

## 2.4 Biological Resources

This section summarizes the existing common and sensitive biological resources in the unincorporated county, including vegetation communities and special-status wildlife and plant species. Potential impacts of the project on special-status plant and wildlife species, riparian habitat and other sensitive natural communities, state and federally protected wetlands, wildlife movement corridors and nursery sites, local policies and ordinances, and habitat conservation plans (HCPs) and natural community conservation plans (NCCPs) are analyzed. Because this analysis is subsequent to the certified 2011 GPU PEIR, the evaluation of impacts focuses on the potential for implementation of the CAP Update to result in new or substantially more severe impacts than presented in the 2011 GPU PEIR, given the changes to the General Plan proposed by the CAP Update and changes in environmental and regulatory conditions that have occurred since the certification of the General Plan. This section incorporates by reference the biological resources setting and impact analysis from the 2011 GPU PEIR as it applies to the CAP Update and supplements with relevant setting conditions that have changed since certification of the 2011 GPU PEIR. The 2011 GPU PEIR mitigation measures that are applicable to the proposed project also are incorporated herein.

Table 2.4-1 summarizes the impact conclusions reached in the 2011 GPU PEIR and identifies if a new or more severe significant impact would occur with implementation of the CAP Update. As indicated below, implementation of the proposed project would not result in new or more severe significant impacts on biological resources (with implementation of mitigation).

**Table 2.4-1 Summary of Biological Resources–Related Impacts**

Issue Number	Issue Topic	Determination from 2011 GPU PEIR	CAP Update SEIR Determination	
			New or More Severe Significant Impact Prior to Mitigation	New or More Severe Significant Impact After Mitigation
1	Special-Status Plant and Wildlife Species	General Plan Only: Significant and Unavoidable Impact	CAP Update Only: No	CAP Update Only: No
		General Plan Cumulative Contribution: Significant and Unavoidable Impact	CAP Update Cumulative Contribution: No	CAP Update Cumulative Contribution: No
2	Riparian Habitat and Other Sensitive Natural Communities	General Plan Only: Significant and Unavoidable Impact	CAP Update Only: No	CAP Update Only: No
		General Plan Cumulative Contribution: Significant and Unavoidable Impact	CAP Update Cumulative Contribution: No	CAP Update Cumulative Contribution: No

Issue Number	Issue Topic	Determination from 2011 GPU PEIR	CAP Update SEIR Determination	
			New or More Severe Significant Impact Prior to Mitigation	New or More Severe Significant Impact After Mitigation
3	State and Federally Protected Wetlands	General Plan Only: Less-Than-Significant Impact after Mitigation	CAP Update Only: No	CAP Update Only: No
		General Plan Cumulative Contribution: Less than Significant	CAP Update Cumulative Contribution: No	CAP Update Cumulative Contribution: No
4	Wildlife Movement Corridors and Nursery Sites	General Plan Only: Significant and Unavoidable Impact	CAP Update Only: No	CAP Update Only: No
		General Plan Cumulative Contribution: Significant and Unavoidable	CAP Update Cumulative Contribution: No	CAP Update Cumulative Contribution: No
5	Local Policies and Ordinances	General Plan Only: Less than Significant	CAP Update Only: No	CAP Update Only: No
		General Plan Cumulative Contribution: No	CAP Update Cumulative Contribution: No	CAP Update Cumulative Contribution: No
6	Habitat Conservation Plans and Natural Community Conservation Plans	General Plan Only: Less than Significant Impact	CAP Update Only: No	CAP Update Only: No
		General Plan Cumulative Contribution: Significant and Unavoidable	CAP Update Cumulative Contribution: No	CAP Update Cumulative Contribution: No

Notes: CAP = Climate Action Plan; GPU = General Plan Update; PEIR = Program Environmental Impact Report; SEIR = Supplemental Environmental Impact Report.

Source: Compiled by Ascent Environmental in 2023.

Comments received during the Notice of Preparation (NOP) scoping process included the following issues regarding the CAP Update that pertained to biological resources: species adaptation to climate change and native habitat preservation. These concerns are addressed and summarized in this section, as appropriate. A copy of the NOP and comment letters received in response to the NOP are included in Appendix A of this draft SEIR.

### 2.4.1 Existing Conditions

The 2011 GPU PEIR included a description of existing conditions in Section 2.4, “Biological Resources.” No substantial changes have occurred to the existing conditions described in the 2011 GPU PEIR. Therefore, the existing conditions in the 2011 GPU PEIR remain applicable and are incorporated by reference. The following discussion summarizes the information in the 2011 GPU PEIR and provides supplemental discussion of recent wildfire events as they relate to change in land cover.

### **2.4.1.1 Terrestrial Communities and Habitats**

Vegetation communities and habitats within the county, as described on pages 2.4-2 through 2.4-11 of the 2011 GPU PEIR include the following: chaparral, coastal sage scrub, coniferous forests, desert chaparral, desert dunes, desert scrub, dry wash woodlands, grasslands, marshes, meadows and seeps, oak forest, other woodlands, pinyon juniper woodland, playas/badlands/mudhill forbs, riparian forest, riparian scrub, riparian woodland, southern foredunes, beach, saltpan, mudflats, urban, disturbed habitat, agriculture, Eucalyptus, and water.

#### **Special-Status Species**

Special-status species are plants and animals that are legally protected or otherwise considered sensitive by federal, state, or local resource conservation agencies and organizations. In this document, special-status species are defined as plants and animals in the following categories:

- Species listed or proposed for listing as threatened, rare, or endangered under the federal Endangered Species Act (ESA) or the California Endangered Species Act (CESA).
- Species considered as candidates for listing under the ESA or CESA.
- Wildlife species identified by California Department of Fish and Wildlife (CDFW) as Species of Special Concern.
- Animals fully protected under the California Fish and Game Code.
- Plants considered by CDFW to be “rare, threatened, or endangered in California” (California Rare Plant Ranks of 1A, presumed extinct in California; 1B, considered rare or endangered in California and elsewhere; and 2, considered rare or endangered in California but more common elsewhere). The California Rare Plant Ranks correspond with and replace former California Native Plant Society (CNPS) listings. While these rankings do not afford the same type of legal protection as ESA or CESA, the uniqueness of these species requires special consideration under CEQA.
- Other species determined to be sensitive within the county.

Tables C-1 and C-2 of the 2011 GPU PEIR provide comprehensive lists of special-status plants and special-status animals that were listed at the time of adoption of the 2011 GPU PEIR. Since adoption of the 2011 GPU PEIR, several additional special-status species have been added to the California Natural Diversity Database (CNDDDB) and the CNPS Inventory of Rare and Endangered Plants. A total of 139 special-status animal species and 301 special-status plants are now listed as potentially occurring within the boundaries of the county. Special-status plant and animal species are listed at the end of this section in Table 2.4-2 and Table 2.4-3, respectively. Some of these species are listed under the ESA and federally designated critical habitat for the species that occurs within the county (Table 2.4-4, presented at the end of this section).

## **2.4.2 Regulatory Framework**

The 2011 GPU PEIR included a summary of the regulatory framework related to biological resources in Section 2.4 (pages 2.4-13 to 2.4-19), which is incorporated by reference. Specific regulations discussed in the 2011 GPU PEIR and applicable to the project include the following. Regulations that appear in a list format have not changed substantially and continue to apply to the unincorporated county. Regulations that have been adopted or updated since certification of the 2011 GPU PEIR are described in full.

### ***2.4.2.1 Federal***

- ESA
- Migratory Bird Treaty Act
- Bald and Golden Eagle Protection Act
- Clean Water Act (CWA)

### ***2.4.2.2 State***

- CESA
- California Fish and Game Code Sections 3503 and 3503.5
- California Fish and Game Code Section 1602 – Streambed Alteration
- Porter-Cologne Water Quality Control Act
- Natural Community Conservation Planning Act of 1991

### ***2.4.2.3 Local***

- San Diego County Zoning Ordinance (Zoning Ordinance)
- Multiple Species Conservation Program (MSCP)
- County of San Diego Code of Regulatory Ordinances Sections 86.501–86.509: Biological Mitigation Ordinance (BMO)
- County of San Diego Code of Regulatory Ordinances Sections 67.801–67.814: Watershed Protection, Stormwater Management, and Discharge Control Ordinance
- County of San Diego Code of Regulatory Ordinances Sections 86.601–86.608: Resource Protection Ordinance (RPO)
- San Diego County Board of Supervisors Policy I-123: Conservation Agreement for the MSCP

## **Habitat Loss Permit Ordinance**

The Habitat Loss Permit (HLP) Ordinance was adopted in March of 1994 as a response to both the listing of the coastal California gnatcatcher as a federally threatened species and the adoption of the Natural Community Conservation Planning Act by the State of California. Pursuant to the Special 4(d) Rule under the federal ESA, the County is authorized to issue “take permits” for the California gnatcatcher (in the form of HLPs) in lieu of Section 7 or 10(a) Permits typically required from USFWS. Although issued by the County, the wildlife agencies must concur with the issuance of an HLP for it to become valid as a take authorization under the federal 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 adversely affect any of several coastal sage scrub habitat types. The ordinance requires an HLP if coastal sage scrub or related habitat will be adversely affected, regardless of whether the site is currently occupied by gnatcatchers. HLPs are not required for projects within the boundaries of the MSCP because take authorization is conveyed to those projects through compliance with the MSCP. HLPs are also not required for projects that have separately obtained Section 7 or 10(a) permits for take of the gnatcatcher.

