riparian Mitigation and Monitoring Plan shall identify the following information:

- compensatory mitigation sites and criteria for selecting these mitigation sites;
- in-kind reference habitats for comparison with compensatory riparian habitats (using performance and success criteria) to document success;
- monitoring protocol, including schedule and annual report requirements (compensatory habitat shall be monitored for a minimum of 5 years from completion of mitigation or human intervention [including recontouring and grading], or until the success criteria identified in the approved mitigation plan have been met, whichever is longer);
- ecological performance standards, based on the best available science and including specifications for native riparian plant densities, species composition, amount of dead woody vegetation gaps and bare ground, and survivorship; at a minimum, compensatory mitigation planting sites must achieve 80-percent survival of planted riparian trees and shrubs by the end of the 5-year maintenance and monitoring period, or dead and dying trees shall be replaced and monitoring continued until 80-percent survivorship is achieved;
- corrective measures if performance standards are not met;
- responsible parties for monitoring and preparing reports; and
- responsible parties for receiving and reviewing reports and for verifying success or prescribing implementation or corrective actions.

If the report documents that site development cannot avoid adverse effects on sensitive natural communities or oak woodlands, in consultation with CDFW, the applicant shall

compensate for permanent loss of these habitats such that no net loss of habitat function occurs as follows:

- restoring sensitive natural community habitat function within the project site (e.g., using locally collected seed or cuttings);
- restoring degraded sensitive natural communities outside the project site at a sufficient ratio to offset the loss of habitat function (at least 3:1 for sensitive natural communities with an S1 or S2 rank and at least 1:1 for other sensitive natural communities); or
- preserving existing sensitive natural communities of equal or better value to the sensitive natural community affected through a conservation easement at a sufficient ratio to offset the loss of habitat function (at least 3:1 for coastal prairie and at least 1:1 for other sensitive natural communities).

The applicant shall prepare and implement a Compensatory Mitigation Plan that includes the following elements:

- For preserving existing habitat outside the project site in perpetuity, the Compensatory Mitigation Plan will include a summary of the proposed compensation lands (e.g., the number and type of credits, location of mitigation bank or easement), parties responsible for the long-term management of the land, and the legal and funding mechanism for long-term conservation (e.g., holder of conservation easement or fee title). The applicant will provide evidence in the plan that the necessary mitigation has been implemented or that the applicant has entered into a legal agreement to implement it and that compensatory habitat will be preserved in perpetuity.
- For restoring or enhancing habitat within the project site or outside the project site, the Compensatory Mitigation Plan will include a description of the proposed habitat improvements, success criteria that demonstrate the performance standard of maintained habitat function has been met, legal and funding mechanisms, and parties responsible for long-term management and monitoring of the restored or enhanced habitat.
- The following success criteria would be required to maintain habitat function for preserved and compensatory populations:
    - The extent of occupied area and density of plants associated with the sensitive natural community (number of plants per unit area) in compensatory habitats would be equal to or greater than the affected occupied habitat.
    - Compensatory and preserved sensitive natural communities would be self-producing. Populations would be considered self-producing when (1) plants associated with sensitive natural communities reestablish annually for a minimum of 5 years with no human intervention, such as supplemental seeding, and (2) reestablished and preserved habitats contain an occupied area and density comparable to existing occupied habitat areas in similar habitat types in the project vicinity.

2.5.6.3 *Issue 3: State and Federally Protected Wetlands*

No mitigation is required for Alternative 1.

The following mitigation is identified for Alternatives 2, 3, 4, and 5.

M-BI.3-1: Identify State or Federally Protected Wetlands and Avoid These Features

The following shall be included as a performance standard for the licensing of new cultivation and noncultivation activities in unincorporated San Diego County. Compliance documentation will be provided to the County as part of the application materials and may be combined with required compliance with SWRCB Order WQ 2023-0102-DWQ.

- The application shall include a report prepared by a qualified biologist that includes a summary of sensitive resources, including wetlands, streams, and rivers, that were identified during the biological survey conducted under M-BI.1-1.
- If the report documents that state or federally protected wetlands are present, a delineation of these resources, including wetlands that would be affected by the project, shall be prepared by a qualified biologist. The delineation shall be submitted to the County and the San Diego RWQCB.
- If, based on the delineation, it is determined that fill of any state or federally protected wetlands would result from implementation of the project, then the applicant shall modify the proposed project to avoid these resources by providing a buffer of at least 100 feet around these features. Depending on site features, a buffer of greater than 100 feet may be required. Buffer size shall be determined in consultation with CDFW and the San Diego RWQCB.
- Cannabis cultivation and noncultivation activities would be subject to Term 3 of Attachment A (Section 1, General Requirements and Prohibitions) of SWRCB Order WQ 2023-0102-DWQ, which requires operations to comply with Fish and Game Code Section 1602. When cultivation or noncultivation activities would affect the bed, bank, channel, or associated riparian habitat subject to CDFW jurisdiction under California Fish and Game Code Section 1602, a Streambed Alteration Notification shall be submitted to CDFW, pursuant to Section 1600 et seq. of the California Fish and Game Code. If proposed activities are determined to be subject to CDFW jurisdiction, the applicant shall abide by the conditions of any executed agreement before any ground disturbance in areas that are under Section 1600 et seq. jurisdiction.

2.5.6.4 *Issue 4: Wildlife Movement Corridors and Nursery Sites*

No mitigation is required for Alternative 1.

The following mitigation is identified for Alternatives 2, 3, 4, and 5.

M-BI.4-1: Utilize Wildlife-Friendly Building and Fencing Designs

The following shall be included as a performance standard for the licensing of new cultivation and noncultivation activities in unincorporated San Diego County. Compliance documentation

will be provided to the County as part of the application materials and may be combined with required compliance with SWRCB Order WQ 2023-0102-DWQ.

- Buildings and other permanent structures that would be constructed for cultivation and noncultivation activities associated with the project shall be designed to minimize impacts on wildlife, including disruption to wildlife movement, bird strikes, and wildlife entanglement.
    - Building design shall utilize guidelines regarding building height, materials, external lighting, and landscaping provided in the American Bird Conservancy's Bird-Friendly Building Design (American Bird Conservancy 2015). The County shall require review of the design plans by a qualified biologist, who will determine whether the plans are sufficient to reduce the likelihood of bird strikes or recommend additional measures.
    - Fencing associated with cultivation and noncultivation activities associated with the project will utilize wildlife-friendly fencing design to minimize the risk of entanglement, entrapment, or impalement of wildlife. The County shall require the review of fencing design by a qualified biologist prior to installation. The fencing design shall meet, but not be limited to the following standards:
        - Minimize the chance of wildlife entanglement by avoiding barbed wire, loose or broken wires, or any material that could impale, snag, or entrap a leaping animal (e.g., wrought iron fencing with spikes).
        - Allow wildlife to jump over easily without injury. Typically, fences should be no more than 40 inches high on flat ground to allow adult deer to jump over. The determination of appropriate fence height will consider slope, as steep slopes are more difficult for wildlife to pass. If fencing is required to be greater than 40 inches high for security or logistical purposes, then the fencing shall be high enough to deter wildlife from attempting to jump over (i.e., greater than 8 feet tall).
        - Allow smaller wildlife to pass under easily without injury or entrapment.
    - Polyethylene plastic used for agricultural shade or crop structures shall be properly fastened, maintained in good condition, and regularly inspected for degradation from weather to prevent introduction of plastic into the natural environment, including waterways.

M-BI.4-2: Retain Wildlife Nursery Habitat and Implement Buffers to Avoid Wildlife Nursey Sites

The following shall be included as a performance standard for the licensing of new cultivation and noncultivation activities in unincorporated San Diego County. Compliance documentation will be provided to the County as part of the application materials and may be combined with required compliance with SWRCB Order WQ 2023-0102-DWQ.

If after implementation of M-BI.1-1, a qualified biologist determines that wildlife nursery sites are present within a proposed project site, the following measures shall be implemented prior to and during construction of a project:

- A qualified biologist will identify the important habitat features of the wildlife nursery and, prior to commencement of project activities (e.g., ground disturbance, vegetation

removal, staging), will mark these features for avoidance and retention during project implementation to maintain the function of the nursery habitat.

- A no-disturbance buffer will be established around the nursery site if project activities are required while the nursery site is active/occupied. The appropriate size and shape of the buffer will be determined by a qualified biologist based on potential effects of project-related habitat disturbance, noise, visual disturbance, and other factors but will typically be a minimum of 100 feet. No project activity will commence within the buffer area until a qualified biologist confirms that the nursery site is no longer active/occupied. Monitoring of the effectiveness of the no-disturbance buffer around the nursery site by a qualified biologist during and after project activities may be required. If project activities cause agitated behavior of the individual(s), the buffer distance will be increased or project activities modified until the agitated behavior stops. The qualified biologist will have the authority to stop any project activities that could result in potential adverse effects on wildlife nursery sites.

2.5.6.5 *Issue 5: Conflict with Local Policies and Ordinances*

No mitigation is required for Alternative 1.

The following mitigation is identified for Alternatives 2, 3, 4, and 5.

M-BI.5-1: Prohibit Cultivation and Noncultivation Activities in Coastal Sage Scrub Habitat

The following shall be included as a performance standard for the licensing of new cultivation and noncultivation activities in unincorporated San Diego County. Compliance documentation will be provided to the County as part of the application materials and may be combined with required compliance with SWRCB Order WQ 2023-0102-DWQ.

- If after implementation of M-BI.1-1 and M-BI.2-1, a qualified biologist determines that a proposed cultivation or noncultivation site contains coastal sage scrub habitat, the project shall be designed such that direct and indirect impacts on this habitat would not occur as confirmed by the qualified biologist and the County. If the project cannot be redesigned to completely avoid direct and indirect impact on coastal sage scrub habitat, then the application will be denied, and cultivation and noncultivation activities will not be permitted on the site.

2.5.6.6 *Issue 6: Conflict with Adopted Habitat Conservation Plans and Natural Community Conservation Plans*

No mitigation is required.

2.5.7 Conclusion

The discussion below provides a synopsis of the conclusion reached in each of the above impact analyses and the level of impact that would occur after mitigation measures are implemented for Alternatives 2, 3, 4, and 5. Implementation of these mitigation measures in addition to the requirements of SWRCB Order WQ 2023-0102_DWQ would be in compliance with General Plan Policies COS-1.9, COS-2.1, COS-2.2, COS-3.1, COS-3.2, COS-5.3, COS-5.4, and COS-5.5.

2.5.7.1 *Issue 1: Special-Status Plant and Wildlife Species*

Alternative 1 would have no impacts on special-status plant and wildlife species.

Cultivation and noncultivation activities associated with Alternatives 2, 3, 4 and 5 would have the potential to directly and indirectly adversely affect special-status plant and wildlife species. Therefore, the project would result in a potentially significant impact on these resources. Implementation of Mitigation Measures M-BI.1-1 through M-BI.1-19 would reduce potentially significant program-level and cumulative impacts on special-status plant and wildlife species to a less-than-significant level because special-status plant and wildlife species would be identified through reconnaissance-level and focused or protocol-level surveys (as applicable), avoidance measures would be implemented to prevent impacts on these species, and appropriate permitting or compensation would be obtained or provided for impacts on special-status species that cannot be avoided. Thus, this impact would be less than significant for Alternatives 2, 3, 4, and 5. In addition, the proposed Cannabis Program would not contribute to a significant cumulative impact.

2.5.7.2 *Issue 2: Riparian Habitat and Other Sensitive Natural Communities*

Alternative 1 would have no impacts to riparian habitat and other sensitive natural communities.

Cultivation and noncultivation activities associated with Alternatives 2, 3, 4 and 5 would have the potential to result in direct and indirect impacts on riparian habitat, sensitive natural communities, and oak woodlands. Therefore, the project would result in a potentially significant impact on these resources. Implementation of Mitigation Measures M-BI.1-1 and M-BI.2-1 would reduce potentially significant program-level and cumulative impacts on riparian habitat, sensitive natural communities, and oak woodlands to a less-than-significant level because these resources would be identified through reconnaissance-level and focused surveys, avoidance measures would be implemented to prevent removal or degradation of the habitats, and appropriate permitting and compensation would be required for impacts on these resources. Thus, this impact would be less than significant for Alternatives 2, 3, 4, and 5. In addition, the proposed Cannabis Program would not contribute to a significant cumulative impact.

2.5.7.3 *Issue 3: State and Federally Protected Wetlands*

Alternative 1 would have no impacts to state and federally protected wetlands.

Cultivation and noncultivation activities associated with Alternatives 2, 3, 4, and 5 would have the potential to result in direct and indirect impacts on state and federally protected wetlands. Therefore, the project would result in a potentially significant impact on these resources. Implementation of Mitigation Measures M-BI.1-1 and M-BI.3-1 would reduce potentially significant program-level and cumulative impacts on state and federally protected wetlands to a less-than-significant level because wetlands would be identified through reconnaissance-level surveys and wetland delineation surveys, and wetlands would be avoided through project redesign. Thus, this impact would be less than significant for Alternatives 2, 3, 4, and 5. In addition, the proposed Cannabis Program would not contribute to a significant cumulative impact.

2.5.7.4 *Issue 4: Wildlife Movement Corridors and Nursery Sites*

Alternative 1 would have no impacts on wildlife movement corridors and nursery sites.

Cultivation and noncultivation activities associated with Alternatives 2, 3, 4, and 5 would have the potential to interfere with resident or migratory wildlife movement corridors or impede the use of native wildlife nursery sites. Therefore, the project would result in a potentially significant impact on these resources. Implementation of Mitigation Measures M-BI.1-1, M-BI.4-1, and M-BI.4-2 would reduce potentially significant program-level and cumulative impacts on resident or migratory wildlife movement corridors and native wildlife nursery sites to a less-than-significant level because regional linkages, wildlife movement corridors, and wildlife nursery sites would be identified during reconnaissance-level surveys, wildlife-friendly building and fencing design would be required for all proposed activities, and native wildlife nursery sites would be protected and retained. Thus, this impact would be less than significant for Alternatives 2, 3, 4, and 5. In addition, the proposed Cannabis Program would not contribute to a significant cumulative impact.

2.5.7.5 *Issue 5: Conflict with Local Policies and Ordinances*

Alternative 1 would have no impacts associated with conflicts with local policies and ordinances.

Cultivation and noncultivation activities associated with Alternatives 2, 3, 4, and 5 would have the potential to conflict with local policies and ordinances, specifically the HLP Ordinance. Therefore, the project would result in a potentially significant impact related to this issue. Implementation of Mitigation Measure M-BI.5-1 would reduce potentially significant program-level and cumulative impacts related to local policies and ordinances to a less-than-significant level because cultivation and noncultivation activities would be prohibited in coastal sage scrub habitat, thereby preventing conflict with the HLP Ordinance. Thus, this impact would be less than significant for Alternatives 2, 3, 4, and 5. In addition, the proposed Cannabis Program would not contribute to a significant cumulative impact.

2.5.7.6 *Issue 6: Conflict with Adopted Habitat Conservation Plans and Natural Community Conservation Plans*

Cultivation and noncultivation activities associated with the program would not conflict with any applicable HCP or NCCP. Therefore, Alternatives 1, 2, 3, 4, and 5 would not result in a significant impact. In addition, these alternatives would not contribute to a significant cumulative impact.

Table 2.5.2 Habitat and Land Cover Types in the Program Area

Habitat and Land Cover Type	Vegetation Alliance (MCV)	Size (acres or miles)
Bog and Marsh		1,046.6 acres
—	*Distichlis spicata*	—
—	*Frankenia salina*	—
—	*Phragmites australis – Arundo donax – Alopecurus pratensis*	—
—	*Schoenoplectus americanus*	—
—	*Typha* (*angustifolia, domingensis, latifolia*)	—
Coastal Sage Scrub		38,287.8 acres
—	*Artemisia californica – (Salvia leucophylla)*	—
—	*Artemisia californica – Salvia mellifera*	—
—	*Salvia apiana*	—
—	*Salvia mellifera*	—
Grasslands, Vernal Pools, Meadows, and Other Herb Communities		56,130.1 acres
—	*Avena* (*barbata, fatua*)	—
—	*Avena* spp. – *Bromus* spp.	—
—	*Brassica nigra – Centaurea* (*solstitialis, melitensis*)	—
—	*Bromus rubens – Schismus* (*arabicus, barbatus*)	—
—	*Deinandra fasciculata*	—
—	*Nassella* spp. – *Melica* spp.	—
Riparian and Bottomland Habitat		20,443.5 acres
	Baccharis salicifolia	—
—	*Populus fremontii – Fraxinus velutina – Salix gooddingii*	—
—	*Salix gooddingii – Salix laevigata*	—
—	*Salix lasiolepis*	—
Scrub and Chaparral		185,368.5
	Adenostoma fasciculatum	—
—	*Adenostoma fasciculatum – Salvia* spp.	—
—	*Arctostaphylos glandulosa*	—
—	*Arctostaphylos glauca*	—
—	*Baccharis pilularis*	—
—	*Baccharis sarothroides*	—
—	*Bahiopsis laciniata*	—
—	*Ceanothus (oliganthus, tomentosus)*	—
—	*Ceanothus crassifolius*	—
—	*Ceanothus leucodermis*	—
—	*Cercocarpus montanus*	—
—	*Eriogonum fasciculatum*	—
—	*Eriogonum fasciculatum – Salvia apiana*	—
—	*Keckiella antirrhinoides*	—

Habitat and Land Cover Type	Vegetation Alliance (MCV)	Size (acres or miles)
—	*Lotus scoparius – Lupinus albifrons – Eriodictyon* spp.	—
—	*Malosma laurina*	—
—	*Prunus ilicifolia – Heteromeles arbutifolia – Ceanothus spinosus*	—
—	*Quercus berberidifolia*	—
—	*Rhus integrifolia*	—
—	*Selaginella* (*bigelovii, wallacei*)	—
—	*Simmondsia chinensis*	—
—	*Xylococcus bicolor*	—
Forest		18,229.6
—	*Callitropsis forbesii*	—
—	*Calocedrus decurrens*	—
—	*Pinus coulteri*	—
—	*Pinus ponderosa* / Shrub Understory	—
—	*Pseudotsuga macrocarpa*	—
Woodland		48,503.4 acres
—	*Eucalyptus* spp. – *Ailanthus altissima – Robinia pseudoacacia*	—
—	*Platanus racemosa – Quercus agrifolia*	—
—	*Quercus agrifolia*	—
—	*Quercus chrysolepis* (tree)	—
—	*Quercus engelmannii*	—
—	*Quercus kelloggii*	—
Agriculture		59,418.3 acres
Disturbed or Developed Areas		68,665.4 acres
Aquatic Habitat		—
Lake/Pond		3,970.4 acres
Reservoir		154.7 acres
Swamp/Marsh		240.7 acres
Ephemeral Stream/River		3,554.9 miles
Intermittent Stream/River		416.0 miles
Perennial Stream/River		84.5 miles
Human-made Aquatic Features		—
Canal Ditch		13.6 miles
Connector		13.6 miles
Drainageway		0.1 mile
Pipeline		51.1 miles

Source: Data downloaded from CDFW, NHD, and SanGIS in 2024; data compiled and adapted by Ascent in 2024.

Table 2.5.3 Special-Status Plant Species Known to Occur in San Diego County

Species	Listing Status[1] Federal	Listing Status[1] State	Listing Status[1] CRPR	MSCP Categories[2]	Habitat
Red sand verbena[4] *Abronia maritima*	—	—	4.2	—	Coastal dunes. Dune plant. 0–330 ft in elevation. Blooms February–November. Perennial.
Chaparral sand-verbena[3] *Abronia villosa* var. *aurita*	—	—	1B.1	—	Chaparral, coastal scrub, desert dunes. Sandy areas. 245–5,250 ft in elevation. Blooms January–September. Annual.
Shrubby Indian mallow *Abutilon abutiloides*	—	—	2B.1	—	Sonoran desert scrub. Rocky, granitic. 2,805–2,955 ft in elevation. Blooms August–November. Perennial.
San Diego thorn-mint[3] *Acanthomintha ilicifolia*	FT	SE	1B.1	Covered Species; Narrow endemic plant species	Endemic to active vertisol clay soils of mesas and valleys. Usually on clay lenses within grassland or chaparral communities. 80–3,100 ft in elevation. Blooms April–June. Annual.
Pygmy lotus[3] *Acmispon haydonii*	—	—	1B.3	—	Creosote bush scrub to pinyon-juniper woodland; rocky sites. 590–4,200 ft in elevation. Blooms January–June. Perennial.
Nuttall's acmispon[3] *Acmispon prostratus*	—	—	1B.1	Covered Species	Coastal dunes, coastal scrub. On sand dunes. 0–60 ft in elevation. Blooms March–June. Annual.
California adolphia[3] *Adolphia californica*	—	—	2B.1	—	From sandy/gravelly to clay soils within grassland, coastal sage scrub, or chaparral; various exposures. 150–2,430 ft in elevation. Blooms December–May. Perennial.
Shaw's agave[3] *Agave shawi*i var. *shawii*	—	—	2B.1	Covered Species; Narrow endemic plant species	Coastal bluffs and slopes within coastal sage scrub. 35–395 ft in elevation. Blooms September–May. Perennial.
Yucaipa onion *Allium marvinii*	—	—	1B.2	—	Chaparral. In openings on clay soils. 2,790–3,510 ft in elevation. Blooms April–May. Geophyte.
San Diego bur-sage[3] *Ambrosia chenopodiifolia*	—	—	2B.1	—	Coastal scrub, mostly associated with maritime succulent scrub. Slopes of canyons in open succulent scrub usually with little herbaceous cover. 65–820 ft in elevation. Blooms April–June. Perennial.
Singlewhorl burrobrush *Ambrosia monogyra*	—	—	2B.2	—	Chaparral, Sonoran desert scrub. Sandy soils. 15–1,560 ft in elevation. Blooms August–November. Perennial.

Species	Listing Status[1] Federal	Listing Status[1] State	Listing Status[1] CRPR	MSCP Categories[2]	Habitat
San Diego ambrosia[3] *Ambrosia pumila*	FE	—	1B.1	Covered Species; Narrow endemic plant species	Sandy loam or clay soil; sometimes alkaline. In valleys; persists where disturbance has been superficial. Sometimes on margins or near vernal pools. 10–1,905 ft in elevation. Blooms April–October. Geophyte.
California androsace[4] *Androsace elongata* ssp. *acuta*	—	—	4.2	—	Chaparral, cismontane woodland, coastal sage scrub, valley and foothill grassland, meadows and seeps, pinyon and juniper woodland. Highly localized and often overlooked plant. 490–3,935 ft in elevation. Blooms March–June. Annual.
Aphanisma[3] *Aphanisma blitoides*	—	—	1B.2	Covered Species	On bluffs and slopes near the ocean in sandy or clay soils. 10–1,000 ft in elevation. Blooms February–June. Annual.
Del Mar manzanita[3] *Arctostaphylos glandulosa* ssp. *crassifolia*	FE	—	1B.1	Covered Species	Sandy coastal mesas and ocean bluffs; in chaparral or Torrey pine forest. 100–1,200 ft in elevation. Blooms December–June. Perennial.
Otay manzanita[3] *Arctostaphylos otayensis*	—	—	1B.2	Covered Species	Metavolcanic soils with other chaparral associates. 395–5,005 ft in elevation. Blooms January–April. Perennial.
Rainbow manzanita[3] *Arctostaphylos rainbowensis*	—	—	1B.1	—	Usually found in gabbro chaparral. 330–2,855 ft in elevation. Blooms December–March. Perennial.
San Diego sagewort[4] *Artemisia palmeri*	—	—	4.2	—	In drainages and riparian areas in sandy soil within chaparral and other habitats. 50–3,000 ft in elevation. Blooms May–September. Perennial.
Western spleenwort[4] *Asplenium vespertinum*	—	—	4.2	—	Chaparral, cismontane woodland, coastal scrub. Rocky sites. 590–3,280 ft in elevation. Blooms February–June. Geophyte.
Salton milk-vetch[4] *Astragalus crotalariae*	—	—	4.3	—	Sonoran desert scrub. Plains, valley floors, washes and fans in the foothills of desert mountains, or on open desert in sandy or gravelly soil. 195–820 ft in elevation. Blooms January–April. Perennial.
Dean's milk-vetch[3] *Astragalus deanei*	—	—	1B.1	Critical populations of sensitive plant species	Open, brushy south-facing slopes in Diegan coastal sage, sometimes on recently burned-over hillsides. 230–2,610 ft in elevation. Blooms February–May. Perennial.
Jacumba milk-vetch[3] *Astragalus douglasii* var. *perstrictus*	—	—	1B.2	—	Stony hillsides and gravelly or sandy flats in open oak woodland. 1,640–4,510 ft in elevation. Blooms April–June. Perennial.

Species	Listing Status[1] Federal	Listing Status[1] State	Listing Status[1] CRPR	MSCP Categories[2]	Habitat
Harwood's milk-vetch[3] *Astragalus insularis* var. *harwoodii*	—	—	2B.2	—	Open sandy flats and sandy or stony desert washes; mostly in creosote bush scrub. 165–2,295 ft in elevation. Blooms January–May. Annual.
Borrego milkvetch[4] *Astragalus lentiginosus* var. *borreganus*[4]	—	—	4.3	—	Mojavean desert scrub, Sonoran desert scrub. Sandy flats and semi-stabilized dunes, locally abundant after rains. 100–1,050 ft in elevation. Blooms February–May. Annual.
Peirson's milk-vetch[3] *Astragalus magdalenae* var. *peirsonii*	FT	SE	1B.2	—	Desert dunes. Slopes and hollows in mobile dunes, usually to the lee of the prevailing winds. 195–740 ft in elevation. Blooms December–April. Perennial.
San Diego milk-vetch[3] *Astragalus oocarpus*	—	—	1B.2	—	Openings in chaparral or on gravelly flats and slopes in thin oak woodland. 395–5,890 ft in elevation. Blooms May–August. Perennial.
Jaeger's milk-vetch[3] *Astragalus pachypus* var. *jaegeri*	—	—	1B.1	—	Dry ridges and valleys and open sandy slopes; often in grassland and oak-chaparral. 1,200–3,000 ft in elevation. Blooms December–June. Perennial.
Gravel milk-vetch *Astragalus sabulonum*	—	—	2B.2	—	Sandy or gravelly flats, washes, and roadsides. 195–2,905 ft in elevation. Blooms February–June. Annual/Perennial.
Coastal dunes milk-vetch[3] *Astragalus tene*r var. *titi*	FE	SE	1B.1	Covered Species	Moist, sandy depressions of bluffs or dunes along and near the Pacific Ocean; one site on a clay terrace. 5–150 ft in elevation. Blooms March–May. Annual.
Coulter's saltbush[3] *Atriplex coulteri*	—	—	1B.2	—	Ocean bluffs, ridgetops, as well as alkaline low places. Alkaline or clay soils. 5–1,510 ft in elevation. Blooms March–October. Perennial.
South coast saltscale[3] *Atriplex pacifica*	—	—	1B.2	—	Coastal scrub, coastal bluff scrub, playas, coastal dunes. Alkali soils. 5–1,310 ft in elevation. Blooms March–October. Annual.
Parish's brittlescale[3] *Atriplex parishii*	—	—	1B.1	—	Vernal pools, chenopod scrub, playas. Usually on drying alkali flats with fine soils. 15–4,660 ft in elevation. Blooms June–October. Annual.
Davidson's saltscale[3] *Atriplex serenana* var. *davidsonii*	—	—	1B.2	—	Coastal bluff scrub, coastal scrub. Alkaline soil. 35–655 ft in elevation. Blooms April–October. Annual.
California ayenia[3] *Ayenia compacta*	—	—	2B.3	—	Sandy and gravelly washes in the desert; dry desert canyons. 195–6,005 ft in elevation. Blooms March–April. Perennial.

Species	Listing Status[1] Federal	Listing Status[1] State	Listing Status[1] CRPR	MSCP Categories[2]	Habitat
Mexican mosquito fern[4] *Azolla microphylla*	—	—	4.2	—	Wetland. Marshes and swamps. Ponds and still water. 100–330 ft in elevation. Blooms August. Annual/perennial.
Encinitas baccharis[3] *Baccharis vanessae*	FT	SE	1B.1	Covered Species; Narrow endemic plant species	On sandstone soils in steep, open, rocky areas with chaparral associates. 130–2,805 ft in elevation. Blooms August–November. Perennial.
San Diego County viguiera[4] *Bahiopsis laciniata*	—	—	—	—	Chaparral, coastal scrub. Slopes and ridges. 195–2,460 ft in elevation. Blooms February–June. Perennial.
Fremont barberry[4] *Berberis fremontii*	—	—	2B.3	—	Pinyon and juniper woodland, Joshua tree woodland. Rocky, sometimes granitic. 3,740–5,805 ft in elevation. Blooms March–May. Perennial.
Nevin's barberry[3] *Berberis nevinii*	FE	SE	1B.1	Covered Species; Narrow endemic plant species	On steep, north-facing slopes or in low grade sandy washes. 950–5,165 ft in elevation. Blooms March–June. Perennial.
Golden-spined cereus[3] *Bergerocactus emoryi*	—	—	2B.2	—	Coastal scrub, chaparral, closed-cone coniferous forest. Limited to the coastal belt. 10–1,295 ft in elevation. Blooms May–June. Perennial.
San Diego goldenstar[3] *Bloomeria clevelandii*	—	—	1B.1	Covered Species	Mesa grasslands, scrub edges; clay soils. Often on mounds between vernal pools in fine, sandy loam. 165–1,525 ft in elevation. Blooms April–May. Geophyte.
Hirshberg's rockcress[3] *Boechera hirshbergiae*	—	—	1B.2	—	Pebble (or pavement) plains. 4.595–4,640 ft in elevation. Blooms March–May. Perennial.
Thread-leaved brodiaea[3] *Brodiaea filifolia*	FT	SE	1B.1	Covered Species; Narrow endemic plant species	Usually associated with annual grassland and vernal pools; often surrounded by shrubland habitats. Occurs in openings on clay soils. 50–3,345 ft in elevation. Blooms March–June. Geophyte.
Orcutt's brodiaea[3] *Brodiaea orcuttii*	—	—	1B.1	Covered Species; Critical populations of sensitive plant species	Mesic, clay habitats; sometimes serpentine; usually in vernal pools and small drainages. 100–5,300 ft in elevation. Blooms May–July. Geophyte.

Species	Listing Status[1] Federal	Listing Status[1] State	Listing Status[1] CRPR	MSCP Categories[2]	Habitat
Santa Rosa Basalt brodiaea *Brodiaea santarosae*	—	—	1B.2	—	Valley and foothill grassland. Santa Rosa Basalt. 1,920–3,430 ft in elevation. Blooms May–June. Geophyte.
Little-leaf elephant tree[3] *Bursera microphylla*	—	—	2B.3	—	Hillsides and washes and on canyon sides in California; rocky sites. 640–2,000 ft in elevation. Blooms June–July. Perennial.
Fire reedgrass *Calamagrostis koelerioides*	—	—	—	Covered Species	Mountain meadows, chaparral, pine and spruce forests, and on slopes, dry hills, and ridges. 0–7,550 ft in elevation. Blooms June–August. Perennial.
Brewer's calandrinia[4] *Calandrinia breweri*	—	—	4.2	—	Chaparral, coastal scrub. Sandy or loamy soils. Disturbed sites, burns. 35–3,935 ft in elevation. Blooms March–June. Annual.
Round leaved filaree[3] *California macrophyulla*	—	—	—	—	Foothill woodland and valley grassland. 0–4,000 ft in elevation. Blooms March–May. Annual.
Pink fairy-duster[3] *Calliandra eriophylla*	—	—	2B.3	—	Sonoran desert scrub. Sandy or rocky sites in the desert. 395–4,920 ft in elevation. Blooms January–March. Perennial.
Catalina mariposa-lily[4] *Calochortus catalinae*	—	—	4.2	—	Valley and foothill grassland, chaparral, coastal scrub, cismontane woodland. In heavy soils, open slopes, openings in brush. 50–2,295 ft in elevation. Blooms March–June. Geophyte.
Dunn's mariposa-lily[3] *Calochortus dunnii*	—	SR	1B.2	Covered Species; Narrow endemic plant species	On gabbro or metavolcanic soils; also known from sandstone; often associated with chaparral. 835–5,300 ft in elevation. Blooms April–June. Geophyte.
San Jacinto mariposa-lily *Calochortus palmeri* var. *munzii*	—	—	1B.2	—	Open Jeffrey pine forest as well as in chaparral. 3,085–5,955 ft in elevation. Blooms April–July. Geophyte.
Arizona pussypaws *Calyptridium arizonicum*	—	—	2B.1	—	Sonoran Desert scrub. In washes. 1,985–2,610 ft in elevation. Blooms March–April. Annual.
Lewis' evening primrose[4] *Camissoniopsis lewisii*	—	—	—	—	Valley and foothill grassland, coastal bluff scrub, cismontane woodland, coastal dunes, coastal scrub. Sandy or clay soil. 0–985 ft in elevation. Blooms March–May. Annual.
San Luis Obispo sedge *Carex obispoensis*	—	—	1B.2	—	Usually in transition zone on sand, clay, serpentine, or gabbro. In seeps. 15–2,770 ft in elevation. Blooms April–June. Perennial.

Species	Listing Status[1] Federal	Listing Status[1] State	Listing Status[1] CRPR	MSCP Categories[2]	Habitat
Arizona carlowrightia[3] *Carlowrightia arizonica*	—	—	2B.2	—	Sandy, granitic alluvium; associated with palm oases in California. 885–3,410 ft in elevation. Blooms March–May. Perennial.
California mustard *Caulanthus lasiophyllus*	—	—	—	Covered Species; Critical populations of sensitive plant species	Desert flats, sandy banks, gravelly or rocky areas, talus slopes, shrubland, grassy fields, and disturbed sites. 0–4,500 ft in elevation. Blooms March–June. Annual.
Payson's wild cabbage[4] *Caulanthus simulans*	—	—	4.2	—	Chaparral, coastal scrub. Frequently in burned areas, or in disturbed sites such as streambeds; also on rocky, steep slopes. Sandy, granitic soils. 295–7,220 ft in elevation. Blooms March–May. Annual.
Lakeside ceanothus[3] *Ceanothus cyaneus*	—	—	1B.2	Covered Species; Narrow endemic plant species	Closed-cone coniferous forest, chaparral. 655–3,410 ft in elevation. Blooms April–June. Perennial.
Viejas Mountain ceanothus *Ceanothus foliosus* var. *viejasensis*	—	—	1B.2	—	Chaparral. Gabbro. 2,575–4,495 ft in elevation. Blooms March–June. Perennial.
Vine Hill ceanothus *Ceanothus foliosus* var. *vineatus*	—	—	1B.1	—	Sandy, acidic soil in chaparral. 150–1,000 ft in elevation. Blooms March–May. Perennial.
Otay Mountain ceanothus *Ceanothus otayensis*	—	—	1B.2	—	Metavolcanic or gabbroic soils. 245–3,805 ft in elevation. Blooms January–April. Perennial.
Pendleton ceanothus *Ceanothus pendletonensis*	—	—	1B.2	—	Chaparral, cismontane woodland. Granitic. 360–2,855 ft in elevation. Blooms March–June. Perennial.
Wart-stemmed ceanothus[3] *Ceanothus verrucosus*	—	—	2B.2	Covered Species	Chaparral. 5–1,245 ft in elevation. Blooms December–May. Perennial.
Southern tarplant[3] *Centromadia parryi* ssp. *australis*	—	—	1B.1	—	Often in disturbed sites near the coast at marsh edges; also in alkaline soils. Sometimes on vernal pool margins. 0–3,200 ft in elevation. Blooms May–November. Annual.
Smooth tarplant[3] *Centromadia pungens* ssp. *laevis*	—	—	1B.1	—	Alkali meadow, alkali scrub; also in disturbed places. 15–3,840 ft in elevation. Blooms April–September. Annual.
Peirson's pincushion[3] *Chaenactis carphoclinia* var. *peirsonii*	—	—	1B.3	—	Open rocky or sandy sites. 10–605 ft in elevation. Blooms March–April. Annual.

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Orcutt's pincushion[3] *Chaenactis glabriuscula* var. *orcuttiana*	—	—	1B.1	—	Coastal bluff scrub, coastal dunes. Sandy sites. 10–260 ft in elevation. Blooms January–August. Annual.
Parish's chaenactis[3] *Chaenactis parishii*	—	—	1B.3	—	Chaparral. Rocky sites. 4,265–8,200 ft in elevation. Blooms May–July. Perennial.
Southern mountain misery[4] *Chamaebatia australis*	—	—	4.2	—	Ultramafic. Chaparral. Gabbro or metavolcanic soils. 985–3,345 ft in elevation. Blooms November–May. Perennial.
Salt marsh bird's-beak[3] *Chloropyron maritimum* ssp. *maritimum*	FE	SE	1B.2	Covered Species	Marshes and swamps, coastal dunes, salt marsh, wetland. Limited to the higher zones of salt marsh habitat. 0–35 ft in elevation. Blooms May–October. Annual.
Peninsular spineflower[4] *Chorizanthe leptotheca*	—	—	4.2	—	Chaparral, coastal scrub, lower montane coniferous forest. On granitic soils, in alluvial fans. 985–6,235 ft in elevation. Blooms May–August. Annual.
Orcutt's spineflower *Chorizanthe orcuttiana*	FE	SE	1B.1	—	Coastal scrub, chaparral, closed-cone coniferous forest. Sandy sites and openings; sometimes in transition zones. 10–410 ft in elevation. Blooms March–May. Annual.
San Fernando Valley spineflower *Chorizanthe parryi* var. *fernandina*	—	SE	1B.1	—	Coastal scrub, valley and foothill grassland. Sandy soils. 50–3,330 ft in elevation. Blooms April–July. Annual.
Long-spined spineflower *Chorizanthe polygonoides* var. *longispina*	—	—	1B.2	—	Chaparral, coastal scrub, meadows and seeps, valley and foothill grassland, vernal pools. Gabbroic clay. 100–5,050 ft in elevation. Blooms April–July. Annual.
White-bracted spineflower *Chorizanthe xanti* var. *leucotheca*	—	—	1B.2	—	Mojavean desert scrub, pinyon-juniper woodland, coastal scrub (alluvial fans). Sandy or gravelly places. 985–3,935 ft in elevation. Blooms April–June. Annual.
Seaside cistanthe[4] *Cistanthe maritima*	—	—	4.2	—	Coastal bluff scrub, coastal scrub, valley and foothill grassland. Sea bluffs; sandy sites. 15–985 ft in elevation. Blooms March–June. Annual.
Delicate clarkia[3] *Clarkia delicata*	—	—	1B.2	—	Cismontane woodland, chaparral. Often on gabbro soils. 165–4,460 ft in elevation. Blooms April–June. Annual.
San Miguel savory[3] *Clinopodium chandleri*	—	—	1B.2	Covered Species	Rocky, gabbroic or metavolcanic substrate. 395–3,525 ft in elevation. Blooms March–July. Perennial.

Species	Listing Status[1] Federal	Listing Status[1] State	Listing Status[1] CRPR	MSCP Categories[2]	Habitat
Las Animas colubrina[3] *Colubrina californica*	—	—	2B.3	—	Mojavean desert scrub, Sonoran desert scrub. On narrow, steep, rocky ravines or washes. 35–3,000 ft in elevation. Blooms April–June. Perennial.
Summer holly[3] *Comarostaphylis diversifolia* ssp. *diversifolia*	—	—	1B.2	—	Often in mixed chaparral in California, sometimes post-burn. 100–3,100 ft in elevation. Blooms April–June. Perennial.
Small flowered morning glory[4] *Convolvulus simulans*	—	—	4.2	—	Ultramafic. Chaparral, coastal scrub, valley and foothill grassland. Wet clay, serpentine ridges. 100–2,295 ft in elevation. Blooms March–July. Annual.
Small-flowered bird's-beak *Cordylanthus parviflorus*	—	—	2B.3	—	Joshua tree woodland, pinyon-juniper woodland, Mojavean desert scrub. 2,295–7,220 ft in elevation. Blooms August–October. Annual.
San Diego sand aster[3] *Corethrogyne filaginifolia* var. *incana*	—	—	1B.1	—	Coastal scrub, coastal bluff scrub, chaparral. Most sites are disturbed, so hard to tell. Possibly in disturbed sites and ecotones. 10–375 ft in elevation. Blooms June–September. Perennial.
Del Mar Mesa sand aster[3] *Corethrogyne filaginifolia* var. *linifolia*	—	—	1B.1	Covered Species	In coastal, shrubby communities on maritime sediments and conglomerates; in openings. 50–490 ft in elevation. Blooms May–September. Perennial.
Gander's cryptantha[3] *Cryptantha ganderi*	—	—	1B.1	—	On dunes and in washes. 510–1,015 ft in elevation. Blooms February–May. Annual.
Wiggins' cryptantha *Cryptantha wigginsii*	—	—	1B.2	—	Coastal scrub. Often on clay soils. 150–360 ft in elevation. Blooms February–June. Annual.
Snake cholla[3] *Cylindropuntia californica* var. *californica*	—	—	1B.1	Covered Species; Narrow endemic plant species	Chaparral, coastal scrub. 50–950 ft in elevation. Blooms April–May. Perennial.
Pink teddy-bear cholla *Cylindropuntia fosbergii*	—	—	1B.3	—	Sonoran desert scrub. 280–2,790 ft in elevation. Blooms March–May. Perennial.
Wolf's opuntia[4] *Cylindropuntia wolfii*	—	—	4.3	—	Sonoran desert scrub. Dry places above the valley floors. 330–3,935 ft in elevation. Blooms March–May. Perennial.
Otay tarplant[3] *Deinandra conjugens*	FT	SE	1B.1	Covered Species; Narrow endemic plant species	Coastal plains, mesas, and river bottoms; often in open, disturbed areas; clay soils. 195–900 ft in elevation. Blooms May–June. Annual.

Species	Listing Status[1] Federal	Listing Status[1] State	Listing Status[1] CRPR	MSCP Categories[2]	Habitat
Tecate tarplant[3] *Deinandra floribunda*	—	—	1B.2	—	Chaparral, coastal scrub. Often in small drainages or disturbed areas. 230–4,005 ft in elevation. Blooms August–October. Annual.
Mojave tarplant[3] *Deinandra mohavensis*	—	SE	1B.3	—	Low sand bars in river bed; mostly in riparian areas or in ephemeral grassy areas. 2,100–5,250 ft in elevation. Blooms June–October. Annual.
Paniculate tarplant[4] *Deinandra paniculata*	—	—	4.2	—	Usually in vernally mesic sites. Sometimes in vernal pools or on mima mounds near them. 80–3,085 ft in elevation. Blooms April–November. Annual.
Mt. Laguna aster[3] *Dieteria asteroides* var. *lagunensis*	—	SR	2B.1	—	Cismontane woodland, lower montane coniferous forest. Openings in woodland or forest. 2,985–6,005 feet in elevation. Blooms July–August. Perennial.
Cuyamaca larkspur[3] *Delphinium hesperium* ssp. *cuyamacae*	—	SR	1B.2	—	Usually found in low, moist areas within meadows. 3,985–6,085 ft in elevation. Blooms May–July. Perennial.
Intermediate larkspur[4] *Delphinium parishii* ssp. *subglobosum*	—	—	4.3	—	Chaparral, cismontane woodland, pinyon-juniper woodland, Sonoran desert scrub. On dry stony fans and slopes. 1,970–5,905 ft in elevation. Blooms March–June. Perennial.
Orcutt's bird's-beak[3] *Dicranostegia orcuttiana*	—	—	2B.1	Covered Species	Found in coastal scrub associations on slopes; also reported from intermittently moist swales, and in washes. 0–655 ft in elevation. Blooms April–July. Annual.
Western dichondra[4] *Dichondra occidentalis*	—	—	4.2	—	Chaparral, cismontane woodland, coastal scrub, valley and foothill grassland. On sandy loam, clay, and rocky soils. 165–1,640 ft in elevation. Blooms March–July. Geophyte.
Mt. Laguna aster[3] *Dieteria asteroides* var. *lagunensis*	—	SR	2B.1	—	Cismontane woodland, lower montane coniferous forest. Openings in woodland or forest. 2,985–6,005 ft in elevation. Blooms July–August. Perennial.
Arizona cottontop *Digitaria californica* var. *californica*	—	—	2B.3	—	Sonoran desert scrub, Mojavean desert scrub. Rocky schist hillsides in California; open plains out of state. 130–4,890 ft in elevation. Blooms July–November. Perennial.
Low bush monkeyflower[4] *Diplacus aridus*	—	—	4.3	—	Chaparral, Sonoran desert scrub. Dry, open rocky places. 2,460–3,935 feet in elevation. Blooms April–July. Perennial.