The “Planning Agreement by and among the County of San Diego, the California Department of Fish and Wildlife, and the United States Fish and Wildlife Service regarding the North and East County Multiple Species Conservation Program Plans: Natural Community Conservation Program Plans and Habitat Conservation Plans” was most recently restated and amended in March 2021 (County of San Diego et al. 2021).

## **2011 San Diego County General Plan**

The General Plan policies addressing biological resources that are applicable to the CAP Update 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-1.4: Collaboration with Other Jurisdictions. Collaborate with other jurisdictions and trustee agencies to achieve well-defined common resource preservation and management goals.

Policy COS-1.5: Regional Funding. Collaborate with other jurisdictions and federal, state, and local agencies to identify regional, long-term funding mechanisms that achieve common resource management goals.

Policy COS-1.6: Assemblage of Preserve Systems. Support the proactive assemblage of a biological preserve system to protect biological resources and to facilitate development through mitigation banking opportunities.

Policy COS-1.7: Preserve System Funding. Provide adequate funding for assemblage, management, maintenance, and monitoring through coordination with other jurisdictions and agencies.

Policy COS-1.8: Multiple-Resource Preservation Areas. Support the acquisition of large tracts of land that have multiple resource preservation benefits, such as biology, hydrology, cultural, aesthetics, and community character. Establish funding mechanisms to serve as an alternative when mitigation requirements would not result in the acquisition of large tracts of land.

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-1.10: Public Involvement. Ensure an open, transparent, and inclusive decision-making process by involving the public throughout the course of planning and implementation of habitat conservation plans and resource management plans.

Policy COS-1.11: Volunteer Preserve Monitor. Encourage the formation of volunteer preserve managers that are incorporated into each community planning group to supplement professional enforcement staff.

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 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-6.4: Sustainable Subdivision Design. Require that residential subdivisions be planned to conserve open space and natural resources, protect agricultural operations including grazing, increase fire safety and defensibility, reduce impervious footprints, use sustainable development practices, and, when appropriate, provide public amenities. [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-6.7: Open Space Network. Require projects with open space to design contiguous open space areas that protect wildlife habitat and corridors; preserve scenic vistas and areas; and connect with existing or planned recreational opportunities.

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.

Policy M-12.9: Environmental and Agricultural Resources. Site and design specific trail segments to minimize impacts to sensitive environmental resources.

ecological system and wildlife linkages and corridors, and agricultural lands. Within the MSCP preserves, conform siting and use of trails to County MSCP Plans and MSCP resource management plans.

### **2011 San Diego County GPU PEIR**

The following mitigation measures from the 2011 GPU PEIR are applicable to the CAP Update:

Adopted Mitigation Measure Bio-1.5: Utilize County Guidelines for Determining Significance for Biological Resources to identify adverse impacts to biological resources. Also, utilize the County's Geographic Information System (GIS) records and the Comprehensive Matrix of Sensitive Species to locate special-status species populations on or near project sites. This information will be used to avoid or mitigate impacts as appropriate.

Adopted Mitigation Measure Bio-1.6: Implement the RPO, BMO, and HLP Ordinance to protect wetlands, wetland buffers, sensitive habitat lands, biological resource core areas, linkages, corridors, high-value habitat areas, subregional coastal sage scrub focus areas, and populations of rare, or endangered plant or animal species.

Adopted Mitigation Measure Bio-1.7: Minimize edge effects from development projects located near sensitive resources by implementing the County Noise Ordinance, the County Groundwater Ordinance, the County's Landscaping Regulations (currently part of the Zoning Ordinance), and the County Watershed Protection, Storm Water Management, and Discharge Control Ordinance.

Adopted Mitigation Measure Bio-2.1: Revise the Ordinance Relating to Water Conservation for Landscaping to incorporate appropriate plant types and regulations requiring planting of native or compatible non-native, non-invasive plant species in new development.

Adopted Mitigation Measure Bio-2.2: Require that development projects obtain CWA Section 401/404 permits issued by the California Regional Water Quality Control Board and U.S. Army Corps of Engineers for all project-related disturbances of waters of the U.S. and/or associated wetlands. Also, continue to require that projects obtain Fish and Game Code Section 1602 Streambed Alteration Agreements from the California Department of Fish and Game for all project-related disturbances of streambeds.

Adopted Mitigation Measure Bio-2.3: Ensure that wetlands and wetland buffer areas are adequately preserved whenever feasible to maintain biological functions and values.

Adopted Mitigation Measure Bio-2.4: Implement the Watershed Protection, Storm Water Management, and Discharge Control Ordinance to protect wetlands.



## 2.4.3 Analysis of Effects and Significance Determinations

### 2.4.3.1 Significance Criteria

Based on the *County of San Diego Guidelines for Determining Significance and Report Format and Content Requirements: Biological Resources* (County of San Diego 2010) and Appendix G of the State CEQA Guidelines, the proposed project 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;
- have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, 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 HCP, NCCP, or other approved local, regional, or state habitat conservation plan.

### 2.4.3.2 Approach to Analysis

Impacts related to biological resources were analyzed qualitatively based on a review of the CAP Update measures and actions and their potential to result in physical changes to the environment if the CAP Update is approved and implemented. Each issue area was analyzed in the context of existing laws and regulations, as well as policies adopted in the General Plan, and the extent to which these existing regulations and policies adequately address and minimize the potential for impacts associated with implementation of the CAP Update. The following impact analysis is informed by databases that address biological resources in the unincorporated county, including the CNDDB and CNPS Inventory of Rare and Endangered Plants. Because this SEIR tiers from the 2011 GPU PEIR, all relevant 2011 GPU PEIR mitigation measures have been applied to the proposed project as needed to avoid or minimize project impacts and are considered part of the proposed CAP Update.

### **Scope of SEIR Impact Analysis**

The impact analysis contained within this ~~draft~~-SEIR focuses on whether approval and implementation of the CAP Update would result in new or more severe impacts than were disclosed in the 2011 GPU PEIR, which is herein incorporated by reference. The CAP Update identifies strategies, measures, and supporting actions (referred to herein as measures and actions) to demonstrate progress toward the established GHG reduction targets. Because these measures and actions represent the components of the CAP Update that could result in physical environmental effects within the unincorporated county, this analysis focuses on the impact of their implementation. Given the broad scope of the CAP Update (i.e., covering the entire unincorporated county) and its role as a planning document designed to guide future decision-making related to the reduction of GHGs within the unincorporated county, the study area for the CAP Update is the unincorporated area of the county within the County's jurisdiction (i.e., excluding tribal lands, state and federally owned lands, and military installations).

The analysis in this ~~draft~~-SEIR is programmatic. Implementation of all CAP Update measures and actions were considered during preparation of this ~~draft~~ SEIR, to the degree specific information about their implementation is known. Because future projects required to implement the CAP Update have yet to be specifically defined, this SEIR considers the types of impacts that could occur with implementation of the proposed GHG reduction measures and actions programmatically. Future discretionary projects would be required to be evaluated to determine if they are within the scope of this SEIR or if they result in project-specific impacts additional to what is concluded in this analysis. If additional impacts would result, additional CEQA documentation would be required to evaluate impacts, determine mitigation, and conclude whether impacts are reduced to a less-than-significant level.

### **Proposed CAP Update Strategies**

As described in Chapter 1, "Project Description," the overarching strategies and associated measures and actions proposed in the CAP Update (see Table 1-2) have been grouped into subcategories for the purpose of analysis, based on the sector they target (e.g., solid waste, water/wastewater). CAP Update measures and actions with the potential to result effects related to biological resources are summarized below. CAP Update actions and measures that would involve development of policies and programs that would not result in direct physical effects or those that would result in limited physical improvements to existing development are not discussed further because these actions and measures would not have potential to result in new or more severe impacts related to biological resources.

**Solid Waste Measures and Actions.** This category includes strategies, measures, implementing actions aimed at achieving zero solid waste in County operations and within the unincorporated county. Key measures and actions with potential to result in new or more severe impacts related to biological resources include those that would result in the development of new or expanded recycling and composting facilities (Action SW-4.1).

**Water and Wastewater Measures and Actions.** This category includes strategies to decrease water consumption and increase wastewater and stormwater treatments. Key measures and actions with potential to result in new or more severe impacts related to biological resources include those that would result in the construction of new recycled water and stormwater capture and reuse infrastructure (Actions W-2.2, W-2.3, and W-2.4).

**Agriculture and Conservation Measures and Actions.** This category includes strategies to preserve natural land and agricultural land, improve land management practices, and support climate-friendly farming practices. Therefore, the measures and actions are not expected to result in new or more severe impacts related to biological resources. Rather, actions that would result in the acquisition and management of conservation lands (Actions A-1.1, A-1.2, A-3.1, and A-4.1) would have potential to benefit biological resources.

**Energy Measures and Actions.** This category includes strategies to develop policies and programs to increase energy efficiency and renewable energy use. Key measures and actions with potential to result in new or more severe impacts related to biological resources include those that would result in the construction of new infrastructure to promote renewable energy use and electrification (Actions E-1.1, E-3.2, and E-3.2.a). Action E-3.3 would require the County to develop a program to provide the unincorporated area with 100 percent renewable energy from San Diego Community Power by 2030. This action may indirectly result in the construction of large-scale renewable energy infrastructure.

**Built Environment and Transportation Measures and Actions.** This category includes strategies to decarbonize vehicle fleet and to support transit and ridesharing. Key measures and actions with potential to result in new or more severe impacts related to biological resources include those that would result in the construction of new electric vehicle charging stations (Actions T-3.1.b, T-3.1.c, and T-4.2) and hydrogen fueling infrastructure (Action T-3.1.a).

### ***2.4.3.3 Issue 1: Special-Status Plant and Wildlife Species***

This section describes potential project impacts on special-status species, based on effects that CAP Update implementation would have on vegetation communities that could support special-status species. These effects could also affect designed critical habitat for federally listed plant and animal species.

#### **Guidelines for Determination of Significance**

Based on Appendix G of the State CEQA Guidelines, the project could result in a significant adverse effect related to biological resources if it would:

- have a substantial adverse effect, either directly or through habitat modification, 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**

### **2011 GPU PEIR Determination**

The 2011 GPU PEIR evaluated impacts on special-status species on a habitat-scale, because biological resources were analyzed at a regional level and the disturbance or loss of some habitats could substantially affect these species. Potential impacts identified in the 2011 GPU PEIR were related to the development of land uses, and construction of new infrastructure to support these land uses. Development, such as construction of new buildings and infrastructure, would result in the removal of several common and sensitive habitat types, which could affect special-status species associated with those habitats. The 2011 GPU PEIR determined that buildout of the General Plan would result in potentially significant direct (e.g., removal of habitat), indirect (e.g., impacts on water quality, introduction of nonnative plants, edge effects), and cumulative impacts on special-status species. The discussion of impacts and mitigation measures related to special-status species can be found in Section 2.4, “Biological Resources,” on pages 2.4-19 through 2.4-25 and 2.4-34 through 2.4-35; and 2.4-37 through 2.4-40 of the 2011 GPU PEIR and is hereby incorporated by reference.

The General Plan establishes Policies COS-1.3, COS-1.6, COS-1.7, COS-1.8, COS-1.9, COS-1.10, COS-1.11, COS-2.1, COS-2.2, LU-6.1, LU-6.2, LU-6.3, LU-6.4, LU-6.6, LU-6.7, LU-10.2, and M-12.9 that would reduce impacts associated with special-status species (see Section 2.4.2.3, “Local,” for full text of GPU PEIR policies). In addition, adopted 2011 GPU PEIR mitigation measures establish uniform methods and data sources for identifying adverse effects on biological resources (Mitigation Measure Bio-1.5); implementing established County ordinances including the RPO, BMO, HLP, the Noise Ordinance, the Groundwater Ordinance, and the County Watershed Protection, Storm Water Management, and Discharge Control Ordinance (Mitigation Measures Bio-1.6 and Bio-1.7); and revising the ordinance relating to water conservation for landscaping to encourage use of native plants (Mitigation Measure Bio-2.1).

Although these impacts would be reduced with implementation of the adopted General Plan policies, 2011 GPU PEIR mitigation measures, and compliance with applicable regulations, they remain significant and unavoidable because even with mitigation measures in place, implementation of the General Plan would allow land uses and development to occur in areas outside of an adopted regional conservation plan, thereby resulting in direct, indirect, and cumulative impacts on species identified as candidate, sensitive, or with special-status. Specific General Plan policies related to the protection of biological resources are listed above under Section 2.4.2, “Regulatory Framework,” and adopted 2011 GUP PEIR mitigation measures that apply to CAP Update implementation are also listed in Section 2.4.2 above.

### **CAP Update Impact Analysis**

The following sections describe the potential for implementation of the proposed CAP Update measures and actions to result in impacts on special-status species. Impacts to

designated critical habitat for listed species could also result if such habitat was modified or converted as a result of the proposed CAP Update measures and actions.

### Solid Waste Measures and Actions

Implementation of the CAP Update would include implementation of measures and actions to increase solid waste diversion and availability of solid waste facilities in County operations and more generally in the unincorporated county. Implementing CAP Update measures and actions could result in potential construction of new or expanded solid waste facilities. For example, Actions SW-1.1 and SW-2.1 include development of zero waste policies which may result in new or expanded composting and recycling facilities to divert solid waste from landfills. Specific locations for new and expanded facilities have not been identified. Therefore, these improvements are analyzed at a programmatic level.

Construction of new facilities in rural or semi-rural areas may result in direct loss or loss of habitat for special-status plant and wildlife species when project activities involve vegetation removal, ground disturbance, or disruption of wildlife activity due to construction noise.

Although all feasible applicable policies (Policies COS-1.3, COS-1.6, COS-1.7, COS-1.8, COS-1.9, COS-1.10, COS-1.11, COS-2.1, COS-2.2, LU-6.1, LU-6.2, LU-6.3, LU-6.4, LU-6.6, LU-6.7, LU-10.2, and M-12.9) and 2011 GPU PEIR mitigation measures (Bio-1.1, Bio-1.5, and Bio-1.6) would be applied at the project level as part of the County's discretionary review process, potential construction of new or expanded solid waste facilities could still adversely affect special-status species because of the nature of the projects. Therefore, the impacts related to special-status plants and wildlife species would be significant, consistent with the conclusions in the 2011 GPU PEIR.

### Water and Wastewater Measures and Actions

Implementation of CAP Update Measures W-1 through W-3 would involve development of policies and programs to encourage water conservation and increase water and wastewater efficiency. Measures W-1 and W-2 include implementing actions to develop policies and programs to increase water efficiency. Implementation of these measures would generally result in installation of water efficient appliances, smart irrigation systems, and stormwater and grey water capture systems. Implementation of Measure W-3 would have the potential to result in installation of stormwater and wastewater treatment systems on-site, so that the stormwater and greywater would be treated and reused for landscaping. Implementation of these measures would not result in substantial effects on special-status plant and wildlife species because any new or expanded physical structures associated with implementing water conservation measures and actions would be ancillary to existing or proposed development and consistent with the existing habitat function for special-status plant and wildlife species. Impacts would be less than significant.

### Agriculture and Conservation Measures and Actions

Implementation of Measures A-1 and A-2 would involve acquiring and managing conservation lands, preserving natural and agricultural lands, planting and protecting trees, and providing incentive to encourage carbon farming. Implementation of CAP Update Actions A-1.2 and A-2.1 could result in habitat restoration activities and tree planting and associated tree watering. Implementation of Action A-4.1.b would have the potential to result in new farmworker housing in unincorporated county, if opportunities to increase farmworker housing in the unincorporated area are identified.