Species	Listing Status[1] Federal	Listing Status[1] State	Listing Status[1] CRPR	MSCP Categories[2]	Habitat
Cleveland's bush monkeyflower[4] *Diplacus clevelandii*	—	—	4.2	—	Chaparral, cismontane woodland, lower montane coniferous forest. Disturbed gravelly roadsides and slopes. 1,475–6,560 ft in elevation. Blooms April–July. Geophyte.
California ditaxis[4] *Ditaxis serrata* var. *californica*	—	—	3.2	—	Sonoran desert scrub. On sandy washes and alluvial fans of the foothills and lower desert slopes. 100–3,280 ft in elevation. Blooms March–December. Perennial.
Cuyamaca Lake downingia[3] *Downingia concolor* var. *brevior*	—	SE	1B.1	—	Meadows and seeps, vernal pools. In vernal seeps, lakes and pools, and on mudflats. 4,595–4,920 ft in elevation. Blooms May–July. Annual.
Orcutt's dudleya[3] *Dudleya attenuata* ssp. *attenuata*	—	—	2B.1	—	Rocky mesas, canyons, and ridges. 10–165 ft in elevation. Blooms May–July. Perennial.
Blochman's dudleya[3] *Dudleya blochmaniae* ssp. *blochmaniae*	—	—	1B.1	Covered Species	Coastal scrub, coastal bluff scrub, chaparral, valley and foothill grassland. Open, rocky slopes; often in shallow clays over serpentine or in rocky areas with little soil. 15–1,475 ft in elevation. Blooms April–June. Perennial.
Short-leaved dudleya[3] *Dudleya brevifolia*	—	—	1B.1	Narrow endemic plant species	Bare sandstone terraces. 100–820 ft in elevation. Blooms April–May. Perennial
Many-stemmed dudleya[3] *Dudleya multicaulis*	—	—	1B.2	—	Chaparral, coastal scrub, valley and foothill grassland. In heavy, often clay soils or grassy slopes. 50–2,590 ft in elevation. Blooms April–July. Perennial.
Variegated dudleya[3] *Dudleya variegata*	—	—	1B.2	Covered Species; Narrow endemic plant species	Chaparral, coastal scrub, cismontane woodland, valley and foothill grassland. In rocky or clay soils; sometimes associated with vernal pool margins. 10–1,905 ft in elevation. Blooms April–June. Perennial.
Sticky dudleya[3] *Dudleya viscida*	—	—	1B.2	Covered Species	Coastal scrub, coastal bluff scrub, chaparral, cismontane woodland. On north and south-facing cliffs and banks. 35–1,805 ft in elevation. Blooms May–June. Perennial.
Harwood's eriastrum *Eriastrum harwoodii*	—	—	1B.2	—	Desert dunes. 245–2,360 ft in elevation. Blooms March–June. Annual.
Laguna Mountains goldenbush[3] *Ericameria cuneata* var. *macrocephala*	—	—	1B.3	—	Chaparral. Endemic to the Laguna Mountains. Among boulders; in crevices in granitic outcrops and in rocky soil. 3,920–6,070 ft in elevation. Blooms September–December. Perennial.

Species	Listing Status[1] Federal	Listing Status[1] State	Listing Status[1] CRPR	MSCP Categories[2]	Habitat
Palmer's goldenbush[3] *Ericameria palmeri* var. *palmeri*	—	—	1B.1	Covered Species; Narrow endemic plant species	Coastal scrub, chaparral. On granitic soils, on steep hillsides. Mesic sites. 15–2,050 ft in elevation. Blooms September–November. Perennial.
Sessile-leaved yerba santa *Eriodictyon sessilifolium*	—	—	2B.1	—	Coastal scrub. Volcanic. 560–555 ft in elevation. Blooms July. Perennial.
Vanishing wild buckwheat *Eriogonum evanidum*	—	—	1B.1	—	Chaparral, cismontane woodland, lower montane coniferous forest, pinyon and juniper woodland. Sandy sites. 3,200–7,350 ft in elevation. Blooms July–October. Annual.
Leafy California buckwheat[3] *Eriogonum fasciculatum* var. *foliolosum*	—	—	—	—	Dry slopes, washes, and canyons. 0–5,200 ft in elevation. Blooms June–August. Perennial.
San Diego button-celery[3] *Eryngium aristulatum* var. *parishii*	FE	SE	1B.1	Covered Species	Vernal pools, coastal scrub, valley and foothill grassland, wetland. San Diego mesa hardpan and claypan vernal pools and southern interior basalt flow vernal pools; usually surrounded by scrub. 50–2,885 ft in elevation. Blooms April–June. Annual/Perennial.
Pendleton button-celery[3] *Eryngium pendletonense*	—	—	1B.1	—	Wetland. Coastal bluff scrub, valley and foothill grassland, vernal pools. Clay. Vernally mesic sites. 65–100 ft in elevation. Blooms April–June. Perennial.
Sand-loving wallflower *Erysimum ammophilum*	—	—	1B.2	Covered Species	Chaparral (maritime), coastal dunes, coastal scrub. Sandy openings. 0–195 ft in elevation. Blooms February–June. Perennial.
Palomar monkeyflower[4] *Erythranthe diffusa*	—	—	4.3	—	Chaparral, lower montane coniferous forest. Sandy or gravelly soils. 4,005–6,005 ft in elevation. Blooms April–June. Annual.
Vernal pool monkeyflower[3] *Erythranthe latidens*	—	—	—	—	Wetlands. 0–3,000 ft in elevation. Blooms April–July. Annual.
Annual rock-nettle[3] *Eucnide rupestris*	—	—	2B.2	—	Sonoran desert scrub. 870–1,000 ft in elevation. Blooms December–April. Annual.
Abrams' spurge *Euphorbia abramsiana*	—	—	2B.2	—	Mojavean desert scrub, Sonoran desert scrub. Sandy sites. 150–4,740 ft in elevation. Blooms September–November. Annual.
Arizona spurge[3] *Euphorbia arizonica*	—	—	2B.3	—	Sonoran desert scrub. Sandy soils. 490–2,955 ft in elevation. Blooms March–April. Perennial.

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Cliff spurge[3] *Euphorbia misera*	—	—	2B.2	—	Coastal bluff scrub, coastal scrub, Mojavean desert scrub. Rocky sites. 10–1,410 ft in elevation. Blooms December–August. Perennial.
Flat-seeded spurge[3] *Euphorbia platysperma*	—	—	1B.2	—	Sandy places or shifting dunes. Possibly a waif in California; more common in Arizona and Mexico. 195–3,150 ft in elevation. Blooms February–September. Annual.
Revolute spurge[4] *Euphorbia revoluta*	—	—	—	—	Rocky slopes. 0–10,170 ft in elevation. Blooms August–September. Annual.
San Diego barrel cactus[3] *Ferocactus viridescens*	—	—	2B.1	Covered Species	Chaparral, coastal scrub, valley and foothill grassland. Often on exposed, level or south-sloping areas; often in coastal scrub near crest of slopes. 10–1,610 ft in elevation. Blooms May–June. Perennial.
Palmer's frankenia[3] *Frankenia palmeri*	—	—	2B.1	—	Wetland. Coastal dunes, marshes (coastal salt), playas. 0–35 ft in elevation. Blooms May–July. Perennial.
Chaparral ash *Fraxinus parryi*	—	—	2B.2	—	Chaparral. Open mixed chaparral and in the chaparral-sage scrub interface in California. 700–2,035 ft in elevation. Blooms March–May. Perennial.
Mexican flannelbush[3] *Fremontodendron mexicanum*	FE	SR	1B.1	—	Ultramafic. Closed-cone coniferous forest, chaparral, cismontane woodland. Usually scattered along the borders of creeks or in dry canyons; found on gabbro, serpentine, or metavolcanics. 985–1,610 ft in elevation. Blooms March–June. Perennial.
Chocolate lily[4] *Fritillaria biflora*	—	—	—	—	Woodlands and grasslands. 0–4,300 ft in elevation. Blooms March–April. Perennial.
Utah vine milkweed[4] *Funastrum utahense*	—	—	4.2	—	Mojavean desert scrub, Sonoran desert scrub. Sandy or gravelly sites in the desert. 330–4,710 ft in elevation. Blooms April–June. Perennial.
Borrego bedstraw[3] *Galium angustifolium* ssp. *borregoense*	—	SR	1B.3	—	Sonoran desert scrub. Steep walls and (usually north) slopes in rocky watersheds or canyons. 1,150–4,100 ft in elevation. Blooms March. Perennial.
San Jacinto Mountains bedstraw[3] *Galium angustifolium* ssp. *jacinticum*	—	—	1B.3	—	Lower montane coniferous forest. Open mixed forest. 3,905–8,005 ft in elevation. Blooms June–August. Perennial.
Johnston's bedstraw[4] *Galium johnstonii*	—	—	4.3	—	Chaparral, lower montane coniferous forest, pinyon and juniper woodland, riparian woodland. 4,005–7,545 ft in elevation. Blooms June–July. Perennial.

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Desert bedstraw *Galium proliferum*	—	—	2B.2	—	Joshua tree woodland, Mojavean desert scrub, pinyon and juniper woodland. Rocky, limestone substrate. 3,905–5,350 ft in elevation. Blooms March–June. Annual.
Campbell's liverwort *Geothallus tuberosus*	—	—	1B.1	—	Coastal scrub, vernal pools. Liverwort known from mesic soil. 35–1,970 ft in elevation.
Sticky geraea[3] *Geraea viscida*	—	—	2B.2	—	Chaparral. Loamy coarse sand to gravelly sand soils; often in post burned areas and in bulldozed areas. 1,475–5,575 ft in elevation. Blooms May–June. Perennial.
El Paso gilia *Gilia mexicana*	—	—	2B.3	—	Pinyon and juniper woodland. Alluvial soil in washes, on bajadas, hillsides, arroyos, and plains. 3,445–4,840 ft in elevation. Blooms May. Annual.
Mission Canyon bluecup[4] *Githopsis diffusa* ssp. *filicaulis*	—	—	3.1	—	Chaparral. Probably in open, grassy places and mesic, disturbed areas; much overlooked. 1,475–2,295 ft in elevation. Blooms April–June. Annual.
San Diego gumplant[3] *Grindelia hallii*	—	—	1B.2	—	Meadows, valley and foothill grassland, chaparral, lower montane coniferous forest. Frequently occurs in low moist areas in meadows. 605–5,725 ft in elevation. Blooms May–October. Perennial.
Palmer's grapplinghook[4] *Harpagonella palmeri*	—	—	4.2	—	Chaparral, coastal scrub, valley and foothill grassland. Clay soils; open grassy areas within shrubland. 65–3,135 ft in elevation. Blooms March–May. Annual.
Orcutt's hazardia[3] *Hazardia orcuttii*	—	ST	1B.1	—	Chaparral, coastal scrub. Often on clay; in grassy edges of chaparral and coastal scrub. 15–280 ft in elevation. Blooms August–October. Perennial.
Algodones Dunes sunflower *Helianthus niveus* ssp. *tephrodes*	—	SE	1B.2	—	Desert dunes. On partially stabilized desert dunes. 165–330 ft in elevation. Blooms September–May. Perennial.
Curly herissantia[3] *Herissantia crispa*	—	—	2B.3	—	Sonoran desert scrub. 2,295–2,380 ft in elevation. Blooms August–September. Annual/Perennial.
Tecate cypress[3] *Hesperocyparis forbesii*	—	—	1B.1	Covered Species	Closed-cone coniferous forest, chaparral. Primarily on north-facing slopes; groves often associated with chaparral. On clay or gabbro. 195–5,395 ft in elevation. Perennial.

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Cuyamaca cypress[3] *Hesperocyparis stephensonii*	—	—	1B.1	—	Ultramafic. Closed-cone coniferous forest, chaparral, chaparral, cismontane woodland, riparian forest. Restricted to the southwest slopes of Cuyamaca Peak, on gabbroic rock. 3,395–4,690 ft in elevation. Perennial.
Beach goldenaster[4] *Heterotheca sessiliflora* ssp. *sessiliflora*	—	—	1B.1	—	Coastal dunes, coastal scrub, chaparral (coastal). Sandy sites. 0–15 ft in elevation. Blooms March–December. Perennial.
Laguna Mountains alumroot[3] *Heuchera brevistaminea*	—	—	1B.3	—	Broadleaved upland forest, chaparral, cismontane woodland, riparian forest. Steep, rocky slopes. 4,460–6,560 ft in elevation. Blooms April–July. Geophyte.
San Diego County alumroot[3] *Heuchera rubescens* var. *versicolor*	—	—	3.3	—	Chaparral, lower montane coniferous forest. Rocky outcrops. 3,790–6,400 ft in elevation. Blooms May–June. Geophyte.
Graceful tarplant[4] *Holocarpha virgata* ssp. *elongata*	—	—	4.3	—	Grassland. 0–3,000 ft in elevation. Blooms May–November. Annual.
Vernal barley[4] *Hordeum intercedens*	—	—	3.2	—	Wetland. Valley and foothill grassland, vernal pools, coastal dunes, coastal scrub. Vernal pools, dry, saline streambeds, alkaline flats. 15–3,280 ft in elevation. Blooms March–June. Annual.
Mesa horkelia[3] *Horkelia cuneata* var. *puberula*	—	—	1B.1	—	Chaparral, cismontane woodland, coastal scrub. Sandy or gravelly sites. 50–5,395 ft in elevation. Blooms February–July. Perennial.
Ramona horkelia[3] *Horkelia truncata*	—	—	1B.3	—	Ultramafic. Chaparral, cismontane woodland. Habitats in California include: mixed chaparral, vernal streams, and disturbed areas near roads. Clay soil; at least sometimes on gabbro. 1,310–4,265 ft in elevation. Blooms May–June. Perennial.
Newberry's velvet mallow[4] *Horsfordia newberryi*	—	—	4.3	—	Sonoran desert scrub. Rocky sites. 10–2,625 ft in elevation. Blooms February–December. Perennial.
Otay Mountain lotus[3] *Hosackia crassifolia* var. *otayensis*	—	—	1B.1	—	Chaparral. Metavolcanic, often in disturbed areas. 1,245–3,295 ft in elevation. Blooms May–August. Perennial.
San Diego sunflower[3] *Hulsea californica*	—	—	1B.3	—	Chaparral, lower montane coniferous forest, upper montane coniferous forest. Burns, clearings, or openings in chaparral and pine-oak woodland. 1,200–6,100 ft in elevation. Blooms April–June. Perennial.

Species	Listing Status[1] Federal	Listing Status[1] State	Listing Status[1] CRPR	MSCP Categories[2]	Habitat
Mexican hulsea[3] *Hulsea mexicana*	—	—	2B.3	—	Chaparral. Volcanic soils or burns and disturbed sites. 3,595–4,265 ft in elevation. Blooms April–June. Annual/Perennial.
Beautiful hulsea[4] *Hulsea vestita*	—	—	4.2	—	Chaparral, lower montane coniferous forest. Rocky or gravelly, granitic sites. 3,000–10,005 ft in elevation. Blooms May–October. Perennial.
Wright's thimblehead[4] *Hymenothrix wrightii*	—	—	4.3	—	Cismontane woodland, lower montane coniferous forest, valley and foothill grassland. 4,595–5,085 ft in elevation. Blooms June–October. Perennial.
California satintail *Imperata brevifolia*	—	—	2B.1	—	Wetland. Coastal scrub, chaparral, riparian scrub, mojavean desert scrub, meadows and seeps (alkali), riparian scrub. Mesic sites, alkali seeps, riparian areas. 10–4,905 ft in elevation. Blooms September–May. Geophyte.
Slender-leaved ipomopsis[3] *Ipomopsis tenuifolia*	—	—	2B.3	—	Chaparral, pinyon and juniper woodland, Sonoran desert scrub. Dry rocky or gravelly slopes. 2,790–4,200 ft in elevation. Blooms March–May. Perennial.
Decumbent goldenbush[3] *Isocoma menziesii* var. *decumbens*	—	—	1B.2	—	Coastal scrub, chaparral. Sandy soils; often in disturbed sites. 5–3,000 ft in elevation. Blooms April–November. Perennial.
San Diego marsh-elder[3] *Iva hayesiana*	—	—	2B.2	—	Marshes and swamps, playas. Riverwashes. 5–1,410 ft in elevation. Blooms April–October. Perennial.
Ribbed cryptantha[4] *Johnstonella costata*	—	—	4.3	—	Sonoran desert scrub, Mojavean desert scrub, desert dunes. Sandy and gravelly places. 200–1,640 ft in elevation. Blooms February–May. Annual.
Winged cryptantha[4] *Johnstonella holoptera*	—	—	4.3	—	Mojavean desert scrub, Sonoran desert scrub. 330–5,545 ft in elevation. Blooms March–April. Annual.
Southern black walnut[4] *Juglans californica*	—	—	4.2	—	Chaparral, coastal scrub, cismontane woodland. Slopes, canyons, alluvial habitats. 165–2,955 ft in elevation. Blooms March–August. Perennial.
Southwesern spiny rush[4] *Juncus acutus* ssp. *leopoldii*	—	—	4.2	—	Wetland. Salt marshes, alkaline seeps, coastal dunes (mesic sites). Moist saline places. 10–2,955 ft in elevation. Blooms May–June. Geophyte.
Cooper's rush[4] *Juncus cooperi*	—	—	4.3	—	Wetland. Meadows and seeps. Mesic sites; alkaline or saline soils. 850–5805 ft in elevation. Blooms April–May. Perennial.

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Santa Lucia dwarf rush *Juncus luciensis*	—	—	1B.2	—	Vernal pools, ephemeral drainages, wet meadow habitats and streamsides. 985–6,695 ft in elevation. Blooms April–July. Annual.
Coulter's goldfields[3] *Lasthenia glabrata* ssp. *coulteri*	—	—	1B.1	—	Coastal salt marshes, playas, vernal pools. Usually found on alkaline soils in playas, sinks, and grasslands. 5–4,510 ft in elevation. Blooms February–June. Annual.
Heart-leaved pitcher sage[3] *Lepechinia cardiophylla*	—	—	1B.2	Covered Species; Narrow endemic plant species	Closed-cone coniferous forest, chaparral, cismontane woodland. 1,705–4,495 ft in elevation. Blooms April–July. Perennial.
Pride-of-California[4] *Lathyrus splendens*	—	—	4.3	—	Chaparral. Sandy to gravelly soils. 655–5,005 ft in elevation. Blooms March–June. Perennial.
Gander's pitcher sage[3] *Lepechinia ganderi*	—	—	1B.3	Covered Species; Narrow endemic plant species	Usually found in chaparral or coastal scrub; sometimes in tecate cypress woodland. Gabbro or metavolcanic substrate. 1,000–3,295 ft in elevation. Blooms June–July. Perennial.
Blair Valley pepper-grass[3] *Lepidium flavum* var. *felipense*	—	—	1B.2	—	Sonoran desert scrub, pinyon and juniper woodland. Sandy, clay, or silty soils. 1,100–2,755 ft in elevation. Blooms March–May. Annual.
Robinson's pepper-grass[3] *Lepidium virginicum* var. *robinsonii*	—	—	4.3	—	Chaparral, coastal scrub. Dry soils, shrubland. 5–2,905 ft in elevation. Blooms January–July. Annual.
Santa Rosa Mountains leptosiphon[3] *Leptosiphon floribundus* ssp. *hallii*	—	—	1B.3	—	Sonoran desert scrub, pinyon and juniper woodland. Desert canyons. 3,280–6,560 ft in elevation. Blooms May–July. Perennial.
Sea dahlia[3] *Leptosyne maritima*	—	—	2B.2	—	Coastal scrub, coastal bluff scrub. Occurs on a variety of soil types, including sandstone. 15–605 ft in elevation. Blooms March–May. Perennial.
Warner Springs lessingia[3] *Lessingia glandulifera* var. *tomentosa*	—	—	1B.1	—	Chaparral. Along roadsides, sandy soil, in high desert chaparral. 2,855–4,005 ft in elevation. Blooms August–October. Annual.
Short-sepaled lewisia[3] *Lewisia brachycalyx*	—	—	2B.2	—	Lower montane coniferous forest, meadows and seeps. Dry to moist meadows in rich loam. 4,495–8,040 ft in elevation. Blooms February–June. Perennial.

Species	Listing Status[1] Federal	Listing Status[1] State	Listing Status[1] CRPR	MSCP Categories[2]	Habitat
Humboldt lily[4] *Lilium humboldtii*	—	—	4.2	—	Yellow pine forest, openings or open forest. 295–4,200 ft in elevation. Blooms May–July. Geophyte.
Lemon lily[3] *Lilium parryi*	—	—	1B.2	—	Wet, mountainous terrain; in forested areas; on shady edges of streams, in open boggy meadows and seeps. 4,005–9,005 ft in elevation. Blooms July–August. Geophyte.
Parish's meadowfoam[3] *Limnanthes alba* ssp. *parishii*	—	SE	1B.2	—	Vernally moist areas and temporary seeps of highland meadows and plateaus; often bordering lakes and streams. 1,985–5,920 ft in elevation. Blooms April–June. Annual.
Desert beauty[3] *Linanthus bellus*	—	—	2B.1	—	Chaparral. Dry slopes and flats; open sandy spots in chaparral, mostly in loamy coarse sandy dg soil types. 3,280–4,595 ft in elevation. Blooms April–May. Annual.
Jacumba Mountains linanthus *Linanthus maculatus* ssp. *emaculatus*	—	—	1B.1	—	Desert dunes, Sonoran desert scrub. Sandy or course, opaque-white, decomposed granite soils of washes and on flats near wash margins. Also on edges of desert dunes. 1,115–1,920 ft in elevation. Blooms April. Annual.
Orcutt's linanthus[3] *Linanthus orcuttii*	—	—	1B.3	—	Chaparral, lower montane coniferous forest, pinyon and juniper woodland. Sometimes in disturbed areas; often in gravelly clearings. 3,000–7,035 ft in elevation. Blooms May–June. Annual.
Mountain Springs bush lupine[3] *Lupinus albifrons* var. *medius*	—	—	1B.3	—	Pinyon and juniper woodland, Sonoran desert scrub. Dry, sandy, gently sloping canyon washes, sandy soil pockets, and flats in steeper slopes and drainages. 1,395–4,495 ft in elevation. Blooms March–May. Perennial.
California box-thorn[4] *Lycium californicum*	—	—	4.2	—	Coastal bluff scrub, coastal scrub. 15–490 ft in elevation. Blooms March–August. Perennial.
Parish's desert-thorn[3] *Lycium parishii*	—	—	2B.3	—	Coastal scrub, Sonoran desert scrub. 445–3,280 ft in elevation. Blooms March–April. Perennial.
Coulter's lyrepod[4] *Lyrocarpa coulteri*	—	—	4.3	—	Sonoran desert scrub. Rocky, dry hillsides and washes. 395–2,610 ft in elevation. Blooms December–April. Perennial.
Indian Valley bushmallow[3] *Malacothamnus aboriginum*	—	—	1B.2	—	Cismontane woodland, chaparral. Granitic outcrops and sandy bare soil, often in disturbed soils. 490–3,705 ft in elevation. Blooms April–October. Perennial.