Construction of new farmworker housing in rural or semi-rural areas may result in direct loss or loss of habitat for special-status plant and wildlife species when project activities involve vegetation removal, ground disturbance, or disruption of wildlife activity due to construction noise. Development of farmworker housing would be required to comply with County policies and ordinances, including adopted General Plan Policies COS-1.3, COS-1.6, COS-1.7, COS-1.9, COS-1.9, COS-1.10, COS-2.2, LU-6.1, LU-6.2, LU-6.3, LU-6.4, LU-6.6, LU-6.7, and LU-10.2. In addition, adopted 2011 GPU PEIR mitigation measures require that project proponents utilize the established *County of San Diego Guidelines for Determining Significance and Report Format and Content Requirements: Biological Resources* (Mitigation Measure Bio-1.5).

Mitigation Measure Bio-1.5 of the 2011 GPU PEIR would be applied to reduce this impact. This measure requires that County guidelines are utilized to determine the significance for biological resources, including utilization of the County's GIS records and matrix of sensitive species to locate sensitive populations.

While all feasible General Plan policies and 2011 GPU PEIR mitigation measures would be applied at the project level, potential construction of new or expanded farmworker housing could still adversely affect special-status species. Therefore, the impacts related to special-status species would be significant, consistent with the conclusions in the 2011 GPU PEIR.

### Energy Measures and Actions

Implementation of CAP Update energy measures and actions would involve implementation of policies, programs, and other mechanisms to increase building energy efficiency, increase the use of renewable energy, and increase electrification in the unincorporated county and County operations. These policies and programs could have the potential to result in the development of various renewable energy projects.

Implementation of CAP Update Measure E-3, Action E-3.2, and Action E-3.2.a could result in energy efficiency retrofits on existing residential and non-residential structures and County facilities. These retrofits could include rooftop or ground-mounted photovoltaic (PV) solar arrays or small wind turbines, energy storage systems, upgraded mechanical systems, and other similar improvements. Development of alternative energy infrastructure may be required to support implementation of some measures. Although removal of common and sensitive habitats that could support special-status plants or

animals is not specifically proposed, implementation of the energy measures and actions listed above could result in removal of these habitats or other disturbances to special-status species. However, while the location of improvements associated with potential future projects is unknown it is likely that retrofits would occur in areas of existing development. Further, because of the small scale and nature of the energy measures, building retrofits generally would not be expected to result in substantial effects on special-status species.

Renewable energy projects, including on-site renewable energy generation supported through proposed CAP Update Action E-3.2.b, would be regulated by existing County ordinances and policies. The placement of small-scale PV solar renewable energy equipment on new and existing buildings is regulated by the existing County Renewable Energy Zoning Ordinance Section 6954(a). Rooftop PV solar energy panels generally do not involve construction that would result in substantial changes to habitats that support special-status species. Additionally, installation and operation of small-scale wind turbines would be regulated by the County's Wind Energy Ordinance Sections 6950 through 6952. A small wind turbine is defined as a wind turbine, with or without a tower, which has a rated capacity of not more than 50 kilowatts; is consistent with the requirements of existing Zoning Ordinance Sections 6156 and 6951; and generates electricity primarily for use on the same lot on which the wind turbine is located. These turbines would be allowed as an accessory use in all zones, provided the turbine complies with the Renewable Energy Regulations in Zoning Ordinance Section 6950 and the turbine proponent obtains a Zoning Verification Permit prior to issuance of a building permit. Small wind turbines are limited to a height of no more than 80 feet (but not more than the height designator of the Zoning District in which they are located) and have relatively small blades on a vertical or horizontal axis. Ground-mounted PV solar arrays could result in small-scale impacts on special-status habitat because small systems can be installed as an accessory use without obtaining a discretionary permit. Operation of solar systems and other building retrofits would not result in impacts on special-status species.

Operation of small wind turbines could result in significant direct impacts on special-status avian and bat species as described on pages 2.4-27 to 2.4-28 of the 2012 Wind Energy Ordinance EIR (County of San Diego 2012). Wind turbine projects would result in the loss of functional foraging habitat for raptors, avian species may be hit by spinning wind turbine blades, and wind turbines may result in direct injury to bats whose flight can be disrupted by the air pressure differential created around wind turbines, resulting in injury or death of individuals. Ground-mounted facilities may require ground disturbance and, therefore, could affect sensitive species if habitat is present. Small wind turbines are prohibited within 4,000 feet of a known golden eagle nest, per the *County of San Diego Guidelines for Determining Significance and Report Format and Content Requirements: Biological Resources* (County of San Diego 2010). Additionally, pursuant to the County's Wind Energy Ordinance setbacks of 300 feet, or five times the turbine height, whichever is greater, are required from known significant roosts of sensitive bat species, blue-line watercourses, or water bodies mapped on the US Geological Survey topographic maps and known locations of transmission towers or power lines.

Implementation of Action E-3.3 could result in the construction of new large-scale renewable energy systems, such as large-scale PV solar and concentrated solar systems, and/or wind turbines. Requirements for new development would include retrofitting and improving existing buildings to meet energy efficiency requirements and installing new energy infrastructure, including small-scale solar and small-scale wind turbines (roof- or ground-mounted systems) and energy storage systems. Because the amount of demand generated by such a program and the mix of renewable energy types that would be constructed to satisfy demand is unknown, this draft SEIR evaluates the potential for impacts at the program level and assumes construction of commonly used existing solar and wind technology. Specific locations for projects have not been identified. While the potential for the construction of large-scale renewable energy infrastructure was not evaluated in the 2011 GPU PEIR, potential wind energy impacts were evaluated in the 2012 Wind Energy EIR, and a summary of that analysis is provided below and is hereby incorporated by reference.

Large-scale renewable energy infrastructure would generally be constructed in undeveloped locations that are productive for generating renewable energy source. Specific locations that may be chosen for these large-scale utility projects are unknown; however, it is likely that suitable locations would include areas that are not highly developed with residential and commercial uses because of the size, massing, coverage, and scale of this type of infrastructure which relies upon large amounts of land unencumbered by buildings or shadowed by buildings or trees. Solar array fields and wind turbines typically encompass large areas, and implementation of the projects could result in the conversion of sensitive habitat, resulting in habitat loss or fragmentation.

Large-scale solar and wind energy systems could result in impacts to special-status species due to construction activities, implementation of access roads and transmission lines, and conversion of large areas of land to industrial uses, resulting in habitat loss. Wildlife could potentially be displaced within the construction areas and use of access roads around the construction area has the potential to result in the direct mortality of less mobile wildlife and rare plants.

Additionally, as described on pages 2.4-27 through 2.4-31 of the 2012 Wind Energy EIR, both small- and large-scale wind turbines could result in direct impacts to avian and bat species because of collision risk. To reduce potential impacts, the Wind Energy Ordinance prohibits small wind turbines within 4,000 feet of a known golden eagle nest. Additionally, setbacks of 300 feet, or five times the turbine height, whichever is greater, are required from known significant roosts of sensitive bat species, blue-line watercourses or water bodies mapped on the US Geological Survey topographic maps, and known locations of transmission towers or power lines. Small turbines cannot include guy wires for structural support or aboveground power lines because these features pose additional collision risk. The environmental design considerations included in the zoning verification process would minimize potential impacts to sensitive species from small wind turbines, but not to a level below significance (County of San Diego 2012).



All large-scale renewable energy projects are subject to discretionary review and are required to obtain a Major Use Permit (MUP). As part of the County's discretionary review process, all large-scale energy projects would be evaluated under CEQA and would be required to implement measures to minimize impacts to candidate, sensitive, or special-status species, as necessary. However, permanent impacts to native vegetation communities could potentially result from the construction of infrastructure such as wind turbines, solar arrays, and solar fields, including support facilities, and access roads. Because of the potential for future large-scale projects to directly and indirectly affect sensitive wildlife, rare plants, and native habitat, large-scale renewable projects could result in potentially significant impacts related to candidate, sensitive, or special-status species.

As described in the 2012 Wind Energy EIR on pages 2.4-28 through 2.4-31, all large-scale wind energy projects would be required to obtain a MUP and be evaluated as part of the County's discretionary review process. Additionally, the 2012 Wind Energy EIR adopted Mitigation Measures M-Bio-1 and M-Bio-2, described below in Section 2.4.5, require significant impacts to special-status species to be mitigated and require updates to the *County of San Diego Guidelines for Determining Significance and Report Format and Content Requirements: Biological Resources* to include mitigation which could reduce impacts related to avian and bat species. The 2012 Wind Energy EIR considered mitigation that would have required the County to prepare and adopt MSCP plans for North and East County. However, this mitigation was determined to be infeasible because approvals from other agencies would be required and the timing of these plans could not be guaranteed. The North County MSCP is currently being prepared, but the East County MSCP plan has not been initiated. No other feasible mitigation is available. The measure is still considered infeasible because the timing of completion of these plans is undetermined.