Species	Listing Status[1] Federal	Listing Status[1] State	Listing Status[1] CRPR	MSCP Categories[2]	Habitat
Brown turbans[3] *Malperia tenuis*	—	—	2B.3	—	Sonoran desert scrub. Sandy places and rocky slopes. 0–1,805 ft in elevation. Blooms March–April. Annual.
Spear-leaf matelea[3] *Matelea parvifolia*	—	—	2B.3	—	Mojavean desert scrub, Sonoran desert scrub. Dry rocky ledges and slopes. 1,445–3,595 ft in elevation. Blooms March–May. Perennial.
Hairy stickleaf[3] *Mentzelia hirsutissima*	—	—	2B.3	—	Sonoran desert scrub. Washes, fans, slopes; coarse rubble and talus slopes; rocky sites. 0–2,295 ft in elevation. Blooms March–May. Annual.
Spiny-hair blazing star *Mentzelia tricuspis*	—	—	2B.1	—	Mojavean desert scrub. Sandy or gravelly slopes and washes. 490–4,200 ft in elevation. Blooms March–May. Annual.
Small flowered microseris[4] *Microseris douglasii* ssp. *platycarpha*	—	—	4.2	—	Wetland. Cismontane woodland, valley and foothill grassland, coastal scrub, vernal pools. Alkaline clay in river bottoms. 50–3,510 ft in elevation. Blooms March–May. Annual.
Shevock's copper moss *Mielichhoferia shevockii*	—	—	1B.2	—	Cismontane woodland. Moss on metamorphic rocks containing heavy metals; mesic sites. On rocks along roads. 2,460–4,595 ft in elevation. Perennial.
Slender-lobed four o'clock *Mirabilis tenuiloba*	—	—	4.3	—	Sonoran desert scrub. 985–3,595 ft in elevation. Blooms March–May. Perennial.
Small-headed monardella *Monardella breweri* ssp. *microcephala*	—	—	2B.2	—	Chaparral, cismontane woodland, lower montane coniferous forest. Granitic, openings, sometimes in disturbed areas. 755–3,935 ft in elevation. Blooms June–August. Annual.
Intermediate monardella *Monardella hypoleuca* ssp. *intermedia*	—	—	1B.3	—	Chaparral, cismontane woodland, lower montane coniferous forest (sometimes). Often in steep, brushy areas. 640–54,955 ft in elevation. Blooms April–September. Geophyte.
Felt-leaved monardella[3] *Monardella hypoleuca* ssp. *lanata*	—	—	1B.2	Covered Species; Critical populations of sensitive plant species	Occurs in understory in mixed chaparral, chamise chaparral, and southern oak woodland; sandy soil. 985–5,165 ft in elevation. Blooms June–August. Geophyte.
Hall's monardella[3] *Monardella macrantha* ssp. *hallii*	—	—	1B.3	—	Dry slopes and ridges in openings within the above communities. 2,395–7,200 ft in elevation. Blooms June–October. Geophyte.

Species	Listing Status[1] Federal	Listing Status[1] State	Listing Status[1] CRPR	MSCP Categories[2]	Habitat
San Felipe monardella[3] *Monardella nana* ssp. *leptosiphon*	—	—	1B.2	—	Sometimes in openings and fuel breaks or in the understory of forest or chaparral. 2,790–7,955 ft in elevation. Blooms June–July. Geophyte.
Jennifer's monardella[3] *Monardella stoneana*	—	—	1B.2	—	Coastal scrub, chaparral, closed cone coniferous forest, riparian scrub. Usually found in rocky, intermittent streambeds. 35–2,590 ft in elevation. Blooms June–September. Perennial.
Willowy monardella[3] *Monardella viminea*	FE	SE	1B.1	Covered Species; Narrow endemic plant species	In canyons, in rocky and sandy places, sometimes in washes or floodplains. Alluvial, ephemeral washes with adjacent coastal scrub. 150–755 ft in elevation. Blooms June–August. Perennial.
California spineflower[4] *Mucronea californica*	—	—	4.2	—	Chaparral, cismontane woodland, coastal dunes, coastal scrub, valley and foothill grassland. Sandy soil. 0–4,595 ft in elevation. Blooms March–July. Annual.
Appressed muhly *Muhlenbergia appressa*	—	—	2B.2	—	Coastal scrub, Mojavean desert scrub, valley and foothill grassland. Rocky slopes, canyon bottoms. 65–5,250 ft in elevation. Blooms April–May. Annual.
Little mousetail[4] *Myosurus minimus*	—	—	—	—	Wetland. Vernal pools, valley and foothill grassland. Alkaline soils. 65–2,100 ft in elevation. Blooms March–June. Annual.
Wooton's lace fern *Myriopteris wootonii*	—	—	2B.3	—	Joshua tree woodland, pinyon-juniper woodland. In crevices and rocky sites. 5,250–6,235 ft in elevation. Blooms May–October. Geophyte.
Mud nama[3] *Nama stenocarpa*	—	—	2B.2	—	Lake shores, river banks, intermittently wet areas. 15–1,640 ft in elevation. Blooms January–July. Annual/Perennial.
Gambel's water cress[3] *Nasturtium gambelii*	FE	ST	1B.1	—	Wetland. Marshes and swamps. Freshwater and brackish marshes at the margins of lakes and along streams, in or just above the water level. 15–1,085 ft in elevation. Blooms April–October. Geophyte.
Spreading navarretia[3] *Navarretia fossalis*	FT	—	1B.1	Covered Species	San Diego hardpan and San Diego claypan vernal pools; in swales and vernal pools, often surrounded by other habitat types. 50–2,790 ft in elevation. Blooms April–June. Annual.

Species	Listing Status[1] Federal	Listing Status[1] State	Listing Status[1] CRPR	MSCP Categories[2]	Habitat
Baja navarretia[3] *Navarretia peninsularis*	—	—	1B.2	—	Lower montane coniferous forest, chaparral, meadows and seeps, pinyon and juniper woodland. Wet areas in open forest. 3,775–7,760 ft in elevation. Blooms June–August. Annual.
Prostrate vernal pool navarretia[3] *Navarretia prostrata*	—	—	1B.2	—	Alkaline soils in grassland, or in vernal pools. Mesic, alkaline sites. 10–4,050 ft in elevation. Blooms April–July. Annual.
Coast woolly-heads[3] *Nemacaulis denudata* var. *denudata*	—	—	1B.2	—	Coastal dunes. 0–330 ft in elevation. Blooms April–September. Annual.
Slender cottonheads[3] *Nemacaulis denudata* var. *gracilis*	—	—	2B.2	—	Sonoran desert scrub. In dunes or sand. 165–1,310 ft in elevation. Blooms April–May. Annual.
Chaparral nolina[3] *Nolina cismontana*	—	—	1B.2	—	Primarily on sandstone and shale substrates; also known from gabbro. 460–4,185 ft in elevation. Blooms May–July. Perennial.
Dehesa nolina[3] *Nolina interrata*	—	SE	1B.1	Covered Species; Narrow endemic plant species	Typically on rocky hillsides or ravines on ultramafic soils (gabbro, serpentine, or metavolcanic). 835–2,410 ft in elevation. Blooms June–July. Perennial.
California adder's tongue[4] *Ophioglossum californicum*	—	—	4.2	—	Wetland. Chaparral, vernal pool areas, valley and foothill grassland. Grassy pastures, vernal pool margins, chaparral. Mesic sites. 195–1,720 ft in elevation. Blooms January–June. Geophyte.
Wiggins' cholla[4] *Opuntia wigginsii*	—	—	3.3	—	Sonoran desert scrub. Sandy soils. 100–2,905 ft in elevation. Blooms March. Perennial.
California Orcutt grass[3] *Orcuttia californica*	FE	SE	1B.1	Covered Species	Vernal pools, wetland. 35–2,165 ft in elevation. Blooms April–August. Annual.
Baja California birdbush[3] *Ornithostaphylos oppositifolia*	—	SE	2B.1	—	Chaparral. Associated with *Ceanothus verrucosus* and *Salvia mellifera* in California. 180–2,625 ft in elevation. Blooms January–April. Perennial.
Parish's broomrape[4] *Orobanche parishii*	—	—	4.2	—	A parasite growing attached to the roots of other plants, usually shrubs of the Asteraceae, such as Menzies' goldenbush (*Isocoma menziesii*).
Gander's ragwort[3] *Packera ganderi*	—	SR	1B.2	Covered Species; Critical populations of sensitive plant species	Recently burned sites and gabbro outcrops. 1,590–3,510 ft in elevation. Blooms April–June. Perennial.

Species	Listing Status[1] Federal	Listing Status[1] State	Listing Status[1] CRPR	MSCP Categories[2]	Habitat
Baja pectocarya[4] *Pectocarya peninsularis*	—	—	—	—	Washes, roadsides, clearings. 100–1,000 ft in elevation. Blooms February–April. Annual.
San Jacinto beardtongue[4] *Penstemon clevelandii*	—	—	4.3	—	Chaparral, pinyon-juniper woodland, Sonoran desert scrub. Dry rocky hillsides in coarse sandy loam and in cracks in rock outcrops. 1,310–4,920 ft in elevation. Blooms March–May. Perennial.
Thurber's beardtongue[4] *Penstemon thurberi*	—	—	4.2	—	Joshua tree woodland, pinyon and juniper woodland, Sonoran desert scrub, chaparral. Dry sandy washes. 1,640–4,005 ft in elevation. Blooms May–July. Perennial.
Golden-rayed pentachaeta[4] *Pentachaeta aurea*	—	—	—	—	Chaparral, cismontane woodland, coastal scrub, lower montane coniferous forest, valley and foothill grassland, riparian woodland. 260–6,070 ft in elevation. Blooms March–July. Annual.
Gairdner's yampah[4] *Perideridia gairdneri* ssp. *gairdneri*	—	—	4.2	—	Coastal flats, grassland, and pine forest. 100–1,150 ft in elevation. Blooms June–October. Perennial.
Narrow-leaf sandpaper-plant *Petalonyx linearis*	—	—	2B.3	—	Sandy or rocky canyons. 80–3,660 ft in elevation. Blooms March–May. Perennial.
Santiago Peak phacelia *Phacelia keckii*	—	—	1B.3	—	Closed-cone coniferous forest, chaparral. Open areas, sometimes along creeks. 1,790–5,250 ft in elevation. Blooms May–June. Annual.
Brand's star phacelia[3] *Phacelia stellaris*	—	—	1B.1	—	Coastal scrub, coastal dunes. Open areas. 5–1,310 ft in elevation. Blooms March–June. Annual.
Arizona pholistoma *Pholistoma auritum* var. *arizonicum*	—	—	2B.3	—	Mojavean desert scrub. 900–2,740 ft in elevation. Blooms March. Annual.
Thurber's pilostyles[4] *Pilostyles thurberi*	—	—	4.3	—	Sonoran desert scrub. Sandy alluvial plains, sandstone talus. 165–1,200 ft in elevation. Blooms December–April. Perennial.
Torrey pine[3] *Pinus torreyana* ssp. *torreyana*	—	—	1B.2	Covered Species	Closed-cone coniferous forest, chaparral. On dry, sandstone slopes. 230–525 ft in elevation. Perennial.
Cooper's rein orchid[4] *Piperia cooperi*	—	—	4.2	—	Chaparral, cismontane woodland, valley and foothill grassland. 50–605 ft in elevation. Blooms March–June. Perennial.

Species	Listing Status[1] Federal	Listing Status[1] State	Listing Status[1] CRPR	MSCP Categories[2]	Habitat
Rein orchid[4] *Piperia leptopetala*	—	—	4.3	—	Cismontane woodland, lower montane coniferous forest, upper montane coniferous forest. 1,245–7,300 ft in elevation. Blooms May–July. Perennial.
San Bernardino blue grass[3] *Poa atropurpurea*	FE	—	1B.2	—	Mesic meadows of open pine forests and grassy slopes, loamy alluvial to sandy loam soil. 4,115–8,710 ft in elevation. Blooms May–July. Geophyte.
San Diego mesa mint[3] *Pogogyne abramsii*	FE	SE	1B.1	Covered Species	Vernal pools within grasslands, chamise chaparral, or coastal sage scrub communities. 230–640 ft in elevation. Blooms March–July. Annual.
Otay Mesa mint[3] *Pogogyne nudiuscula*	FE	SE	1B.1	Covered Species	Dry beds of vernal pools and moist swales with. 445–540 ft in elevation. Blooms May–July. Annual.
Fish's milkwort[4] *Polygala cornuta*	—	—	4.3	—	Cismontane woodland, riparian woodland, chaparral. Scree slopes, brushy ridges, and along creeks; often with oaks. 330–3,280 ft in elevation. Blooms May–August. Perennial.
Desert unicorn plant[4] *Proboscidea althaeifolia*	—	—	4.3	—	Sonoran desert scrub. Gently sloping sandy flats and washes. 280–3,280 ft in elevation. Blooms May–September. Perennial.
White rabbit-tobacco *Pseudognaphalium leucocephalum*	—	—	2B.2	—	Riparian woodland, cismontane woodland, coastal scrub, chaparral. Sandy, gravelly sites. 115–1,690 ft in elevation. Blooms August–November. Perennial.
Deep Canyon snapdragon *Pseudorontium cyathiferum*	—	—	2B.3	—	Sonoran desert scrub. Rocky sites. 0–2,625 ft in elevation. Blooms February–April. Annual.
Cedros Island oak[3] *Quercus cedrosensis*	—	—	2B.2	—	Closed-cone coniferous forest, chaparral, coastal scrub. 425–3,200 ft in elevation. Blooms April–May. Perennial.
Nuttall's scrub oak[3] *Quercus dumosa*	—	—	1B.1	—	Generally on sandy soils near the coast; sometimes on clay loam. 50–1,310 ft in elevation. Blooms February–April. Perennial.
Engelmann oak[4] *Quercus engelmannii*	—	—	4.2	—	Cismontane woodland, chaparral, riparian woodland, valley and foothill grassland. 165–4,265 ft in elevation. Blooms March–June. Perennial.
Single-leaved skunkbrush[3] *Rhus aromatica* var. *simplicifolia*	—	—	2B.3	—	Pinyon and juniper woodland. Usually granitic. 2,395–4,365 ft in elevation. Blooms March–April. Perennial.
Moreno currant[3] *Ribes canthariforme*	—	—	1B.3	—	Among boulders in oak-manzanita thickets; shaded or partially shaded sites. 1,115–3,935 ft in elevation. Blooms February–April. Perennial.

Species	Listing Status[1] Federal	Listing Status[1] State	Listing Status[1] CRPR	MSCP Categories[2]	Habitat
Santa Catalina Island currant[3] *Ribes viburnifolium*	—	—	1B.2	—	Chaparral, cismontane woodland. Among shrubs in canyons. 100–1,000 ft in elevation. Blooms February–April. Perennial.
Coulter's matilija poppy[4] *Romneya coulteri*	—	—	4.2	—	Desert wash. Coastal scrub, chaparral. In washes and on slopes; also after burns. 65–3,935 ft in elevation. Blooms March–July. Geophyte.
Small-leaved rose[3] *Rosa minutifolia*	—	SE	2B.1	Covered Species	Coastal scrub, chaparral. Cobbly soil at the head of a small, dry canyon on Otay Mesa. 490–525 ft in elevation. Blooms January–June. Perennial.
Cuyamaca raspberry[3] *Rubus glaucifolius* var. *ganderi*	—	—	3.1	—	Lower montane coniferous forest. Open, moist forest; gabbro soils. 3,935–5,495 ft in elevation. Blooms May–June. Perennial.
Parish's rupertia[4] *Rupertia rigida*	—	—	4.3	—	Chaparral, lower montane coniferous forest, cismontane woodland, meadows and seeps, pebble plain, valley and foothill grassland. 2,295–8,200 ft in elevation. Blooms June–August. Perennial.
Caraway-leaved woodland-gilia[4] *Saltugilia caruifolia*	—	—	4.3	—	Chaparral, lower montane coniferous forest. In disturbed areas near roads and on fuel breaks, in sandy washes, on old burns; also in rocky outcrops. 2,755–7,545 ft in elevation. Blooms May–August. Annual.
Desert sage[4] *Salvia eremostachya*	—	—	4.3	—	Dry rocky and gravelly desert slopes, in desert canyons from the base of the mountains to the pinyon pine belt. 2,295–4,595 ft in elevation. Blooms March–May. Perennial.
Munz's sage[3] *Salvia munzii*	—	—	2B.2	—	Rolling hills and slopes, in rocky soil. 115–1,885 ft in elevation. Blooms February–April. Perennial.
Southern mountains skullcap[3] *Scutellaria bolanderi* ssp. *austromontana*	—	—	1B.2	—	In gravelly soils on streambanks or in mesic sites in oak or pine woodland. 1,395–6,560 ft in elevation. Blooms June–August. Geophyte.
Bluish spike moss[4] *Selaginella asprella*	—	—	4.3	—	Dry, rocky soils, crevices; granitic substrate. 5,250–8,860 ft in elevation. Blooms July. Geophyte.
Ashy spike moss[4] *Selaginella cinerascens*	—	—	4.1	—	Chaparral, coastal scrub. 65–2,100 ft in elevation. Geophyte.
Desert spike-moss[3] *Selaginella eremophila*	—	—	2B.2	—	Shaded sites, gravelly soils; crevices or among rocks. 655–2,955 ft in elevation. Blooms June. Geophyte.

Species	Listing Status[1] Federal	Listing Status[1] State	Listing Status[1] CRPR	MSCP Categories[2]	Habitat
Chaparral ragwort[3] *Senecio aphanactis*	—	—	2B.2	—	Chaparral, cismontane woodland, coastal scrub. Drying alkaline flats. 65–2,805 ft in elevation. Blooms January–April. Annual.
Cove's cassia[3] *Senna covesii*	—	—	2B.2	—	Dry, sandy desert washes, slopes. 835–4,250 ft in elevation. Blooms March–June. Perennial.
Hammitt's clay-cress[3] *Sibaropsis hammittii*	—	—	1B.2	—	Mesic microsites in open areas on clay soils in needlegrass grassland. 2,360–3,495 ft in elevation. Blooms March–April. Annual.
Salt Spring checkerbloom *Sidalcea neomexicana*	—	—	2B.2	—	Alkali springs and marshes. 0–5,020 ft in elevation. Blooms March–June. Perennial.
Purple nightshade *Solanum xanti*	—	—	—	Covered Species; Critical populations of sensitive plant species	0–8,860 ft in elevation. Blooms February–July. Perennial.
Bristly scaleseed[3] *Spermolepis echinata*	—	—	—	—	Rocky slopes and sandy flats. 200–5,000 ft in elevation. Blooms March–April. Annual.
Hellhole scaleseed *Spermolepis infernensis*	—	—	1B.2	—	Sonoran desert scrub. Rocky or sandy. 755–2,200 ft in elevation. Blooms March–April. Annual.
Western bristly scaleseed *Spermolepis lateriflora*	—	—	2A	—	Sonoran desert scrub. Rocky or sandy. 1,200–2,200 ft in elevation. Blooms March–April. Annual.
Bottle liverwort *Sphaerocarpos drewiae*	—	—	1B.1	—	Chaparral, coastal scrub. Liverwort in openings; on soil. 195–1,920 ft in elevation.
Prairie false oat *Sphenopholis interrupta* ssp. *californica*	—	—	1B.1	—	Chaparral. Friable clay lenses. 285 ft in elevation. Annual.
Prairie wedge grass *Sphenopholis obtusata*	—	—	2B.2	—	Open moist sites, along rivers and springs, alkaline desert seeps. 985–6,560 ft in elevation. Blooms April–July. Perennial.
Purple stemodia[3] *Stemodia durantifolia*	—	—	2B.1	—	Sonoran desert scrub. Sandy soils; mesic sites. 115–1,265 ft in elevation. Blooms January–December. Perennial.
Laguna mountain jewelflower[4] *Streptanthus bernardinus*	—	—	4.3	—	Chaparral, lower montane coniferous forest. Clay or decomposed granite soils; sometimes in disturbed areas such as streamsides or roadcuts. 4,725–8,200 ft in elevation. Blooms May–August. Perennial.

Species	Listing Status[1] Federal	Listing Status[1] State	Listing Status[1] CRPR	MSCP Categories[2]	Habitat
Southern jewelflower[3] *Streptanthus campestris*	—	—	1B.3	—	Chaparral, lower montane coniferous forest, pinyon-juniper woodland. Open, rocky areas. 2,955–7,545 ft in elevation. Blooms May–July. Perennial.
San Diego County needle grass[4] *Stipa diegoensis*	—	—	4.2	—	Chaparral, coastal scrub. Rocky slopes, sea cliffs and stream banks; often in mesic sites. 35–2,625 ft in elevation. Blooms February–June. Perennial.
Oil neststraw[3] *Stylocline citroleum*	—	—	1B.1	—	Chenopod scrub, coastal scrub, valley and foothill grassland. Flats, clay soils in oil-producing areas. 165–1,310 ft in elevation. Blooms March–April. Annual.
Estuary seablite[3] *Suaeda esteroa*	—	—	1B.2	—	Coastal salt marshes in clay, silt, and sand substrates. 0–15 ft in elevation. Blooms May–October. Perennial.
Woolly seablite[4] *Suaeda taxifolia*	—	—	4.2	—	Wetland. Coastal bluff scrub, coastal dunes, marshes, and swamps. Margins of salt marshes. 0–165 ft in elevation. Blooms January–December. Perennial.
San Bernardino aster *Symphyotrichum defoliatum*	—	—	1B.2	—	Vernally mesic grassland or near ditches, streams and springs; disturbed areas. 5–6,695 ft in elevation. Blooms July–November. Geophyte.
Parry's tetracoccus[3] *Tetracoccus dioicus*	—	—	1B.2	Covered Species; Critical populations of sensitive plant species	Stony, decomposed gabbro soil. 540–3,280 ft in elevation. Blooms April–May. Perennial.
Velvety false lupine[3] *Thermopsis californica* var. *semota*	—	—	1B.2	—	Pine forests and meadow edges, on rocky slopes and outcrops, and along roadsides. 3,280–6,135 ft in elevation. Blooms March–June. Geophyte.
Rigid fringepod *Thysanocarpus rigidus*	—	—	1B.2	—	Dry, rocky slopes and ridges of oak and pine woodland in arid mountain ranges. 1,395–7,105 ft in elevation. Blooms February–May. Annual.
California screw moss *Tortula californica*	—	—	1B.2	—	Moss growing on sandy soil. 35–4,790 ft in elevation. Perennial.
Coastal triquetrella *Triquetrella californica*	—	—	1B.2	—	Grows within approximately 100 feet from the coast in coastal scrub, grasslands and in open gravels on roadsides, hillsides, rocky slopes, and fields. On gravel or thin soil over outcrops. 35–330 ft in elevation. Perennial.
La Purisima viguiera[3] *Viguiera purisimae*	—	—	2B.3	—	Dry, rocky places in open shrubland. 1,200–1,395 ft in elevation. Blooms April–September. Perennial.