Future projects would be required to be evaluated for project-specific impacts under CEQA at the time of application. Project-specific mitigation would minimize or eliminate impacts to special-status species to the extent feasible in compliance with State CEQA Guidelines Section 15126.4. Implementation of the General Plan policies and 2011 GPU PEIR mitigation measures listed above also would reduce potential impacts to biological resources as part of the County's discretionary review process. However, construction and operation of facilities associated with implementation of Action E-3.3 could still adversely affect special-status species because of the scale and nature of the projects. At the programmatic level, it is not possible to determine with certainty that impacts to special-status species from construction and operation of large-scale renewable energy projects would occur. With implementation of the applicable General Plan policies and 2011 GPU PEIR mitigation measures; compliance with existing federal, state, and local regulations that protect sensitive resources; and completion of subsequent project-level planning and environmental review, potential impacts on special-status species because of implementation of measures would be reduced, however, the potential loss of special-status plant or animal species would be a significant impact.

### Built Environment and Transportation Measures and Actions

The CAP Update built environment and transportation measures and actions would implement existing County programs, such as the County's 2019 Electric Vehicle Roadmap and 2023 Green Fleet Action Plan (Action T-1.1) and Active Transportation Program (Action T-5.1). Other measures and actions would affect the design of existing and planned roadways. Action T-6.2 would implement transit-supportive roadway treatments such as signal communication and curb extensions along County-maintained roadways to optimize traffic flow for transit and pedestrians. Action T-3.1 would result in the installation of publicly available electric vehicle charging stations. Action T-3.1.a would support the transition to clean hydrogen fuel for medium- and heavy-duty vehicles by increasing access to hydrogen fueling infrastructure through streamlined permitting processes and other efforts that could facilitate future infrastructure construction. Several measures and actions would further support alternative modes of transportation without resulting in physical changes that could affect biological resources.

Because of the nature of such improvements (i.e., limited size, along existing roadways, not accompanied by tall or expansive buildings), it is likely that most infrastructure improvements would occur within existing developed residential and commercial centers throughout the county or as part of new development as it is approved. Specific locations for such improvements have not been identified. However, it is possible that the locations of such improvements would disturb existing vegetation communities. Although removal of common and sensitive habitats that could support special-status plants or animals is not specifically proposed, implementation of the measures listed above could result in removal of these habitats or other disturbances to special-status species. Construction activities and project operations associated with these measures and actions could result in direct and indirect disturbances or loss of special-status species through ground disturbance, tree removal, or habitat conversion in areas suitable for some special-status species.

As explained in the 2011 GPU PEIR, implementation of the General Plan and 2011 GPU PEIR mitigation measures identified in Section 2.4, "Biological Resources," on pages 2.4-19 through 2.4-25, 2.4-34, 2.4-35; and 2.4-37 through 2.4-40 of the 2011 GPU PEIR would reduce potential impacts on special-status species: Bio-1.1 requires that a Conservation Subdivision Program is created which facilitates conservation-oriented project design; Bio-1.5 requires that County guidelines are utilized to determine the significance for biological resources, including utilization of the County's GIS records and matrix of sensitive species to locate sensitive populations; and Bio-1.6 requires that the RPO, BMO, and HLP Ordinance protects wetland buffers, sensitive habitat lands, biological resource core areas, linkages, corridors, high-value habitat areas, subregional coastal sage scrub focus areas, and populations of rare or endangered plant or animal species.

Additionally, all future development projects would be required to follow County development requirements, including compliance with local policies, ordinances, and applicable permitting procedures related to protection of sensitive biological resources, which would minimize impacts on special-status species. Furthermore, as described in

Section 2.4.2, “Regulatory Framework,” above, several federal, state, and local regulations and policies (e.g., ESA, CESA) are in place to protect special-status species in the county. Furthermore, future projects would be required to be evaluated for project-specific impacts under CEQA at the time of application and project-specific mitigation would minimize or eliminate impacts on special-status species to the extent feasible in compliance with State CEQA Guidelines Section 15126.4. With implementation of the applicable General Plan policies and 2011 GPU PEIR mitigation measures; compliance with existing federal, state, and local regulations that protect sensitive resources; and completion of subsequent project-level planning and environmental review, potential impacts on special-status species because of implementation of measures would be minimized. Nonetheless, the impacts related to special-status species would be significant, consistent with the conclusions in the 2011 GPU PEIR.

## Summary

Implementation of CAP Update Actions SW-1.1, SW-1.2, SW-2.1.b, SW-3.1, SW-4.1.a, SW-4.1.b, W-1.1, E-3.2.a, T-3.1, T-3.1.a, and E-3.3 would result in new or expanded solid waste facilities, irrigation systems, stormwater and grey water capture systems, stormwater and wastewater treatment systems, solar arrays, small wind turbines, transportation infrastructure improvements, and large-scale renewable energy infrastructure that could result in new development, which would have construction and operational impacts. Subsequent projects associated with CAP Update implementation would be required to comply with applicable existing federal, state, and local regulations, as well as with the General Plan Policies COS-1.3, COS-1.6, COS-1.7, COS-1.8, COS-1.9, COS-1.10, COS-1.11, COS-2.1, COS-2.2, LU-6.1, LU-6.2, LU-6.3, LU-6.4, LU-6.6, LU-6.7, LU-10.2, and M-12.9 that would reduce the potential for impacts to special-status species. Specifically, projects would be evaluated for their consistency with policies and regulations including County Grading Ordinance regulations, and the County RPO regulations, and the 2011 GPU PEIR Mitigation Measures Bio-1.1, Bio-1.5, and Bio-1.6. CAP Update Mitigation Measures Bio-1 and Bio-2 also would be applied to the project to further reduce impacts associated with large-scale renewable energy development. These measures would require implementation of measures to avoid sensitive biological resources; preserve habitat; requirement revegetation of disturbed areas; and restrict lighting, runoff, access and/or noise on future renewable energy development sites. Additionally, standard measures as outlined in the *County Guidelines for Determining Significance for Biological Resources* would be required to be implemented.

While all feasible mitigation would be applied at the project level as part of the County’s discretionary review process, construction of projects associated with CAP Update Actions SW-1.1, SW-1.2, SW-2.1.b, SW-3.1, SW-4.1.a, SW-4.1.b, W-1.1, E-3.2.a, T-3.1, and T-3.1.a could still adversely affect special-status species because of the nature of the projects. At the programmatic level, it is not possible to determine with certainty that impacts resulting from construction activities to special-status species would be reduced to a level below significance. The 2011 GPU PEIR concluded that implementation of the General Plan would have the potential to adversely impact special-status species and their habitat. At a programmatic level, and thus the potential loss of special-status plant or animal species would remain a **significant impact**, consistent with the 2011 GPU

PEIR. Implementation of the CAP Update **would not result in new or more severe impacts** to special-status species beyond the scope of the 2011 GPU PEIR.

### ***2.4.3.4 Issue 2: Riparian Habitat and Other Sensitive Natural Communities***

This section describes potential project impacts on riparian habitat or other sensitive natural communities for the project.

#### **Guidelines for Determination of Significance**

Based on Appendix G of the State CEQA Guidelines, the project could result in a significant adverse effect related to biological resources if it would:

- have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by CDFW or USFWS.

#### **Impact Analysis**

##### **2011 GPU PEIR Determination**

Impacts identified in the 2011 GPU PEIR were primarily related to new development which could affect up to 10,131 acres of riparian habitat within the county. Development under the 2011 GPU PEIR would also result in development of various vegetation communities, presented in Table 2.4-2 on pages 2.4-46 and 2.4-47 of the 2011 GPU PEIR; many of which may contain sensitive natural communities. The 2011 GPU PEIR determined that proposed development would result in potentially significant direct (e.g., removal of habitat), and indirect (e.g., impacts on water quality, introduction of nonnative plants) impacts on riparian habitat and other sensitive natural communities. This determination was developed by reviewing the potential for project-related clearing, grading, or construction activities which may remove sensitive natural habitat; potential work within jurisdictional wetlands or riparian habitats as defined by the US Army Corps of Engineers, CDFW, and the County of San Diego; potential of groundwater draw on groundwater-dependent habitat; introduction of disturbance along edge habitat; and potential disruption to the habitat function of wetlands. The discussion of impacts on riparian habitat and other sensitive natural communities can be found in Section 2.4, “Biological Resources” (pages 2.4-25 through 2.4-27, 2.4-35, and 2.4-40 through 2.4-41), of the 2011 GPU PEIR and is incorporated by reference.