Species	Listing Status[1] Federal	Listing Status[1] State	Listing Status[1] CRPR	MSCP Categories[2]	Habitat
Golden violet[3] *Viola purpurea* ssp. *aurea*	—	—	2B.2	—	Great Basin scrub, pinyon-juniper woodland. Dry, sandy slopes. 3,280–8,200 ft in elevation. Blooms April–June. Perennial.
Palmer's jackass clover *Wislizenia refracta* ssp. *palmeri*	—	—	2B.2	—	Known from desert basins, dunes, washes and benches of sand field ecotones where upland desert scrubs, transition to halophytic scrub or mesquite. 410–575 ft in elevation. Blooms January–December. Perennial.
Rush-like bristleweed[4] *Xanthisma junceum*	—	—	4.3	—	Chaparral, coastal scrub. Dry hillsides. 785–3,280 ft in elevation. Blooms May–January. Perennial.
Orcutt's woody-aster[3] *Xylorhiza orcuttii*	—	—	1B.2	—	Sonoran desert scrub. Arid canyons; often in washes. 0–1,200 ft in elevation. Blooms March–April. Perennial.

Notes: CRPR = California Rare Plant Rank.

[1] Legal Status Definitions

Federal:

FE Endangered (legally protected by ESA)

FT Threatened (legally protected by ESA)

FC Candidate (legally protected by ESA)

State:

SE Endangered (legally protected by CESA)

California Rare Plant Ranks:

1B Plant species considered rare or endangered in California and elsewhere (protected under CEQA, but not legally protected under ESA or CESA)

2B Plant species considered rare or endangered in California but more common elsewhere (protected under CEQA, but not legally protected under ESA or CESA)

3 Plants about which more information is needed - A Review List

4 Plants of limited distribution – A Watch List

Threat Ranks:

0.1 Seriously threatened in California (over 80% of occurrences threatened; high degree and immediacy of threat)

0.2 Moderately threatened in California (20–80% occurrences threatened; moderate degree and immediacy of threat)

0.3 Not very threatened in California (less than 20% of occurrences threatened / low degree and immediacy of threat or no current threats known)

[2] MSCP Categories

Covered Species

Critical populations of sensitive plant species

Narrow endemic plant species

[3] San Diego County List A and B Plant Species

[4] San Diego County List C and D Plant Species

Sources: CNDDB 2024; CNPS 2024a; County of San Diego 2010b.

Table 2.5.4 Special-Status Wildlife Species Known to Occur in San Diego County

Species	Listing Status[1] Federal	Listing Status[1] State	MSCP Categories[2]	Habitat
Amphibians and Reptiles				
Arroyo toad[3] *Anaxyrus californicus*	FE	SSC	Covered Species; Rare, narrow endemic animal species	Semi-arid regions near washes or intermittent streams, including valley-foothill and desert riparian, and desert wash. Rivers with sandy banks, willows, cottonwoods, and sycamores; loose, gravelly areas of streams in drier parts of range.
Baja California coachwhip *Masticophis fuliginosus*	—	SSC	—	In California restricted to southern San Diego County, where it is known from grassland and coastal sage scrub. Open areas in grassland and coastal sage scrub.
Barefoot banded gecko[4] *Coleonyx switaki*	—	ST	—	Found only in areas of massive rock and rock outcrops at the heads of canyons. Occurs in rock cracks and crevices.
California glossy snake *Arizona elegans occidentalis*	—	SSC	—	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. Generalist reported from a range of scrub and grassland habitats, often with loose or sandy soils.
California red-legged frog[3] *Rana draytonii*	FT	SSC	Covered Species; Rare, narrow endemic animal species	Lowlands and foothills in or near permanent sources of deep water with dense, shrubby or emergent riparian vegetation. Requires 11–20 weeks of permanent water for larval development. Must have access to estivation habitat.
Coast horned lizard[4] *Phrynosoma blainvillii*	—	SSC	Covered Species	Frequents a wide variety of habitats, most common in lowlands along sandy washes with scattered low bushes. Open areas for sunning, bushes for cover, patches of loose soil for burial, and abundant supply of ants and other insects.
Coast mountain kingsnake[4] *Lampropeltis multifasciata*	—	—	—	A habitat generalist, found in diverse habitats including coniferous forest, oak-pine woodlands, riparian woodland, chaparral, manzanita, and coastal sage scrub.
Coast patch-nosed snake[4] *Salvadora hexalepis virgultea*	—	SSC	—	Brushy or shrubby vegetation in coastal southern California. Require small mammal burrows for refuge and overwintering sites.
Coast Range newt[4] *Taricha torosa*	—	SSC	—	Coastal drainages from Mendocino County to San Diego County. Lives in terrestrial habitats and will migrate over approximately 0.6 mile (1 kilometer) to breed in ponds, reservoirs, and slow-moving streams.
Coastal whiptail[4] *Aspidoscelis tigris stejnegeri*	—	SSC	—	Found in deserts and semiarid areas with sparse vegetation and open areas. Also found in woodland and riparian areas. Ground may be firm soil, sandy, or rocky.

Species	Listing Status[1] Federal	Listing Status[1] State	MSCP Categories[2]	Habitat
Colorado Desert fringe-toed lizard[3] *Uma notata*	—	SSC	—	Colorado Desert region; in sand dunes, dry lakebeds, sandy beaches or riverbanks, desert washes, or sparse desert scrub. Requires fine, loose, windblown sand (for burrowing); shrubs or annuals for arthropod production.
Common chuckwalla[4] *Sauromalus ater*	—	—	—	Inhabits rocky flats and hillsides, lava flows, and large outcrops in the California Mojave and Colorado deserts.
Cope's leopard lizard *Gambelia copeii*	—	SSC	—	Restricted in California to southeastern San Diego County. Occurs in desert scrub, coastal sage scrub, oak woodland, and chaparral. Open flat areas within vegetation.
Coronado skink[4] *Plestiodon skiltonianus interparietalis*	—	—	—	Grassland, chaparral, pinyon-juniper and juniper sage woodland, pine-oak and pine forests in Coast Ranges of southern California. Prefers early successional stages or open areas. Found in rocky areas close to streams and on dry hillsides.
Desert slender salamander[3] *Batrachoseps major aridus*	FE	SE	—	Desert wash, limestone, and talus slope. Known only from Hidden Palm Canyon and Guadalupe Creek, Riverside County, in barren, palm oasis, desert wash, and desert scrub. Occurs under limestone sheets, rocks, and talus, usually at the base of damp, shaded, north and west-facing walls.
Flat-tailed horned lizard[3] *Phrynosoma mcallii*	—	SSC	—	Restricted to desert washes and desert flats in central Riverside, eastern San Diego, and Imperial counties. Critical habitat element is fine sand, into which lizards burrow to avoid temp extremes; requires vegetative cover and ants.
Large-blotched salamander[3] *Ensatina eschscholtzii klauberi*	—	—	—	Found in conifer and woodland associations. Found in leaf litter, decaying logs and shrubs in heavily forested areas.
Orange-throated whiptail[4] *Aspidoscelis hyperythra*	—	—	Covered Species	Semi-arid shrub areas typically with loose soil and rocks, including washes, streamsides, rocky hillsides, and coastal chaparral.
Red-diamond rattlesnake[4] *Crotalus ruber*	—	SSC	—	Chaparral, woodland, grassland, and desert areas from coastal San Diego County to the eastern slopes of the mountains. Occurs in rocky areas and dense vegetation. Needs rodent burrows, cracks in rocks or surface cover objects.
Rosy boa[4] *Lichanura orcutti*	—	—	—	Inhabits arid scrublands, semi-arid shrublands, rocky shrublands, rocky deserts, canyons, and other rocky areas.
San Diego banded gecko[3] *Coleonyx variegatus abbotti*	—	SSC	—	Coastal and cismontane southern California. Found in granite or rocky outcrops in coastal scrub and chaparral habitats.

Species	Listing Status[1] Federal	Listing Status[1] State	MSCP Categories[2]	Habitat
San Diego ringneck snake[4] *Diadophis punctatus similis*	—	—	—	Open, fairly rocky areas. Use boards, flat rocks, woodpiles, stable talus, rotting logs and small ground holes for cover. Prefer areas with surface litter or herbaceous vegetation. Often in somewhat moist areas near intermittent streams.
Sandstone night lizard *Xantusia gracilis*	—	SSC	—	Known only from the Truckhaven Rocks in the eastern part of Anza-Borrego State Park. Found in fissures or under slabs of exfoliating sandstone and rodent burrows in compacted sandstone and mudstone
Silvery legless lizard[4] *Anniella pulchra pulchra*	—	SSC	—	Chaparral, coastal dunes, coastal scrub. Sandy or loose loamy soils under sparse vegetation. Soil moisture is essential. Prefers soils with a high moisture content.
South coast gartersnake[4] *Thamnophis sirtalis* pop. 1	—	SSC	—	Southern California coastal plain from Ventura County to San Diego County, and from sea level to approximately 2,800 ft in elevation. Marsh and upland habitats near permanent water with good strips of riparian vegetation.
Southern California legless lizard *Anniella stebbinsi*	—	SSC	—	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. Variety of habitats; generally in moist, loose soil. Prefers soils with a high moisture content.
Southern mountain yellow-legged frog [3] *Rana muscosa*	FE	SE	—	Federal listing refers to populations in the San Gabriel, San Jacinto, and San Bernardino mountains (southern DPS). Northern DPS was determined to warrant listing as endangered, April 2014, effective June 30, 2014. Always encountered within a few feet of water. Tadpoles may require 2–4 years to complete their aquatic development.
Southern sagebrush lizard[4] *Sceloporus graciosus vandenburgianus*	—	—	—	Lives in shrublands such as chaparral, manzanita and ceanothus, as well as open pine and Douglas fir forests, mainly in the mountains. Prefers open areas with scattered low bushes and lots of sun.
Southwestern pond turtle[3] *Actinemys marmorata pallida*	FP	SSC	Covered Species; Rare, narrow endemic animal species	Ponds, marshes, rivers, streams and irrigation ditches, usually with aquatic vegetation, below 6,000 ft elevation. Needs basking sites and suitable (sandy banks or grassy open fields) upland habitat up to approximately 0.3 mile from water for egg-laying.
Two-striped gartersnake[3] *Thamnophis hammondii*	—	SSC	—	From sea to about 7,000 feet elevation. Highly aquatic, found in or near permanent fresh water. Often along streams with rocky beds and riparian growth.
Western spadefoot[4] *Spea hammondii*	FP	SSC	—	Occurs primarily in grassland habitats, but can be found in valley-foothill hardwood woodlands. Vernal pools are essential for breeding and egg-laying.

Species	Listing Status[1] Federal	Listing Status[1] State	MSCP Categories[2]	Habitat
Birds				
American peregrine falcon[3] *Falco peregrinus*	FD	SD	Covered Species; Rare, narrow endemic animal species	Near wetlands, lakes, rivers, or other water; on cliffs, banks, dunes, mounds; also, human-made structures. Nest consists of a scrape or a depression or ledge in an open site.
American white pelican[4] *Pelecanus erythrorhynchos*	—	SSC	—	Colonial nester on large interior lakes. Nests on large lakes, providing safe roosting and breeding places in the form of well-sequestered islets.
Bald eagle[3] *Haliaeetus leucocephalus*	FD	SE FP	Covered Species	Ocean shore, lake margins, and rivers for both nesting and wintering. Most nests within 1 mile of water. Nests in large, old-growth, or dominant live tree with open branches, especially ponderosa pine. Roosts communally in winter.
Bank swallow[3] *Riparia riparia*	—	ST	—	Colonial nester; nests primarily in riparian and other lowland habitats west of the desert. Requires vertical banks/cliffs with fine-textured/sandy soils near streams, rivers, lakes, ocean to dig nesting hole.
Barn owl[4] *Tyto alba*	—	—	—	Dense foliage of trees and shrubs, buildings, and cliffs used for roosting cover.
Barrow's goldeneye[4] *Bucephala islandica*	—	SSC	—	Breeds in high central and northern Sierra Nevada mountains, near wooded mountain lakes or large streams. Nest in tree cavities, such as a deserted nest-hole of a pileated woodpecker or flicker; also use nest boxes.
Belding's savannah sparrow[3] *Passerculus sandwichensis beldingi*	—	SE	Covered Species; Rare, narrow endemic animal species	Inhabits coastal salt marshes, from Santa Barbara south through San Diego County. Nests in pickleweed (*Salicornia* spp.) on and about margins of tidal flats.
Bell's sparrow[3] *Artemisiospiza belli belli*	—	—	—	Nests in chaparral dominated by fairly dense stands of chamise. Found in coastal sage scrub in south of range. Nest located on the ground beneath a shrub or in a shrub 6–18 inches above ground. Territories about 50 yards apart.
Bendire's thrasher[4] *Toxostoma bendirei*	—	SSC	—	Migratory; local spring/summer resident in flat areas of desert succulent shrub/Joshua tree habitats in Mojave Desert. Nests in cholla, yucca, paloverde, thorny shrub, or small tree, usually 0.5 to 20 feet above ground.
Black skimmer[3] *Rynchops niger*	—	SSC	—	Nests on gravel bars, low islets, and sandy beaches, in unvegetated sites. Nesting colonies usually less than 200 pairs.

Species	Listing Status[1] Federal	Listing Status[1] State	MSCP Categories[2]	Habitat
Black swift[4] *Cypseloides niger*	—	SSC	—	Coastal belt of Santa Cruz and Monterey counties; central and southern Sierra Nevada; San Bernardino and San Jacinto mountains. Breeds in small colonies on cliffs behind or adjacent to waterfalls in deep canyons and sea-bluffs above the surf; forages widely.
Black tern[4] *Chlidonias niger*	—	SSC	—	Freshwater lakes, ponds, marshes and flooded agricultural fields. At coastal lagoons and estuaries during migration. Breeding range reduced. Breeds primarily in Modoc Plateau region, with some breeding in Sacramento and San Joaquin valleys.
Burrowing owl[3] *Athene cunicularia*	—	SC SSC	Covered Species; Rare, narrow endemic animal species	Open, dry annual or perennial grasslands, deserts and scrublands characterized by low-growing vegetation. Subterranean nester, dependent upon burrowing mammals, most notably, the California ground squirrel.
California black rail[4] *Laterallus jamaicensis coturniculus*	—	ST FP	Rare, narrow endemic animal species	Inhabits freshwater marshes, wet meadows and shallow margins of saltwater marshes bordering larger bays. Needs water depths of about 1 inch that do not fluctuate during the year and dense vegetation for nesting habitat.
California gull[4] *Larus californicus*	—	—	—	Littoral waters, sandy beaches, waters and shorelines of bays, tidal mud-flats, marshes, and lakes. Colonial nester on islets in large interior lakes, either fresh or strongly alkaline.
California horned lark[4] *Eremophila alpestris actia*	—	—	—	Marine intertidal and splash zone communities, meadow and seep. Coastal regions, chiefly from Sonoma County to San Diego County. Also main part of San Joaquin Valley and east to foothills. Short-grass prairie, "bald" hills, mountain meadows, open coastal plains, fallow grain fields, alkali flats.
California least tern[3] *Sternula antillarum browni*	FE	SE FP	Covered Species; Rare, narrow endemic animal species	Alkali playa, wetland. Nests along the coast from San Francisco Bay south to northern Baja California. Colonial breeder on bare or sparsely vegetated, flat substrates: sand beaches, alkali flats, landfills, or paved areas.
California spotted owl[3] *Strix occidentalis occidentalis*	FP	SSC	—	Mixed conifer forest, often with an understory of black oaks and other deciduous hardwoods. Canopy closure greater than 40 percent. Most often found in deep-shaded canyons, on north-facing slopes, and within 300 meters of water.
Canada goose[4] *Branta canadensis*	—	—	Covered Species	Preferred habitats include lacustrine, fresh emergent wetlands, and moist grasslands, croplands, pastures, and meadows.
Coastal cactus wren *Campylorhynchus brunneicapillus sandiegensis*	—	SSC	Rare, narrow endemic animal species	Southern California coastal sage scrub. Wrens require tall *Opuntia* cactus for nesting and roosting.

Species	Listing Status[1] Federal	Listing Status[1] State	MSCP Categories[2]	Habitat
Coastal California gnatcatcher[3] *Polioptila californica californica*	FT	SSC	Covered Species	Obligate, permanent resident of coastal sage scrub below 2,500 feet in southern California. Low, coastal sage scrub in arid washes, on mesas and slopes. Not all areas classified as coastal sage scrub are occupied.
Common loon[4] *Gavia immer*	—	SSC	—	Great Basin standing waters. Nesting locations at certain large lakes and reservoirs in interior of state, primarily in northeastern plateau region. Bodies of water regularly frequented are extensive, fairly deep, and produce quantities of large fish.
Cooper's hawk[3] *Accipiter cooperii*	—	—	Covered Species	Ranges from sea level to above 9,000 ft in elevation. Prefers dense stands of live oak, riparian deciduous, or other forest habitats near water.
Crissal thrasher[3] *Toxostoma crissale*	—	SSC	—	Resident of southeastern deserts in desert riparian and desert wash habitats. Nests in dense vegetation along streams/washes; mesquite, screwbean mesquite, ironwood, catclaw, acacia, arrowweed, willow.
Double-crested cormorant[4] *Nannopterum auritum*	—	—	—	Colonial nester on coastal cliffs, offshore islands, and along lake margins in the interior of the state. Nests along coast on sequestered islets, usually on ground with sloping surface, or in tall trees along lake margins.
Ferruginous hawk[3] *Buteo regalis*	—	—	Covered Species	Open grasslands, sagebrush flats, desert scrub, low foothills and fringes of pinyon and juniper habitats. Eats mostly lagomorphs, ground squirrels, and mice. Population trends may follow lagomorph population cycles. Winter range overlaps San Diego County.
Fulvous whistling-duck[4] *Dendrocygna bicolor*	—	SSC	—	Freshwater marsh. Tule/cattail marsh.
Gadwall[4] *Mareca streptera*	—	—	—	A common yearlong resident in many parts of the state, particularly interior valleys, wetlands, ponds, and streams. Feeds and rests in freshwater lacustrine and emergent habitats, and to a lesser extent, estuarine and saline emergent habitats, and nests in nearby herbaceous and cropland habitats.
Golden eagle[3] *Aquila chrysaetos*	—	FP	Covered Species; Rare, narrow endemic animal species	Rolling foothills, mountain areas, sage-juniper flats, and desert. Cliff-walled canyons provide nesting habitat in most parts of range; also, large trees in open areas.
Grasshopper sparrow[3] *Ammodramus savannarum*	—	SSC	—	Dense grasslands on rolling hills, lowland plains, in valleys and on hillsides on lower mountain slopes. Favors native grasslands with a mix of grasses, forbs and scattered shrubs. Loosely colonial when nesting.

Species	Listing Status[1] Federal	Listing Status[1] State	MSCP Categories[2]	Habitat
Gray vireo[3] *Vireo vicinior*	—	SSC	—	Dry chaparral; west of desert, in chamise-dominated habitat; mountains of Mojave Desert, associated with juniper and Artemisia. Forage, nest, and sing in areas formed by a continuous growth of twigs, 1–5 feet above ground.
Gray-headed junco[4] *Junco hyemalis caniceps*	—	—	—	Upper montane coniferous forest. Summer resident of Clark Mountain (eastern San Bernardino County) and Grapevine Mountains (Inyo County). Inhabits white fir association at 7,300 feet (Clark Mountain); also, from dense pinyons above 6,700 feet (Grapevine Mountains).
Great blue heron[4] *Ardea herodias*	—	—	—	Brackish marsh, estuary, freshwater marsh, marsh and swamp, riparian forest, and wetlands. Colonial nester in tall trees, cliffsides, and sequestered spots on marshes. Rookery sites in close proximity to foraging areas: marshes, lake margins, tide-flats, rivers and streams, wet meadows.
Greater sandhill crane[4] *Antigone canadensis tabida*	—	ST FP	—	Marsh and swamp, meadow and seep, wetland. Nests in wetland habitats in northeastern California; winters in the Central Valley. Prefers grain fields within 4 miles of a shallow body of water used as a communal roost site; irrigated pasture used as loafing sites.
Green heron[4] *Butorides virescens*	—	—	—	Nests and roosts in valley foothill and desert riparian habitats, and feeds in fresh emergent wetland, lacustrine, and slow-moving riverine habitats
Large-billed savannah sparrow[4] *Passerculus sandwichensis rostratus*	—	SSC	Covered Species	Wetland. Breeds along the Colorado River Delta in Mexico; winters at the Salton Sea. Saline emergent wetlands at the Salton Sea and southern coast.
Laughing gull[4] *Leucophaeus atricill*	—	—	—	Once a regular nester at the south end of the Salton Sea.
Le Conte's thrasher[4] *Toxostoma lecontei*	—	SSC	—	Desert resident; primarily of open desert wash, desert scrub, alkali desert scrub, and desert succulent scrub habitats. Commonly nests in a dense, spiny shrub or densely branched cactus in desert wash habitat, usually 2–8 feet above ground.
Least Bell's vireo[3] *Vireo bellii pusillus*	FE	SE	Covered Species; Rare, narrow endemic animal species	Summer resident of southern California in low riparian in vicinity of water or in dry river bottoms; below 2,000 feet. Nests placed along margins of bushes or on twigs projecting into pathways, usually willow, coyote brush, mesquite.
Least bittern[4] *Ixobrychus exilis*	—	SSC	—	Colonial nester in marshlands and borders of ponds and reservoirs which provide ample cover. Nests usually placed low in tules, over water.
Lewis' woodpecker[3] *Melanerpes lewis*	—	—	—	Breeds in open forest and woodland with an open canopy and brushy understory. Requires dead trees for nest cavities.