The 2011 GPU PEIR concluded that even with implementation of the applicable General Plan policies and 2011 GPU PEIR mitigation measures listed above, and compliance with applicable state and federal regulations, potential impacts were determined to be significant and unavoidable because implementation of the General Plan would allow land uses and development to occur in areas outside of any adopted regional conservation plan, thereby resulting in direct and indirect impacts on riparian habitat and other sensitive natural communities. Specific General Plan policies related to the protection of riparian

habitat and other sensitive resources include Policies COS-1.1, COS-1.2, COS-1.3, COS-1.6, COS-1.7, COS-1.8, COS-1.9, COS-2.1, COS-2.2, COS-3.1, and COS-3.2. Adopted 2011 GPU PEIR mitigation measures related to the protection of riparian habitat and other sensitive resources include Bio-2.1, Bio-2.2, Bio-2.3, Bio-2.4. Applicable General Plan policies and 2011 GPU PEIR mitigation measures are listed above under Section 2.4.2, “Regulatory Framework.”

### **CAP Update Impact Analysis**

Riparian vegetation occurs along rivers, streams, and other drainages in the unincorporated county. Riparian areas connect terrestrial and aquatic habitats and provide linkages between water bodies and upstream vegetation communities. Sensitive natural communities in the unincorporated county can be associated with several vegetation communities, including grassland, chaparral, and coastal scrub. The following section describes the potentially significant impacts on riparian habitat and other sensitive natural communities that could result from the implementation of the CAP Update measures and actions.

#### **Solid Waste Measures and Actions**

Implementation of CAP Update Measures SW-1 through SW-4 and associated implementing actions have the potential to result in the construction of new or expanded solid waste facilities. These projects would involve some level of construction and physical disturbance to the land. This analysis assumes that implementation of these projects would result in construction activities that could include: the use of heavy equipment for earthmoving, materials processing, or compost spreading; and vehicle trips during construction/equipment replacement/monitoring activities. Construction activities and project operations associated with these measures could result in direct and indirect disturbances to riparian habitat or other sensitive natural communities through ground disturbance, or conversion of habitat. Depending on the location of these projects, construction could result in erosion, direct removal of habitat, or water quality issues.

However, all projects would be required to comply with applicable existing federal, state, and local regulations. Specifically, projects would be evaluated for their consistency with General Plan policies, 2011 GPU PEIR mitigation measures, County Grading Ordinance regulations, and County RPO regulations. General Plan policies related to the protection of riparian habitat and other sensitive resources include Policies COS-1.1, COS-1.2, COS-1.3, COS-1.6, COS-1.7, COS-1.8, COS-1.9, COS-2.1, COS-2.2, COS-3.1, and COS-3.2. Adopted 2011 GPU PEIR mitigation measures related to the protection of riparian habitat and other sensitive resources include Bio-2.1, Bio-2.2, Bio-2.3, and Bio-2.4. Applicable General Plan policies and 2011 GPU PEIR mitigation measures are listed above under Section 2.4.2, “Regulatory Framework.”

Potential impacts associated with implementation of CAP Update Measures SW-1 through SW-4 would be related to disturbance of riparian and other sensitive natural communities as a result of construction of new or expanded solid waste facilities. As noted above, these impacts would be addressed through implementation of General Plan

policies and 2011 GPU PEIR mitigation measures, as well as other regulatory requirements. Consistent with the 2011 GPU PEIR conclusion, implementation of these measures and actions could allow development to occur in areas outside of any adopted regional conservation plan, thereby resulting in direct and indirect impacts on riparian habitat and other sensitive natural communities. Accordingly, implementation of the CAP Update solid waste measures could result in impacts on riparian habitat or other natural communities but would not result in new or substantial increase in magnitude of impacts on any riparian habitat or other sensitive natural community compared to the General Plan. Impacts would remain significant.

#### Water and Wastewater Measures and Actions

Implementation of CAP Update Measures W-1 through W-3 and associated actions would involve development of policies and programs to encourage water conservation and increase water and wastewater efficiency. Measures W-1 and W-2 include implementing actions to develop policies and programs to increase water efficiency. Implementation of these measures would generally result in installation of water efficient appliances, smart irrigation systems, and stormwater and grey water capture systems. Implementation of Measure W-3 would have the potential to result in installation of stormwater and wastewater treatment systems on-site, so that the stormwater and greywater would be treated and reused for landscaping. As discussed under Section 2.4.3.3, "Issue 1: Special-Status Plant and Wildlife Species," implementation of CAP Update water and wastewater measures and actions would result in new or replaced ancillary structures within existing development or developed areas and would not result in substantial effects on riparian habitat and other sensitive natural communities. Impacts would be less than significant.

#### Agriculture and Conservation Measures and Actions

Implementation of Measures A-1 and A-2 would involve acquiring and managing conservation lands, preserving natural and agricultural lands, planting and protecting trees, and providing incentive to encourage carbon farming. Implementation of CAP Update Actions A-1.2 and A-2.1 could result in habitat restoration activities and tree planting, including associated watering of planted vegetation. Agriculture and conservation projects associated with the CAP Update would contribute to preservation of natural and agricultural lands and habitat restoration. Therefore, it would result in beneficial effects to riparian habitats and other sensitive natural communities.

Implementation of Action A-4.1.b would have the potential to result in new farmworker housing in unincorporated county, if opportunities to increase farmworker housing in the unincorporated area are identified. Development of farmworker housing would be required to comply with County policies and ordinances, including adopted General Plan Policies COS-1.1, COS-1.2, COS-1.3, COS-1.6, COS-1.7, COS-1.8, COS-1.9, COS-2.1, COS-2.2, COS-3.1, and COS-3.2. These policies would reduce impacts to riparian resources by requiring management of riparian resources, maintenance of a preserve system, funding for the system, public involvement, protection and enhancement of riparian habitat through site design and land use, conservation-oriented project design,

and wetland protection. In addition, 2011 GPU PEIR Mitigation Measures Bio-2.1, Bio-2.2, Bio-2.3, and Bio-2.4 would require that landscaping addresses water conservation and invasive plant species, require that development projects obtain CWA Section 401/404 permits and Fish and Game Code Section 1602 Streambed Alteration Agreements when appropriate, ensure that wetlands and wetland buffer areas are adequately preserved, and require that adequate watershed protection, storm water management, and discharge control ordinances are followed. With the implementation of these policies and mitigation measures, impacts to riparian habitats and other sensitive natural communities as a result of the agriculture and conservation measures and actions in the CAP Update would be less than significant.

### Energy Measures and Actions

Implementation of CAP Update energy measures and actions would involve implementation of policies, programs, and other mechanisms to increase building energy efficiency, increase the use of renewable energy, and increase electrification in the unincorporated county and County operations. These policies and programs could have the potential to result in the development of various renewable energy projects (including large- and small-scale PV solar arrays and small-scale wind turbines). While exact locations for these projects have not been determined, it is possible that the locations of such improvements would disturb some riparian habitat and other sensitive natural communities.

The placement of small-scale PV solar renewable energy equipment on new and existing buildings is regulated by the existing County Renewable Energy Zoning Ordinance Section 6954(a). Rooftop PV solar energy panels would not involve construction that would substantially alter riparian habitat or other sensitive natural communities; however, ground-mounted PV solar arrays could result in impacts on these habitats because of ground disturbance.

Wind turbines of all sizes are regulated by the County's Zoning Ordinance, Wind Energy Sections 6950–6952 and would be required to comply with regulations specific to the size and scale of the turbines. These turbines would be allowed as accessory use in all zones provided the turbine complies with the Zoning Ordinance Section 6950 and the proponent obtains a Zoning Verification Permit prior to issuance of a building permit. However, small wind turbines could result in significant impacts on riparian habitat and other sensitive natural communities as described on pages 2.4-31 and 2.4-32 of the 2012 Wind Energy EIR due to removal or disturbance of riparian habitat and sensitive natural communities (County of San Diego 2012). Ground-mounted facilities may require ground disturbance that would not be subject to environmental review and, therefore, could affect riparian habitat or other sensitive natural communities if present. The Wind Energy Ordinance requires setbacks of 300 feet, or five times the turbine height, whichever is greater, from blue-line watercourses or water bodies mapped on the US Geological Survey topographic maps.