Species	Listing Status[1] Federal	Listing Status[1] State	MSCP Categories[2]	Habitat
Light-footed Ridgway's rail[3] *Rallus obsoletus levipes*	FE	SE FP	Covered Species; Rare, narrow endemic animal species	Found in salt marshes traversed by tidal sloughs, where cordgrass and pickleweed are the dominant vegetation. Requires dense growth of either pickleweed or cordgrass for nesting or escape cover; feeds on mollusks and crustaceans.
Loggerhead shrike[3] *Lanius ludovicianus*	—	SSC	—	Broken woodlands, savannah, pinyon-juniper, Joshua tree, and riparian woodlands, desert oases, scrub and washes. Prefers open country for hunting, with perches for scanning, and fairly dense shrubs and brush for nesting.
Long-billed curlew[4] *Numenius americanus*	—	—	Covered Species	Great Basin grassland, meadow and seep. Breeds in upland shortgrass prairies and wet meadows in northeastern California. Habitats on gravelly soils and gently rolling terrain are favored over others.
Long-eared owl[3] *Asio otus*	—	SSC	—	Cismontane woodland, Great Basin scrub, riparian forest, riparian woodland, and upper montane coniferous forest. Riparian bottomlands grown to tall willows and cottonwoods; also, belts of live oak paralleling stream courses. Require adjacent open land productive of mice and the presence of old nests of crows, hawks, or magpies for breeding.
Lucy's warbler[3] *Leiothlypis luciae*	—	SSC	—	Primarily along lower Colorado River Valley and the washes and arroyos emptying into it, with occasional occurrences throughout the Sonoran and Mojave deserts. Partial to thickets of mesquite, riparian scrub, and stands of tamarisk.
Merlin[4] *Falco columbarius*	—	—	—	Estuary, Great Basin grassland, valley and foothill grassland. Seacoast, tidal estuaries, open woodlands, savannahs, edges of grasslands and deserts, farms and ranches. Clumps of trees or windbreaks are required for roosting in open country.
Mountain plover[4] *Charadrius montanus*	—	—	Covered Species	Short grasslands, freshly plowed fields, newly sprouting grain fields, and sometimes sod farms. Short vegetation, bare ground and flat topography. Prefers grazed areas and areas with burrowing rodents. Winter range overlaps San Diego County.
Mountain quail[4] *Oreortyx pictus*	—	—	—	Found seasonally in open, brushy stands of conifer and deciduous forest and woodland, and chaparral.
Northern harrier[3] *Circus hudsonius*	—	SSC	Covered Species	Nest and forage in grasslands, from salt grass in desert sink to mountain cienagas. Nests on ground in shrubby vegetation, usually at marsh edge; nest built of a large mound of sticks in wet areas.
Olive-sided flycatcher[4] *Contopus cooperi*	—	SSC	—	Nesting habitats are mixed conifer, montane hardwood-conifer, Douglas fir, redwood, red fir and lodgepole pine. Most numerous in montane conifer forests where tall trees overlook canyons, meadows, lakes or other open terrain.

Species	Listing Status[1] Federal	Listing Status[1] State	MSCP Categories[2]	Habitat
Osprey[3] *Pandion haliaetus*	—	—	—	Ocean shore, bays, fresh-water lakes, and larger streams. Large nests built in tree-tops within 15 miles of a good fish-producing body of water.
Prairie falcon[3] *Falco mexicanus*	—	—	—	Inhabits dry, open terrain, either level or hilly. Breeding sites located on cliffs. Forages far afield, even to marshlands and ocean shores.
Purple martin[3] *Progne subis*	—	SSC	—	Inhabits woodlands, low elevation coniferous forest of Douglas fir, ponderosa pine, and Monterey pine. Nests in old woodpecker cavities mostly, also in human-made structures. Nest often located in tall, isolated tree/snag.
Reddish egret[4] *Egretta rufescens*	—	—	Covered Species	San Diego County represents the northern limit of the range of this species along the Pacific coast. Uncommon annual nonbreeding visitor in the coastal wetlands or San Diego County.
Redhead[4] *Aythya americana*	—	SSC	—	
Red-shouldered hawk[3] *Buteo lineatus*	—	—	—	
San Diego cactus wren[3] *Campylorhynchus brunneicapillus sandiegensis*	—	—	Covered Species	The key habitat element is thickets of chollas (*Opuntia prolifera*) or prickly-pear cacti (*Opuntia littoralis, Opuntia oricola*) tall enough to support and protect nests.
Sharp-shinned hawk[3] *Accipiter striatus*	—	—	—	Ponderosa pine, black oak, riparian deciduous, mixed conifer, and Jeffrey pine habitats. Prefers riparian areas. North-facing slopes, with plucking perches are critical requirements. Nests usually within 275 feet of water.
Short-eared owl[4] *Asio flammeus*	—	SSC	—	Great Basin grassland, marsh and swamp, meadow and seep, valley and foothill grassland, and wetlands. Found in swamp lands, both fresh and salt; lowland meadows; irrigated alfalfa fields. Tule patches/tall grass needed for nesting/daytime seclusion. Nests on dry ground in depression concealed in vegetation.
Snow goose[4] *Anser caerulescens*	—	—	—	From October to March, the redhead is uncommon to locally common south from Modoc County to Mono County in eastern California in lacustrine waters where it is also a common breeder during summer. During this season it is also found in the Central Valley and central California foothills and coastal lowlands, and along the coast from Monterey County south to Ventura County and along the Colorado River. Also breeds locally in the Central Valley, coastal southern California, eastern Kern County, and the Salton Sea.

Species	Listing Status[1] Federal	Listing Status[1] State	MSCP Categories[2]	Habitat
Southern California rufous-crowned sparrow[3] *Aimophila ruficeps canescens*	—	—	Covered Species	Resident in southern California coastal sage scrub and sparse mixed chaparral. Frequents relatively steep, often rocky hillsides with grass and forb patches.
Southwestern willow flycatcher[3] *Empidonax traillii extimus*	FE	SE	Covered Species; Rare, narrow endemic animal species	Requires dense riparian habitats with cottonwood, willow, and tamarisk vegetation and microclimatic conditions that are dictated by the local surroundings. Saturated soils, standing water or nearby streams, pools, or cienegas are a component of nesting habitat that also influences the microclimate and vegetation density component. Habitat not suitable for nesting may be used for migration and foraging. The southwestern willow flycatcher is typically found below 8,500 feet of elevation.
Summer tanager[4] *Piranga rubra*	—	SSC	—	Summer resident of desert riparian along lower Colorado River, and locally elsewhere in California deserts. Requires cottonwood-willow riparian for nesting and foraging; prefers older, dense stands along streams.
Swainson's hawk[3] *Buteo swainsoni*	—	ST	Covered Species	Breeds in grasslands with scattered trees, juniper-sage flats, riparian areas, savannahs, and agricultural or ranch lands with groves or lines of trees. Requires adjacent suitable foraging areas such as grasslands, or alfalfa or grain fields supporting rodent populations.
Tricolored blackbird[3] *Agelaius tricolor*	—	ST SSC	Covered Species	Highly colonial species, most numerous in Central Valley and vicinity. Largely endemic to California. Requires open water, protected nesting substrate, and foraging area with insect prey within a few miles of the colony.
Turkey vulture[3] *Cathartes aura*	—	—	—	Common in breeding season throughout most of California. Occurs in open stages of most habitats that provide adequate cliffs or large trees for nesting, roosting, and resting.
Vermilion flycatcher[3] *Pyrocephalus rubinus*	—	SSC	—	During nesting, inhabits desert riparian adjacent to irrigated fields, irrigation ditches, pastures, and other open, mesic areas Nest in cottonwood, willow, mesquite, and other large desert riparian trees.
Western bluebird[4] *Sialia mexicana*	—	—	Covered Species	Fairly common to common year-round throughout much of California, excluding the higher mountains and eastern deserts. Breeds in open woodlands of oaks, riparian deciduous trees, or conifers with herbaceous understory.
Western grebe[3] *Aechmophorus occidentalis*	—	—	—	Breeds on freshwater lakes and marshes with open water bordered by vegetation. Saltwater or brackish bays, estuaries, or sea coasts in winter. Less frequently on freshwater lakes or rivers.

Species	Listing Status[1] Federal	Listing Status[1] State	MSCP Categories[2]	Habitat
Western snowy plover[3] *Charadrius nivosus nivosus*	FT	SSC	Covered Species	Sandy beaches, salt pond levees and shores of large alkali lakes. Needs sandy, gravelly or friable soils for nesting.
Western yellow-billed cuckoo[3] *Coccyzus americanus occidentalis*	FT	SE	Rare, narrow endemic animal species	Riparian forest nester, along the broad, lower flood-bottoms of larger river systems. Nests in riparian jungles of willow, often mixed with cottonwoods, with lower story of blackberry, nettles, or wild grape.
White-faced ibis[3] *Plegadis chihi*	—	—	Covered Species	Shallow fresh-water marsh. Dense tule thickets for nesting interspersed with areas of shallow water for foraging.
White-tailed kite[3] *Elanus leucurus*	—	FP	—	Rolling foothills and valley margins with scattered oaks and river bottomlands or marshes next to deciduous woodland. Open grasslands, meadows, or marshes for foraging close to isolated, dense-topped trees for nesting and perching.
Wood stork[4] *Mycteria americana*	—	SSC	—	Freshwater and saltwater sloughs, lagoons, shallow ponds, and marshes.
Yellow rail *Coturnicops noveboracensis*	—	SSC	—	Summer resident in eastern Sierra Nevada in Mono County. Fresh-water marshlands. Winter range overlaps San Diego County; rare visitor.
Yellow warbler[4] *Setophaga petechia*	—	SSC	—	Riparian plant associations in close proximity to water. Also nests in montane shrubbery in open conifer forests in Cascades and Sierra Nevada. Frequently found nesting and foraging in willow shrubs and thickets, and in other riparian plants including cottonwoods, sycamores, ash, and alders.
Yellow-breasted chat[3] *Icteria virens*	—	SSC	—	Summer resident; inhabits riparian thickets of willow and other brushy tangles near watercourses. Nests in low, dense riparian, consisting of willow, blackberry, wild grape; forages and nests within 10 feet of ground.
Fish				
Arroyo chub *Gila orcuttii*	—	SSC	—	Native to streams from Malibu Creek to San Luis Rey River basin. Introduced into streams in Santa Clara, Ventura, Santa Ynez, Mojave, and San Diego river basins. Slow water stream sections with mud or sand bottoms. Feeds heavily on aquatic vegetation and associated invertebrates.
Desert pupfish[4] *Cyprinodon macularius*	FE	SE	—	Desert ponds, springs, marshes and streams in southern California.
Mohave tui chub *Siphateles bicolor mohavensis*	FE	SE FP	—	Endemic to the Mojave River basin, adapted to alkaline, mineralized waters. Needs deep pools, ponds, or slough-like areas. Needs vegetation for spawning.
Steelhead - southern California DPS[3] *Oncorhynchus mykiss irideus* pop. 10	FE	SC	—	South coast flowing waters. Federal listing refers to populations from Santa Maria River south to southern extent of range (San Mateo Creek in San Diego County). Southern steelhead likely have greater physiological tolerances to warmer water and more variable conditions.

Species	Listing Status[1] Federal	Listing Status[1] State	MSCP Categories[2]	Habitat
Unarmored threespine stickleback[4] *Gasterosteus aculeatus williamsoni*	FE	SE FP	—	South coast flowing waters. Weedy pools, backwaters, and among emergent vegetation at the stream edge in small southern California streams. Cool, clear water with abundant vegetation.
Invertebrates				
Alkali skipper[3] *Pseudocopaeodes eunus eunus*	—	—	—	Grassy spots on alkali flats. Host plant is Desert salt grass (*Distichlis spicata* var. *stricta*).
Belkin's dune tabanid fly[4] *Brennania belkini*	—	—	—	Inhabits coastal sand dunes of southern California.
Blaisdell trigonoscuta weevil[4] *Trigonoscuta blaisdelli*	—	—	—	Associated with either coastal sand dunes, desert sand dunes, or other inland sand dune areas.
California linderiella[3] *Linderiella occidentalis*	—	—	—	Vernal pool. Seasonal pools in unplowed grasslands with old alluvial soils underlain by hardpan or in sandstone depressions. Water in the pools has very low alkalinity, conductivity, and total dissolved solids.
Crotch's bumble bee *Bombus crotchii*	—	SC	—	Found primarily in California: mediterranean, Pacific coast, western desert, Great Valley, and adjacent foothills through most of southwestern California. Habitat includes open grassland and scrub. Nests underground.
Harbison's dun skipper[3] *Euphyes vestris harbisoni*	—	—	—	Found in chaparral or riparian areas that have narrow canyons or drainages. Oak woodland is a preferred vegetation community due to the balance of sun and shade. Host plant is San Diego sedge (*Carex spissa*).
Hermes copper[3] butterfly *Lycaena hermes*	FT	—	—	Found in southern mixed chaparral and coastal sage scrub at western edge of Laguna Mountains. Host plant is *Rhamnus crocea*.
Hilda greenish blue[3] *Plebejus saepiolus hilda*	—	—	—	Meadows. Host plant is cows clover (*Trifolium wormskioldii*).
Laguna Mountains skipper[3] *Pyrgus ruralis lagunae*	FE	—	—	Only in a few open meadows in yellow pine forest between 5,000 and 6,000 feet in the vicinity of Mt Laguna and Palomar Mountain. Eggs laid on leaves of *Horkelia bolanderi clevelandi*. Larvae feed on leaves and overwinter on the host plant.
Mesa shoulderband[4] *Helminthoglypta coelata*	—	—	—	Coastal bluff scrub. Known only from a few locations in western San Diego County. Found in rock slides, beneath bark and rotten logs, and among coastal vegetation.
Mimic tryonia (=California brackishwater snail)[4] *Tryonia imitator*	—	—	—	Inhabits coastal lagoons, estuaries and salt marshes, from Sonoma County south to San Diego County. Found only in permanently submerged areas in a variety of sediment types; able to withstand a wide range of salinities.

Species	Listing Status[1] Federal	Listing Status[1] State	MSCP Categories[2]	Habitat
Monarch[4] *Danaus plexippus*	FP	—	—	Habitat requirements include host plants for larvae (primarily milkweeds [*Asclepias* spp.]); adult nectar sources (i.e., flowering plants); and sites for roosting, thermoregulation, mating, hibernation, and predator escape. In addition, monarch butterfly requires conditions and resources for initiating and completing migration both to and from winter roosting areas. Winter roost sites extend along the coast from northern Mendocino to Baja California, Mexico. Roosts located in wind-protected tree groves (eucalyptus, Monterey pine, cypress), with nectar and water sources nearby. Many overwintering sites have been documented in San Diego County (Xerces Society 2018).
Oblivious tiger beetle[4] *Cicindela latesignata obliviosa,*	—	—	—	Occurs along the coast of southern California occupying salt marshes, mud flats, and other estuarine habitats, usually near beaches.
Palomar banana slug[4] *Ariolimax* sp. (taxonomy under review)	—	—	—	Common in moist habitats along the West Coast of North America. The population on Palomar Mountain near San Diego represents a new species.
Peninsular metalmark[3] *Apodemia virgulti peninsularis*	—	—	—	Occurs within large, open, dry meadows areas surrounded by sparse Jeffrey pine forest. Host plant is Wright's buckwheat (*Eriogonum wrightii* ssp. *membranaceum*).
Quino checkerspot butterfly[3] *Euphydryas editha quino*	FE	—	—	Chaparral, coastal scrub. Sunny openings within chaparral and coastal sage shrublands in parts of Riverside and San Diego counties. Hills and mesas near the coast. need high densities of food plants *Plantago erecta, Plantago insularis, Orthocarpus purpurescens.*
Riverside fairy shrimp[3] *Streptocephalus woottoni*	FE	—	Covered Species; Rare, narrow endemic animal species	Coastal scrub, valley and 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. Inhabits seasonally astatic pools filled by winter/spring rains.
Robinson's rain scarab[4] *Phobetus robinsoni*	—	—	—	Only known from San Diego County.
San Diego fairy shrimp[3] *Branchinecta sandiegonensis*	FE	—	Covered Species; Rare, narrow endemic animal species	Chaparral, coastal scrub, vernal pool, wetland. Endemic to San Diego and Orange County mesas. Vernal pools.
Sandy beach tiger beetle[4] *Cicindela hirticollis gravida*	—	—	—	Coastal dunes. Inhabits areas adjacent to non-brackish water along the coast of California from San Francisco Bay to northern Mexico. Clean, dry, light-colored sand in the upper zone. Subterranean larvae prefer moist sand not affected by wave action.

Species	Listing Status[1] Federal	Listing Status[1] State	MSCP Categories[2]	Habitat
Senile tiger beetle[4] *Cicindela senilis frosti*	—	—	—	Mud shore/flats, wetland. Inhabits marine shoreline, from central California coast south to salt marshes of San Diego. Also found at Lake Elsinore Inhabits dark-colored mud in the lower zone and dried salt pans in the upper zone.
Sigmoid tiger beetle[4] *Cicindela trifasciata sigmoidea*	—	—	—	Occurs along the Pacific coast of southern California. Most common at salt water-edge habitats close the coast but also found in tidal mudflats, marshes, bays, and inlets. Can also occur in inland freshwater environments.
Thorne's hairstreak butterfly[3] *Callophrys thornei (Mitoura thornei)*	—	—	Covered Species	Thorne's hairstreak butterfly is restricted to its larval host plant, Tecate cypress. Associated with chaparral ecosystems in southern California and northern Baja California.
Two-tailed swallowtail[3] *Papilio multicaudata*	—	—	—	Found near streams in dry montane canyons within Tulare, Kern, San Bernardino, Ventura, Los Angeles, Imperial, and San Diego counties.
Wandering skipper[3] *Panoquina errans*	—	—	Covered Species	Restricted to coastal salt marshes with its only known host plant seashore saltgrass *(Distichlis spicata*).
Western tidal flat beetle[4] *Cicindela gabbii*	—	—	—	Occurs on mudflats and dry saline flats of estuaries along the southern California coast.
Western beach tiger beetle[4] *Cicindela latesignata latesignata*	—	—	—	Coast of California south of Los Angeles; also in Baja California.
Yucca giant-skipper[4] *Megathymus yuccae*	—	—	—	Occurs throughout San Diego County extending north into Riverside County and east to the eastern slopes of the Santa Rosa Mountains. Host plant is yucca (*Hesperoyucca* spp.; *Yucca* ssp.).
Mammals				
American badger[4] *Taxidea taxus*	—	SSC	Covered Species	American badgers are most commonly found in treeless areas including tallgrass and shortgrass prairies, grass-dominated meadows and fields within forested habitats, and shrub-steppe communities. Most abundant in drier open stages of most shrub, forest, and herbaceous habitats, with friable soils. Needs sufficient food, friable soils and open, uncultivated ground. Preys on burrowing rodents. Digs burrows.
Big free-tailed bat[4] *Nyctinomops macrotis*	—	SSC	—	Low-lying arid areas in southern California. Need high cliffs or rocky outcrops for roosting sites. Feeds principally on large moths.
California leaf-nosed bat[4] *Macrotus californicus*	—	SSC	—	Desert riparian, desert wash, desert scrub, desert succulent scrub, alkali scrub, and palm oasis habitats. Needs rocky, rugged terrain with mines or caves for roosting.

Species	Listing Status[1] Federal	Listing Status[1] State	MSCP Categories[2]	Habitat
Dulzura pocket mouse[4] *Chaetodipus californicus femoralis*	—	SSC	—	Chaparral, coastal scrub, valley and foothill grassland. Variety of habitats including coastal scrub, chaparral and grassland in San Diego County. Attracted to grass-chaparral edges.
Fringed myotis[4] *Myotis thysanodes*	—	—	—	In a wide variety of habitats, optimal habitats are pinyon-juniper, valley foothill hardwood and hardwood-conifer. Uses caves, mines, buildings or crevices for maternity colonies and roosts.
Jacumba pocket mouse[4] *Perognathus longimembris internationalis*	—	SSC	—	Desert riparian, desert scrub, desert wash, coastal scrub and sagebrush. Rarely found on rocky sites, uses all canopy coverages.
Lesser long-nosed bat *Leptonycteris yerbabuenae*	FD	—	—	Arid regions such as desert grasslands and shrub land. Suitable day roosts (caves and mines) and suitable concentrations of food plants (columnar cacti and agaves) are critical resources. No maternity roosts known from California; may only be vagrant. Caves and mines are used as day roosts. Caves, mines, rock crevices, trees and shrubs, and abandoned buildings are used as night roosts for digesting meals. Nectar, pollen, and fruit eating bat; primarily feeding on agaves, saguaro, and organ pipe cactus.
Long-eared myotis[4] *Myotis evotis*	—	—	—	Found in all brush, woodland and forest habitats from sea level to about 9,000 feet prefers coniferous woodlands and forests. Nursery colonies in buildings, crevices, spaces under bark, and snags. Caves used primarily as night roosts.
Long-legged myotis[4] *Myotis volans*	—	—	—	Upper montane coniferous forest. Most common in woodland and forest habitats above 4,000 feet. Trees are important day roosts; caves and mines are night roosts. Nursery colonies usually under bark or in hollow trees, but occasionally in crevices or buildings.
Los Angeles pocket mouse[4] *Perognathus longimembris brevinasus*	—	SSC	—	Lower elevation grasslands and coastal sage communities in and around the Los Angeles Basin. Open ground with fine sandy soils. May not dig extensive burrows, hiding under weeds and dead leaves instead.
Mexican long-tongued bat[4] *Choeronycteris mexicana*	—	SSC	—	Pinyon and juniper woodlands, riparian scrub, Sonoran thorn woodland. Occasionally found in San Diego County, which is on the periphery of their range. Feeds on nectar and pollen of night-blooming succulents. Roosts in relatively well-lit caves, and in and around buildings.