The 2012 Wind Energy Ordinance EIR concluded that small turbines may result in a potentially significant adverse impact on riparian habitat or other sensitive natural

communities because multiple small turbines are allowed on a single parcel as an accessory use without discretionary review (County of San Diego 2012). The 2012 Wind Energy Ordinance EIR considered mitigation that would have required the County to prepare and adopt MSCP plans for North and East County. However, this mitigation was determined to be infeasible because approvals from other agencies would be required and the timing of these plans could not be guaranteed. The North County MSCP is currently being prepared, but the East County MSCP plan has not been initiated. No other feasible mitigation is available.

Implementation of CAP Update Action E-3.3 could result in the construction of new large-scale renewable energy systems, such as large-scale PV solar or concentrated solar power systems, and/or wind turbines. Requirements for new development would include retrofitting and improving existing buildings to meet energy efficiency requirements and installing new energy infrastructure, including small-scale solar and small-scale wind turbines (roof- or ground-mounted systems) and energy storage systems. As described in detail above in Section 2.4.4.3 large-scale renewable energy infrastructure would generally be constructed in undeveloped locations that are productive for generating renewable energy source. As a result, it is likely that the locations of such renewable energy projects would disturb some riparian communities. Specific locations for projects have not been identified. PV solar, concentrator solar, and/or wind turbines could result in impacts to riparian habitat and habitat loss because of construction activities, implementation of access roads and transmission lines, and conversion of large areas of land to infrastructure uses.

The 2012 Wind Energy EIR evaluated impacts to riparian habitat associated with the development of large-scale wind turbines on pages 2.4-32 and 2.4-33. Future projects would be required to be evaluated for project-specific impacts under CEQA at the time of application and project-specific mitigation would minimize or eliminate impacts to riparian habitat to the extent feasible in compliance with State CEQA Guidelines Section 15126.4. All large-scale wind projects would be subject to discretionary review and required to obtain a MUP. As part of the County's discretionary review process all large wind projects would be evaluated under CEQA and would be required to implement measures to minimize impacts to riparian habitat, as necessary. MUPs are also subject to several biological resources protection ordinances including the County's RPO, MSCP, Biological Mitigation Ordinance, Natural Communities Conservation Planning program, and other local or regional plans, policies, or regulations. Additionally, the 2012 Wind Energy EIR adopted Mitigation Measures M-Bio-1 and M-Bio-2 as described below in Section 2.4.5 require mitigation of significant impacts to riparian species. While these mitigation programs are in place, there is no guarantee that project-level impacts would not occur. Therefore, the 2012 Wind Energy EIR concluded that impacts to riparian habitat would remain potentially significant because there is no guarantee that mitigation could resolve all impacts (see page 2.4-33).

All other large-scale renewable energy projects allowed under these measures would be required to follow County development requirements, including compliance with local policies, ordinances, and applicable permitting procedures related to protection of sensitive riparian habitat. Large-scale solar projects over 10 acres would be required to



obtain a MUP and undergo discretionary review under CEQA. Furthermore, as described in Section 2.4.2, “Regulatory Framework,” several federal, state, and local regulations and policies are in place to protect sensitive biological resources in the county. Compliance with General Plan policies and 2011 GPU PEIR mitigation measures; compliance with existing local, state, and federal regulations that protect sensitive habitats; and completion of subsequent project-level planning and environmental review, would minimize and reduce potential impacts. However, the construction of renewable energy facilities could still adversely affect riparian habitat because of the scale and nature of the projects. The potential loss of riparian habitat would result in a significant impact.

### Built Environment and Transportation Measures and Actions

CAP Update built environment and transportation measures and actions would implement existing County programs, such as the County's 2019 Electric Vehicle Roadmap and 2023 Green Fleet Action Plan (Action T-1.1) and Active Transportation Program (Action T-5.1). Other measures and actions would affect the design of existing and planned roadways. Action T-6.2 would Implement transit-supportive roadway treatments such as signal communication and curb extensions along County-maintained roadways to optimize traffic flow for transit and pedestrians. Action T-3.1 would result in the installation of publicly available electric vehicle charging stations. Action T-3.1.a would support the transition to clean hydrogen fuel for medium- and heavy-duty vehicles by increasing access to hydrogen fueling infrastructure through streamlined permitting processes and other efforts that could facilitate future infrastructure construction.

As discussed in Section 2.4.3.3, “Issue 1: Special-Status Plant and Wildlife Species,” it is likely that most improvements would occur within existing developed residential and commercial centers throughout the county or as part of new development as it is approved because of the nature of these improvements. Improvements occurring within developed and residential areas would not result in substantial impacts to riparian habitats and other sensitive natural communities given that these areas are already disturbed due to prior development. Furthermore, all future projects associated with the CAP Update would be required to comply with existing federal, state, and local regulations that protect sensitive resources.

In addition, future projects would be required to be evaluated for project-specific impacts under CEQA at the time of application and project-specific mitigation would minimize or eliminate impacts on riparian habitat and other sensitive natural communities to the extent feasible in compliance with State CEQA Guidelines Section 15126.4. Although removal of riparian habitat and other sensitive natural communities is not specifically proposed, implementation of the measures listed above could result in removal of these habitat types during construction or development of improvements, if these resources are present in individual project areas. Construction activities and project operations associated with these measures could result in direct and indirect disturbances or loss of riparian habitat and other sensitive natural communities through ground disturbance, tree removal, or conversion of habitat. Depending on the location of these new facilities, construction could result in erosion, or water quality issues. However, as described above in Section 2.4.3.3,

implementation of the relevant General Plan policies (Policies COS-1.1, COS-1.2, COS-1.3, COS-1.6, COS-1.7, COS-1.8, COS-1.9, COS-2.1, COS-2.2, COS-3.1, and COS-3.2) would reduce impacts to riparian resources by requiring management of riparian resources, maintenance of a preserve system, funding for the system, public involvement, protection and enhancement of riparian habitat through site design and land use, conservation-oriented project design, and wetland protection. Additionally, implementation of the 2011 GPU PEIR Mitigation Measures Bio-2.1, Bio-2.2, Bio-2.3, and Bio-2.4 would require that landscaping addresses water conservation and invasive plant species; require that development projects obtain CWA Section 401/404 permits and Fish and Game Code Section 1602 Streambed Alteration Agreements when appropriate; ensure that wetlands and wetland buffer areas are adequately preserved; and require that adequate watershed protection, storm water management, and discharge control ordinances are followed. With the implementation of these policies and mitigation measures, impacts to riparian habitats and other sensitive natural communities as a result of the built environment and transportation measures and actions in the CAP Update would be less than significant.

### **Summary**

All future projects that result from implementation of the CAP Update would be required to comply with applicable existing federal, state, and local regulations. Specifically, projects would be evaluated for their consistency with General Plan policies (Policies COS-1.1, COS-1.2, COS-1.3, COS-1.6, COS-1.7, COS-1.8, COS-1.9, COS-2.1, COS-2.2, COS-3.1, and COS-3.2), 2011 GPU PEIR mitigation measures (Bio-2.1, Bio-2.2, Bio-2.3, Bio-2.4), County Grading Ordinance regulations, and County RPO regulations.

While all feasible mitigation would be applied at the project level as part of the County's discretionary review process, construction of projects associated with CAP Update Actions SW-1.1, SW-1.2, SW-2.1.b, SW-3.1, SW-4.1.a, SW-4.1.b, W-1.1, E-3.2.a, T-3.1, T-3.1.a, and E-3.3 could still adversely affect riparian habitat and other sensitive natural communities because of the nature of the projects. The 2011 GPU PEIR concluded that it is not possible to determine with certainty that impacts on riparian habitat and other sensitive natural communities at the programmatic level, because a comprehensive NCCP is not in place for the long-term protection of the sensitive natural communities in San Diego and the surrounding landscape. Therefore, loss of riparian and other sensitive habitat may occur even after mitigation has been implemented. The potential impact related to riparian habitat and other sensitive natural communities would remain significant, consistent with the conclusion identified in the 2011 GPU PEIR. Implementation of the CAP Update **would not result in new or more severe impacts** on any riparian habitat or other sensitive natural community compared to the 2011 GPU PEIR

### ***2.4.3.5 Issue 3: State and Federally Protected Wetlands***

This section describes potential impacts on state and federally protected wetlands because of implementation of the project.