Species	Listing Status[1] Federal	Listing Status[1] State	MSCP Categories[2]	Habitat
Mountain lion[4] *Felis concolor*	—	SC	Covered Species	Mountain lions inhabit a wide range of ecosystems, including mountainous regions, forests, deserts, and wetlands. Mountain lions establish and defend large territories and can travel large distances in search of prey or mates. In April of 2020, the California Fish and Game Commission found that listing of the Central Coast and Southern California Evolutionarily Significant Units may be warranted, and designated mountain lion within these ESUs as a candidate species.
Northwestern San Diego pocket mouse[4] *Chaetodipus fallax fallax*	—	SSC	—	Coastal scrub, chaparral, grasslands, and sagebrush in western San Diego County. Sandy, herbaceous areas, usually in association with rocks or coarse gravel.
Pacific pocket mouse[3] *Perognathus longimembris pacificus*	FE	SSC	Rare, narrow endemic animal species	Coastal scrub. Inhabits the narrow coastal plains from the Mexican border north to El Segundo, Los Angeles County. Seems to prefer soils of fine alluvial sands near the ocean, but much remains to be learned.
Pallid bat[4] *Antrozous pallidus*	—	SSC	—	Most common in open, dry habitats with rocky areas for roosting. Tree roosting has also been documented in large conifer snags, inside basal hollows of redwoods and giant sequoias, and bole cavities in oaks. Roosts must protect bats from high temperatures. Very sensitive to disturbance of roosting sites.
Pallid San Diego pocket mouse[4] *Chaetodipus fallax pallidus*	—	SSC	—	Desert wash, pinyon and juniper woodlands, Sonoran desert scrub. Desert border areas in eastern San Diego County in desert wash, desert scrub, desert succulent scrub, and pinyon-juniper. Sandy herbaceous areas, usually in association with rocks or coarse gravel.
Palm Springs pocket mouse *Perognathus longimembris bangsi*	—	SSC	—	Desert riparian, desert scrub, desert wash, and sagebrush habitats. Most common in creosote-dominated desert scrub. Rarely found on rocky sites. Occurs in all canopy coverage classes.
Peninsular desert bighorn sheep DPS[3] *Ovis canadensis nelsoni* pop. 2	FE	ST FP	—	Eastern slopes of the Peninsular Ranges below 4,600 feet elevation. This DPS of the subspecies inhabits the Peninsular Ranges in southern California from the San Jacinto Mountains south to the US-Mexico International Border. Optimal habitat includes steep walled canyons and ridges bisected by rocky or sandy washes, with available water.
Pocketed free-tailed bat[4] *Nyctinomops femorosaccus*	—	SSC	—	Variety of arid areas in southern California; pine-juniper woodlands, desert scrub, palm oasis, desert wash, and desert riparian. Rocky areas with high cliffs.
San Diego black-tailed jackrabbit[4] *Lepus californicus bennettii*	—	SSC	—	Coastal sage scrub habitats in southern California.

Species	Listing Status[1] Federal	Listing Status[1] State	MSCP Categories[2]	Habitat
San Diego desert woodrat[4] *Neotoma lepida intermedia*	—	SSC	—	Coastal scrub of southern California from San Diego County to San Luis Obispo County. Moderate to dense canopies preferred. They are particularly abundant in rock outcrops and rocky cliffs and slopes.
Southern California ringtail[4] *Bassariscus astutus octavus*	—	FP	—	Exploits a variety of habitats such as dry, rocky, brush-covered hillsides or riparian areas, typically not far from an open water source. Dens most often in rock crevices, boulder piles, or talus, but also tree hollows, root cavities, and rural buildings. Rarely use same den for more than a few days. Females with litters change dens within 10 days of birth and almost daily after 20 days.
Southern grasshopper mouse[4] *Onychomys torridus ramona*	—	SSC	—	Desert areas, especially scrub habitats with friable soils for digging. Prefers low to moderate shrub cover. Feeds almost exclusively on arthropods, especially scorpions and orthopteran insects.
Southern mule deer[4] *Odocoileus hemionus fuliginatus*	—	—	Covered Species	Southern mule deer are adapted to a variety of habitats in western San Diego County, including woodlands, shrublands, meadows, grasslands, and riparian areas. Shrub habitats and woodlands interspersed with meadows or grasslands are important for food resources, as well as cover for shade and protection from predators.
Spotted bat[4] *Euderma maculatum*	—	SSC	—	Occupies a wide variety of habitats from arid deserts and grasslands through mixed conifer forests. Feeds over water and along washes. Feeds almost entirely on moths. Needs rock crevices in cliffs or caves for roosting.
Stephens' kangaroo rat[3] *Dipodomys stephensi*	FT	ST	—	Primarily annual and perennial grasslands, but also occurs in coastal scrub and sagebrush with sparse canopy cover. Prefers buckwheat, chamise, brome grass and filaree. Will burrow into firm soil.
Townsend’s big-eared bat[4] *Corynorhinus townsendii*	—	SSC	—	Throughout California in a wide variety of habitats. Most common in mesic sites. Requires large cavities for roosting, which may include abandoned buildings and mines, caves, and basal cavities of trees. Roosts in the open, hanging from walls and ceilings. Roosting sites limiting. Extremely sensitive to human disturbance.
Western mastiff bat[4] *Eumops perotis californicus*	—	SSC	—	Found in a variety of habitats, from desert scrub to chaparral to oak woodland and into the ponderosa pine belt and high elevation meadows of mixed conifer forests. The distribution of this species is likely geomorphically determined, with the species being present only where there are significant rock features offering roosting habitat.

Species	Listing Status[1] Federal	Listing Status[1] State	MSCP Categories[2]	Habitat
Western red bat[4] *Lasiurus frantzii*	—	SSC	—	Roosts primarily in trees, 2–40 feet above ground, from sea level up through mixed conifer forests. Prefers habitat edges and mosaics with trees that are protected from above and open below with open areas for foraging.
Western small-footed myotis[4] *Myotis ciliolabrum*	—	—	—	Wide range of habitats mostly arid wooded and brushy uplands near water. Seeks cover in caves, buildings, mines and crevices Prefers open stands in forests and woodlands. Requires drinking water. Feeds on a wide variety of small flying insects.
Western yellow bat *Lasiurus xanthinus*	—	SSC	—	Found in valley foothill riparian, desert riparian, desert wash, and palm oasis habitats. Roosts in trees, particularly palms. Forages over water and among trees.
Yuma myotis[4] *Myotis yumanensis*	—	—	—	Optimal habitats are open forests and woodlands with sources of water over which to feed. Distribution is closely tied to bodies of water. Maternity colonies in caves, mines, buildings or crevices.

Notes: CEQA = California Environmental Quality Act; DPS = distinct population segment; ESU = evolutionarily significant unit.

[1] Legal Status Definitions

Federal:

FE Endangered (legally protected)

FT Threatened (legally protected)

FD Delisted

FC Candidate for Listing

FP Proposed for Listing

State:

FP Fully Protected (legally protected)

SSC Species of Special Concern (no formal protection other than CEQA consideration)

SE State Listed as Endangered (legally protected)

ST State Listed as Threatened (legally protected)

SC State Candidate for Listing (legally protected)

SD State Delisted

[2] MSCP Categories

Covered Species

Rare, narrow endemic animal species

[3] San Diego County Group I Animal Species

[4] San Diego County Group II Animal Species

Sources: CNDDB 2024; County of San Diego 1998; County of San Diego 2010b.

Table 2.5.5 Legacy Sensitive Natural Communities Known to Occur in San Diego County

Sensitive Natural Community	Habitat Type
Coastal brackish marsh	Bog and Marsh
Coastal sage chaparral scrub	Coastal Sage Scrub Scrub and Chaparral
Desert fan palm (*Washingtonia filifera*) oasis woodland	Woodland
Diegan coastal sage scrub	Coastal Sage Scrub
Maritime succulent scrub	Scrub and Chaparral
Mesquite bosque	Woodland
Mojave mixed steppe	Scrub and Chaparral
Mojave riparian forest	Riparian and Bottomland Habitat
San Diego Mesa Claypan Vernal Pool	Grasslands, Vernal Pools, Meadows, and Other Herb Communities
San Diego Mesa Hardpan Vernal Pool	Grasslands, Vernal Pools, Meadows, and Other Herb Communities
Scrub Oak Chaparral	Scrub and Chaparral
Sonoran Cottonwood Willow Riparian Forest	Riparian and Bottomland Habitat
Southern Coast Live Oak Riparian Forest	Riparian and Bottomland Habitat
Southern Coastal Bluff Scrub	Scrub and Chaparral
Southern Coastal Salt Marsh	Bog and Marsh
Southern Cottonwood Willow Riparian Forest	Riparian and Bottomland Habitat
Southern Dune Scrub	Dune Community
Southern Foredunes	Dune Community
Southern Interior Cypress Forest	Forest
Southern Maritime Chaparral	Scrub and Chaparral
Southern Riparian Forest	Riparian and Bottomland Habitat
Southern Riparian Scrub	Riparian and Bottomland Habitat
Southern Sycamore Alder Riparian Woodland	Riparian and Bottomland Habitat
Southern Willow Scrub	Riparian and Bottomland Habitat
Torrey Pine Forest	Forest
Valley Needlegrass Grassland	Grasslands, Vernal Pools, Meadows, and Other Herb Communities

Source: CNDDB 2024, compiled by Ascent in 2024.

Table 2.5.6 Sensitive Natural Communities Known to Occur and with Potential to Occur in San Diego County

Sensitive Natural Community[1]	Rarity Rank[2]	Habitat Type
Alkali heath marsh *Frankenia salina**	S3	Bog and Marsh
Common three-square marsh *Schoenoplectus americanus**	S3.2	Bog and Marsh
California cordgrass marsh *Spartina foliosa**	S3.2	Bog and Marsh
White sage scrub *Salvia apiana**	S3	Coastal Sage Scrub
Clustered tarweed fields *Deinandra fasciculata**	S2	Grasslands, Vernal Pools, Meadows, and Other Herb Communities
Needle grass – Melic grass grassland *Nassella* spp. – *Melica* spp.*	S3S4	Grasslands, Vernal Pools, Meadows, and Other Herb Communities
Fremont cottonwood forest and woodland *Populus fremontii – Fraxinus velutina – Salix gooddingii**	S3.2	Riparian and Bottomland
Goodding's willow - red willow riparian woodland and forest *Salix gooddingii – Salix laevigata**	S3	Riparian and Bottomland
Bush penstemon scrub *Keckiella antirrhinoides**	S3	Scrub and Chaparral
Bushy spikemoss mats *Selaginella* (*bigelovii, wallacei*)*	S3	Scrub and Chaparral
California brittle bush - Ashy buckwheat scrub *Encelia californica – Eriogonum cinereum**	S3	Scrub and Chaparral
Eastwood manzanita chaparral *Arctostaphylos glandulosa**	S3	Scrub and Chaparral
Hairy leaf - woolly leaf ceanothus chaparral *Ceanothus (oliganthus, tomentosus)**	S3	Scrub and Chaparral
Jojoba scrub *Simmondsia chinensis**	S3	Scrub and Chaparral
Lemonade berry scrub *Rhus integrifolia**	S3	Scrub and Chaparral
Menzies's golden bush scrub *Isocoma menziesii**	S3	Scrub and Chaparral
Mission manzanita chaparral *Xylococcus bicolor**	S3	Scrub and Chaparral
Wart-stemmed ceanothus chaparral *Ceanothus verrucosus**	S2	Scrub and Chaparral
Tecate cypress - Piute cypress woodland *Callitropsis forbesii**	S3	Forest
Bigcone Douglas fir forest *Pseudotsuga macrocarpa**	S3.2	Forest

Sensitive Natural Community[1]	Rarity Rank[2]	Habitat Type
Incense cedar forest and woodland *Calocedrus decurrens**	S3	Forest
California sycamore - coast live oak riparian woodlands *Platanus racemosa – Quercus agrifolia**	S3	Woodland
Engelmann oak woodland and forest *Quercus engelmannii**	S3	Woodland
Bush monkeyflower scrub *Diplacus aurantiacus*	S3?	Coastal sage scrub
California brittle bush - Ashy buckwheat scrub *Encelia californica – Eriogonum cinereum*	S3	Coastal sage scrub
Coast prickly pear scrub *Opuntia littoralis – Opuntia oricola – Cylindropuntia prolifera*	S3	Coastal sage scrub
Scale broom scrub *Lepidospartum squamatum*	S3	Coastal sage scrub
Wright's buckwheat - Heerman's buckwheat - Utah butterfly-bush scrub *Eriogonum wrightii – Eriogonum heermannii – Buddleja utahensis*	S3	Coastal sage scrub
Dune mat *Abronia latifolia – Ambrosia chamissonis*	S3	Dune Communities
Ashy ryegrass – creeping ryegrass turf *Leymus cinereus – Leymus triticoides*	S3	Grasslands, Vernal Pools, Meadows, and Other Herb Communities
Clustered tarweed field *Deinandra fasciculata*	S2	Grasslands, Vernal Pools, Meadows, and Other Herb Communities
Deer grass bed *Muhenbergia rigens*	S2?	Grasslands, Vernal Pools, Meadows, and Other Herb Communities
Giant wild rye grassland *Leymus condensatus*	S3	Grasslands, Vernal Pools, Meadows, and Other Herb Communities
Black cottonwood forest *Populus trichocarpa*	S3	Riparian and Bottomland Habitat
California rose briar patch *Rosa californica*	S3	Riparian and Bottomland Habitat
Shining willow groves *Salix lucida* ssp. *lasiandra*	S3.2	Riparian and Bottomland Habitat
Wild grape shrubland *Vitis arizonica – Visit girdiana*	S3	Riparian and Bottomland Habitat
Acton's and Virgin River brittlebush - net-veined goldeneye scrub *Encelia (actonii, virginensis) – Viguiera reticulata*	S3	Scrub and chaparral
Big galleta shrub-steppe *Pleuraphis rigida*	S2.2	Scrub and chaparral
Bush seepweed scrub *Suaeda moquinii*	S3	Scrub and chaparral

Sensitive Natural Community[1]	Rarity Rank[2]	Habitat Type
Canyon sunflower scrub *Venegasia carpesiodies*	S3	Scrub and Chaparral
Coastal sage and island scrub oak chaparral *Quercus dumosa – Quercus pacifica*	S3	Scrub and chaparral
Cup leaf ceanothus – California flannelbush chaparral *Ceanothus greggii – Fremontodendron californicum*	S3	Scrub and Chaparral
Desert agave scrub *Agave deserti*	S3.2	Scrub and chaparral
Desert apricot scrub *Prunus fremontii*	S3	Scrub and chaparral
Nolina scrub *Nolina* (*bigelovii, parryi*)	S2.2	Scrub and chaparral
Oak gooseberry thicket *Ribes quercetorum*	S2?	Scrub and chaparral
Palmer oak chaparral *Quercus palmeria*	S2	Scrub and chaparral
Snakeweed scrub *Gutierrezia sarothrae – Gutierrezia microcephala*	S3	Scrub and chaparral
Cuyamaca cypress stand *Hespeocyparis stephensonii*	S1	Forest
Parry pinyon woodland *Pinus quadrifolia*	S2	Forest
Torrey pine woodland *Pinue torreyana*	S1.2	Forest
California bay forest *Umbellularia californica*	S3	Woodland
California walnut groves *Juglans californica*	S3.2	Woodland
Elephant tree stand *Bursera microphylla*	S1.2	Woodland

Notes: Vegetation communities shown with an asterisk (*) are known to occur in San Diego County. The other communities have potential to occur in the habitat types identified in the county.

[1] These are designated sensitive natural communities with a state rarity rank of S1 (critically imperiled), S2 (imperiled), or S3 (vulnerable).

[2] A question mark (?) denotes an inexact numeric rank when there is an insufficient number of samples over the full expected range of the type, but existing information points to this rank.

[3] For S3S4 there remains uncertainty whether the alliance should be defined as either S3 or S4.

Source: Sawyer et al. 2009, compiled and adapted by Ascent in 2024.

Table 2.5.7 Minimum Riparian Setbacks[1,2]

Common Name	Watercourse Class[3]	Distance
Perennial watercourses, waterbodies (e.g., lakes, ponds), or springs[4]	I	150 ft.
Intermittent watercourses or wetlands	II	100 ft.
Ephemeral watercourses	III	50 ft.
Human-made irrigation canals, water supply reservoirs, or hydroelectric canals that support native aquatic species	IV	Established Riparian Vegetation Zone
All other human-made irrigation canals, water supply reservoirs, or hydroelectric canals	IV	N/A

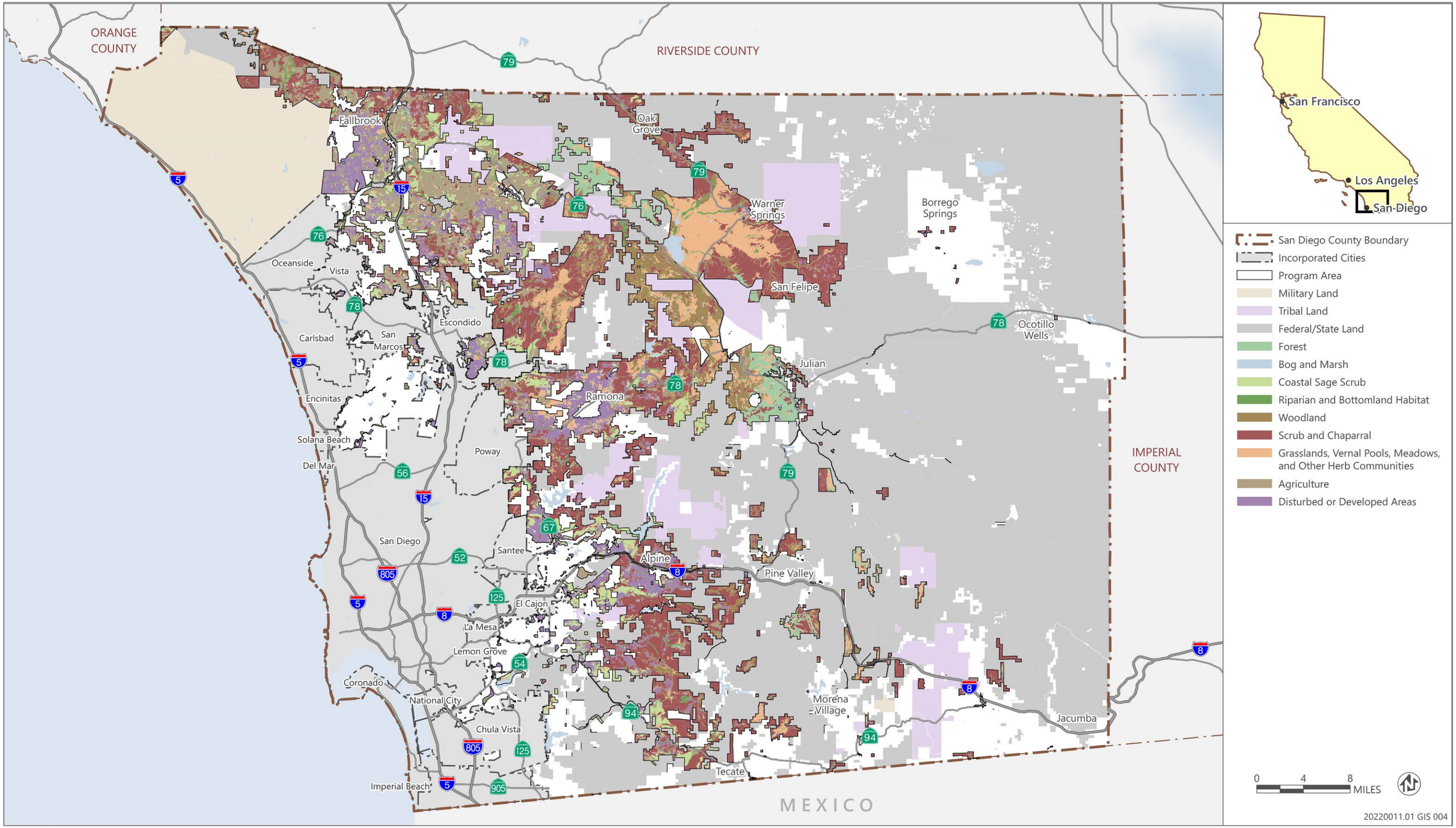
1. A Regional Water Board may adopt site-specific WDRs or an enforcement order for a cannabis cultivator with requirements that are inconsistent with the setbacks in this table if the Executive Officer determines that the site-specific WDRs or enforcement order contains sufficient requirements to be protective of water quality.

2. Cannabis cultivators enrolled in a Regional Water Board order adopting WDRs or a waiver of WDRs for cannabis cultivation activities prior to October 17, 2017, may retain reduced setbacks applicable under that Regional Water Board order unless the Regional Water Board's Executive Officer determines that the reduced setbacks applicable under that order are not protective of water quality.

3. Except where more restrictive, the stream class designations are equivalent to the Forest Practice Rules Water Course and Lake Protection Zone definitions (California Code of Regulations, title 14, Chapter 4. Forest Practice Rules, Subchapters 4, 5, and 6 Forest District Rules, Article 6 Water Course and Lake Protection).

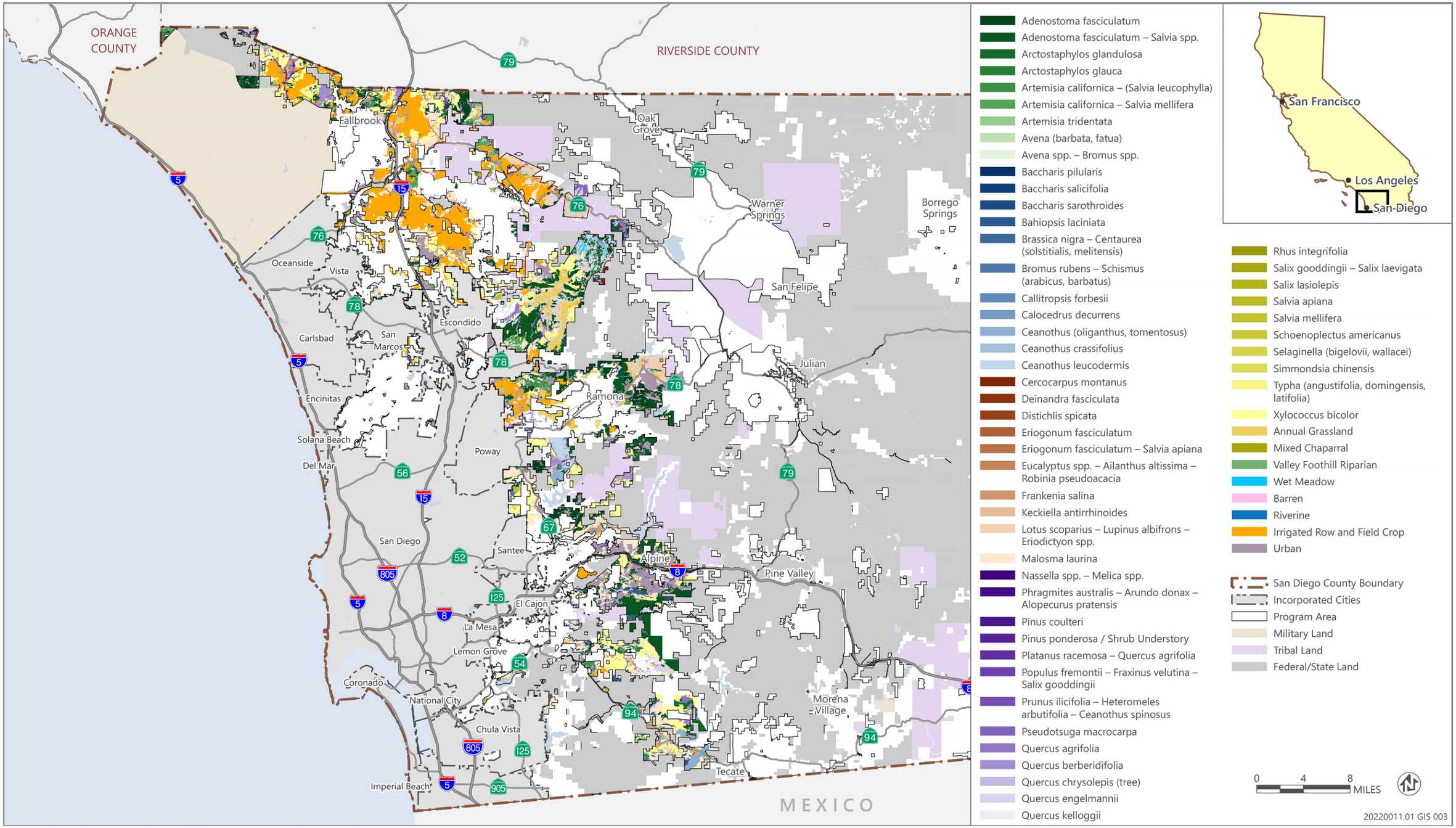
4. Spring riparian setbacks default to the applicable watercourse riparian setback 150 feet downstream and/or upstream of the spring's confluence with the watercourse or 150 feet downstream of the point where the spring forms a watercourse with defined bed and banks.

Source: SWRCB 2023.



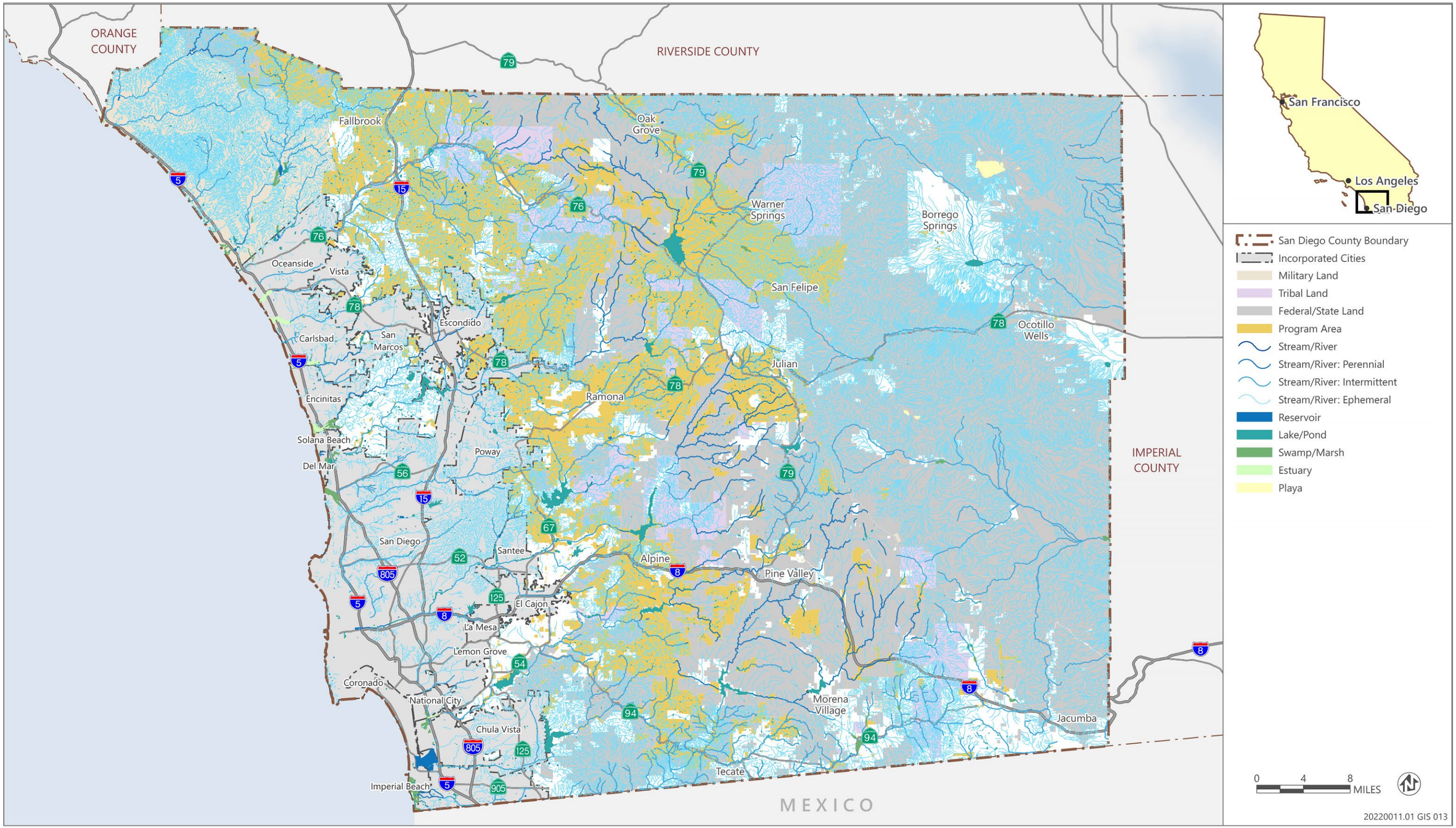
Sources: Data downloaded from SanGIS in 2024, adapted by Ascent in 2024.

Figure 2.5.1 **Vegetation and Habitat Types in the Program Area**



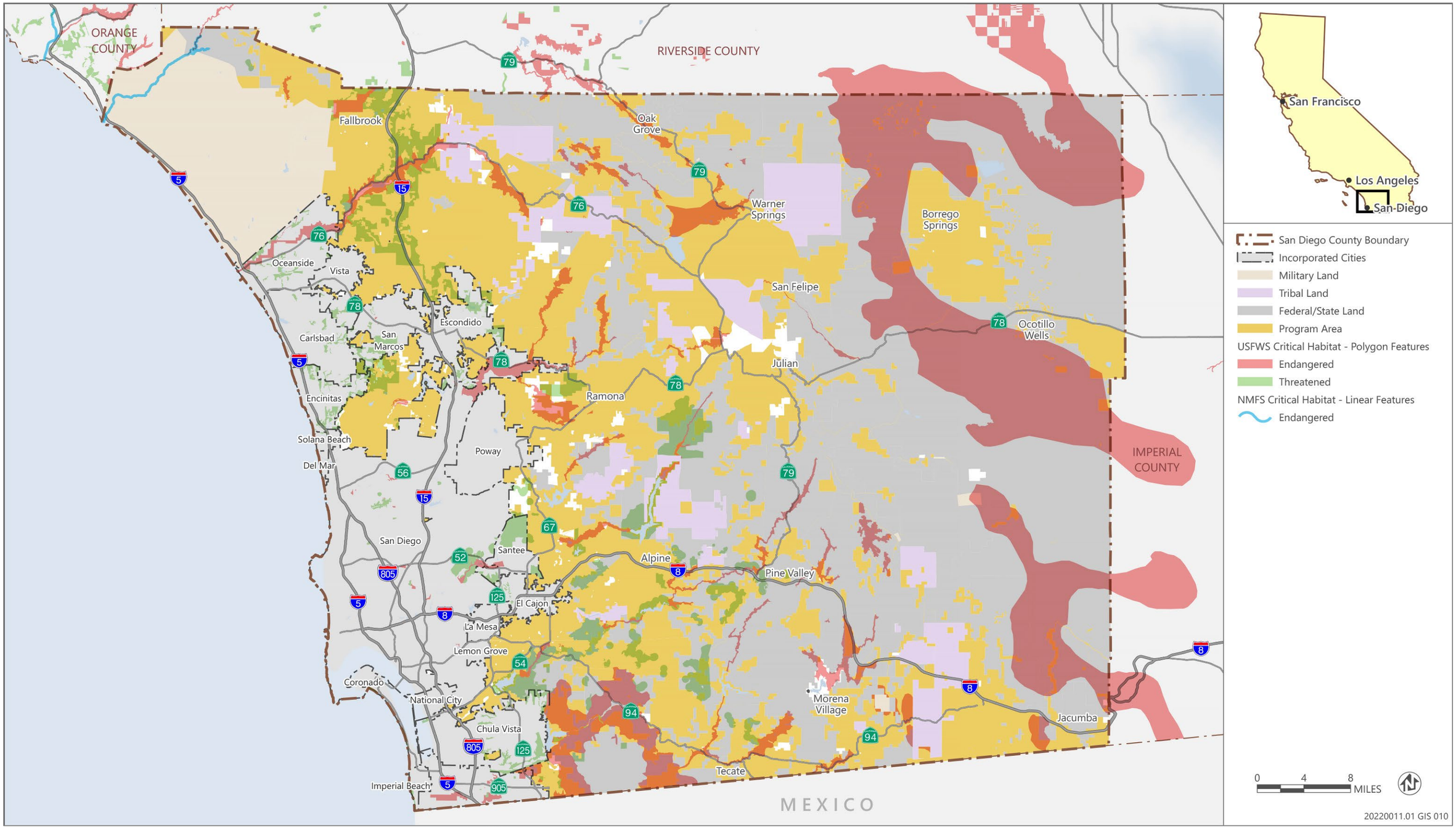
Sources: Data downloaded from CDFW in 2024; adapted by Ascent in 2024.

Figure 2.5.2 **Vegetation Alliances in Western San Diego County**



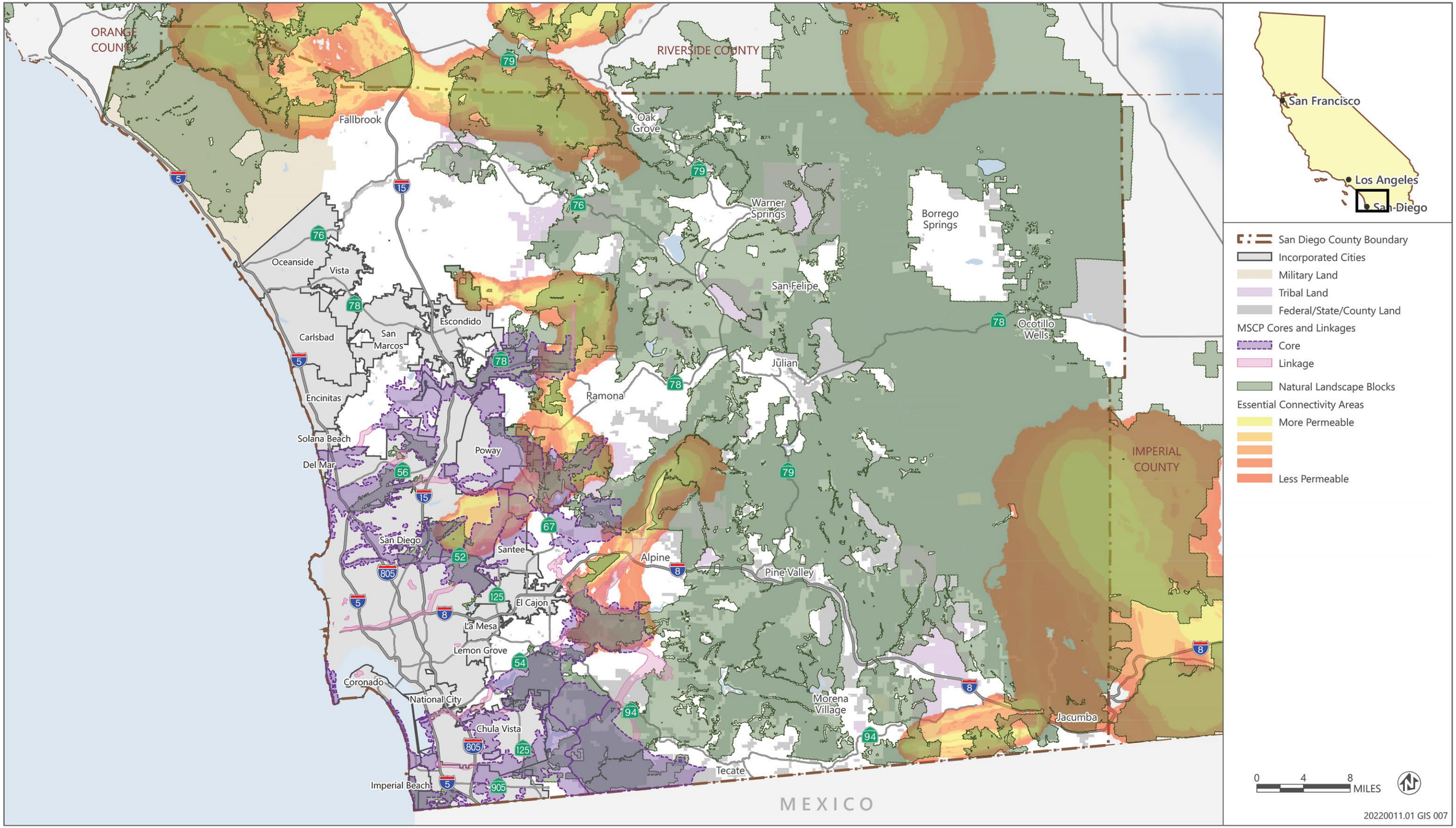
Sources: Data downloaded from USGS (NHD) in 2023, SanGIS in 2021, and County of San Diego in 2023; adapted by Ascent in 2024.

Figure 2.5.3 **Aquatic Habitat in the Program Area**



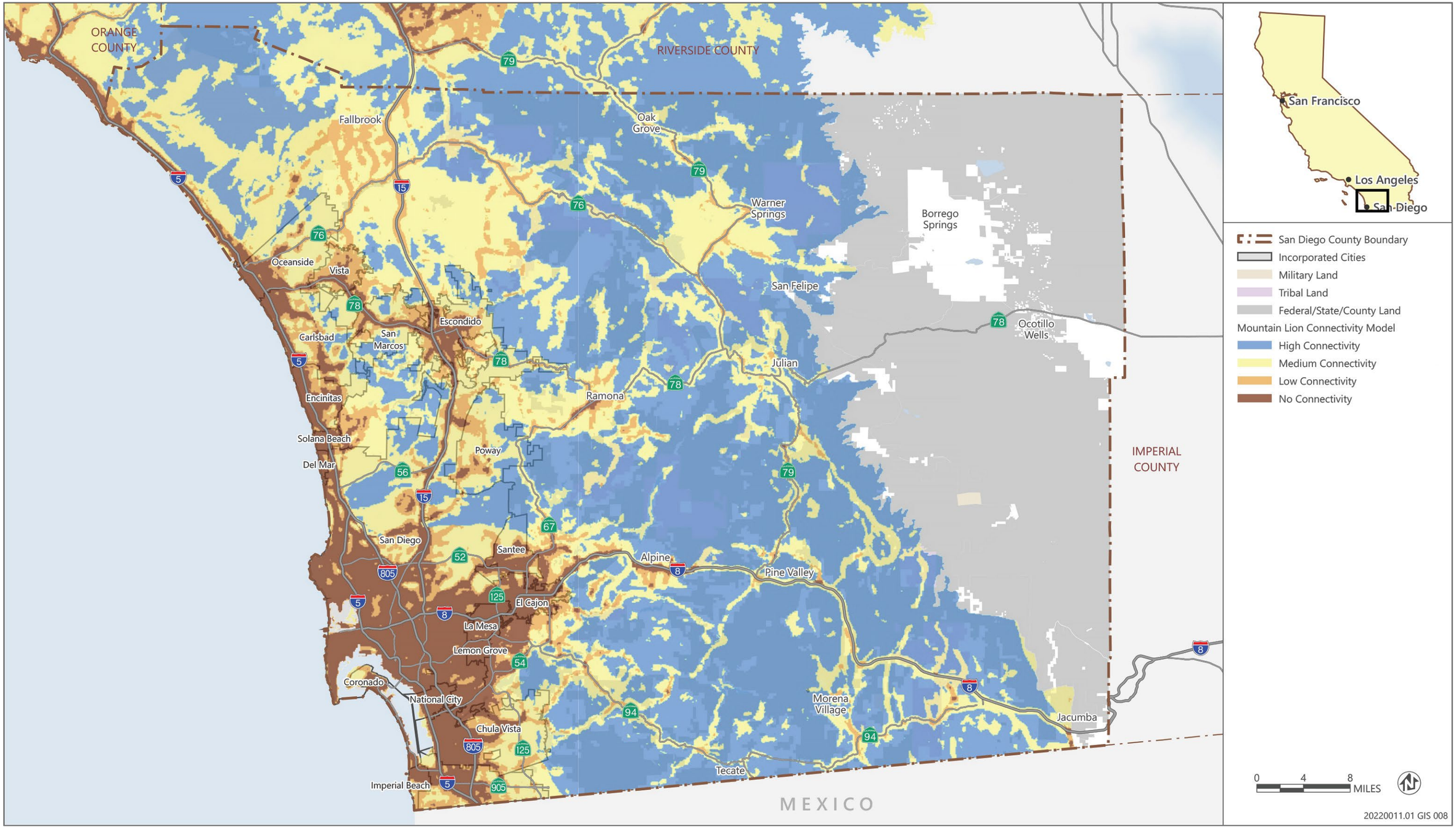
Sources: Data downloaded from USFWS and NOAA Fisheries in 2024; adapted by Ascent in 2024.

Figure 2.5.4 **Designated Critical Habitat in San Diego County**



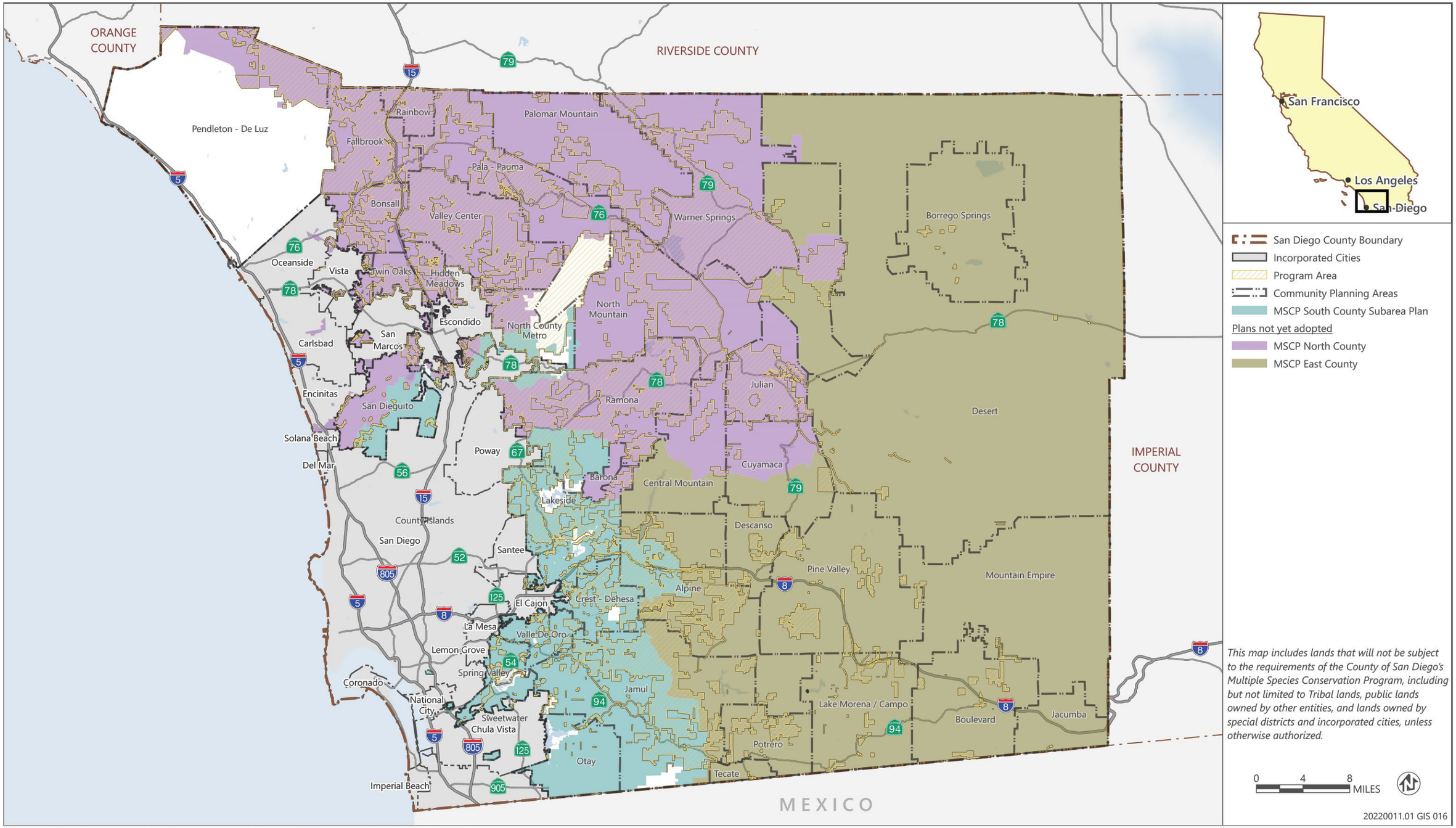
Sources: Data downloaded from CDFW in 2024; adapted by Ascent in 2024.

Figure 2.5.5 **California Essential Habitat Connectivity**



Sources: Data downloaded from SDMMP in 2024; Vickers et al. 2017; adapted by Ascent in 2024.

Figure 2.5.6 **Mountain Lion Habitat Connectivity**



Sources: Data downloaded from County of San Diego in 2024; adapted by Ascent in 2024.

Figure 2.5.7 **MSCP Plan Areas and Draft Plan Areas**