## **Guidelines for Determination of Significance**

Based on Appendix G of the State CEQA Guidelines, implementation of the project could result in a significant adverse effect related to biological resources if it would:

- 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.

## **Impact Analysis**

### **2011 GPU PEIR Determination**

As described in the 2011 GPU PEIR, new development proposed under the General Plan could potentially affect approximately 1,841 acres of federally protected wetlands in the unincorporated county. The 2011 GPU PEIR determined that this development would result in potentially significant direct impacts on federally protected wetlands, including direct filling, removal, or hydrological interruption. The discussion of impacts on wetlands can be found in Section 2.4, “Biological Resources” (pages 2.4-27, 2.4-28, 2.4-35, 2.4-41, and 2.4-42), of the 2011 GPU PEIR and is hereby incorporated by reference. With implementation of the applicable General Plan policies and 2011 GPU PEIR mitigation measures, and compliance with applicable state and federal regulations, these potential impacts were determined to be reduced to a less-than-significant level. Specific policies and mitigation measures related to the protection of biological resources are listed above under Section 2.4.2, “Regulatory Framework.”

In 2020, the US Environmental Protection Agency and the US Department of the Army’s Navigable Waters Protection Rule: Definition of “Waters of the United States” (NWPR) was updated. In 2023, the 2020 NWPR was vacated and replaced in the Code of Federal Regulations by the “Revised Definition of ‘Waters of the United States’” (2023 rule). The 2023 rule uses a pre-2015 definition of waters of the United States as the foundation, updated to reflect consideration of Supreme Court decisions, the science, and the agencies’ technical expertise. The agencies’ definition of “waters of the United States” provides jurisdiction over waterbodies that Congress intended to protect under the CWA, including traditional navigable waters (e.g., certain large rivers and lakes), territorial seas, and interstate waters. To determine jurisdiction for tributaries, adjacent wetlands, and additional waters, the 2023 rule relies on the relatively permanent standard or significant nexus standard.

The state wetland delineation procedures will continue to follow the methods set forth in the USACE 1987 wetlands delineation manual (Environmental Laboratory 1987) and applicable regional supplement (i.e., the Mountains, Valleys, and Coasts supplement). However, if there is a conflict between these federal methods and the state procedures, the State Board directs that the state procedures will be used.

These wetland definitions and procedures do not affect the meaning of waters of the state as it pertains to the State and Regional Boards’ jurisdiction and do not change the

authority of the State and Regional Boards to protect water quality. The guidance specifies that it is the intent of the State Board to apply a broad interpretation of waters of the United States into the definition of waters of the state, including both historic and current definitions of waters of the United States. The state will continue to regulate wetlands and waters that may no longer be protected under new federal rules pertaining to the CWA. Waters of the state continue to be broadly defined to include any surface or groundwater, including saline waters, within the boundaries of the state.

In addition to the 2023 rule, since certification of the 2011 GPU PEIR, guidance in the State CEQA Guidelines regarding determining significance has been changed to include waters of the state. As a result, waters of the state and wetlands under the jurisdiction of the state were not directly addressed in the 2011 GPU PEIR. However, the 2011 GPU PEIR Mitigation Measure Bio-1.6 requires protection of wetlands through implementation of the County RPO, which defines wetlands more broadly and encompassing than the federal definition in that it only requires the presence of one of the following: hydrophytic vegetation, hydric soils, or an ephemeral or perennial stream whose substrate is predominately non-soil. The County RPO requires a standard of no net loss for impacts on wetlands and a 3:1 mitigation ratio for impacts on wetlands, which meets or exceeds requirements for impacts on state protected wetlands.

### **CAP Update Impact Analysis**

The following sections describe the potential for implementation of the proposed CAP Update measures and actions to affect state and federally protected wetlands.

#### **Solid Waste Measures and Actions**

As described in Sections 2.4.3.3 and 2.4.3.4, implementation of CAP Update solid waste measures and actions could result in construction and operation of new or expanded solid waste facilities. Specific locations for the new or expanded solid waste facilities have not been identified. Although removal of wetlands is not specifically proposed, implementation of the measures and efforts listed above could result in degradation or removal of these wetlands. Depending on the locations of new facilities, construction activities and project operations, these measures could result in direct and indirect disturbances or loss of state or federally protected wetlands through ground disturbance or conversion of habitat.

There are many federal, state, and local regulations in place to limit impacts on state or federally protected wetlands in the county. At the federal level, there are prohibitions regarding the discharge of pollutants or fill materials in waters of the United States without obtaining a Section 404 permit and Section 401 Water Quality certification. At the state level, the Lake and Streambed Alteration Program requires written notification to CDFW prior to altering a riparian area supported by a lake, river, or stream, including state or federally protected wetlands. For water quality impacts on all wetlands, the California Porter-Cologne Water Quality Control Act directs the local water boards to develop regional Basin Plans, which, for the San Diego Region, is designed to preserve and enhance the quality of water resources in the region. At the local level, the County's RPO

restricts impacts from certain project types to various wetlands, wetland buffers, floodways, and floodplain fringe areas, which would potentially contain state or federally protected wetlands. In addition, both the Watershed Protection Ordinance and the Zoning Ordinance include special protections for wetlands that would apply to state or federally protected wetlands and would be applied at the time of discretionary project review.

All future projects would be required to follow County development requirements, including compliance with local policies, ordinances, and applicable permitting procedures related to protection of sensitive biological resources. Therefore, with implementation of the General Plan policies (Policies COS-3.1 and COS-3.2) and 2011 GPU PEIR mitigation measures (Bio-1.1, Bio-1.5, Bio-1.6, Bio-1.7, Bio-2.2, Bio-2.3, and Bio-2); compliance with existing local, state, and federal regulations that protect sensitive habitats; and completion of subsequent project-level planning and environmental review, potential direct and indirect impacts on state or federally protected wetlands would be reduced to a less-than-significant level.

#### Water and Wastewater Measures and Actions

As described in Sections 2.4.3.3 and 2.4.3.4, implementation of CAP Update water and wastewater Measures W-1 through W-3 and actions could result in installation of new or replaced ancillary structures (e.g., water efficient appliances, irrigation systems, and stormwater and wastewater treatment systems) within existing development or developed areas. Given the nature of these improvements it is assumed that these potential ancillary structures would not be located on state or federally protected wetlands. With compliance of applicable general plan policies from the General Plan policies (Policies COS-3.1 and COS-3.2) and 2011 GPU PEIR mitigation measures (Bio-1.1, Bio-1.5, Bio-1.6, Bio-1.7, Bio-2.2, Bio-2.3, and Bio-2); compliance with existing local, state, and federal regulations that protect sensitive habitats; and completion of subsequent project-level planning and environmental review, potential direct and indirect impacts on state or federally protected wetlands would be reduced to a less-than-significant level.

#### Agriculture and Conservation Measures and Actions

As described in Sections 2.4.3.3 and 2.4.3.4, implementation of CAP Update agriculture and conservation Measures A-1 through A-2 and actions would result in preservation of conservation, natural, and agricultural lands, protection of trees, and development of programs to incentivize carbon farming and transition to clean fuels. Implementation of these measures and associated implementing actions would reduce development pressure on vacant and undeveloped lands and conserve natural lands including state or federally protected wetlands.

Implementation of Action A-4.1.b would result in evaluation of opportunities to increase affordable farmworker housing in the unincorporated county. If development of new farmworker housing results from opportunities identified through implementation of this action, such development would be required to comply with applicable federal, state and local regulations regarding protections of wetlands. As described above, there are prohibitions regarding the discharge of pollutants or fill materials in waters of the United

States without obtaining a Section 404 permit and Section 401 Water Quality certification. A Lake and Streambed Alteration Agreement with CDFW would be required prior to altering a riparian area supported by a lake, river, or stream, including state or federally protected wetlands. For water quality impacts on all wetlands, the California Porter-Cologne Water Quality Control Act directs the local water boards to develop regional Basin Plans, which, for the San Diego Region, is designed to preserve and enhance the quality of water resources in the region. The County's RPO also restricts impacts from certain project types to various wetlands, wetland buffers, floodways, and floodplain fringe areas, which would potentially contain state or federally protected wetlands. In addition, both the Watershed Protection Ordinance and the Zoning Ordinance include special protections for wetlands that would apply to state or federally protected wetlands. With compliance of applicable general plan policies from the General Plan policies (Policies COS-3.1 and COS-3.2) and 2011 GPU PEIR mitigation measures (Bio-1.1, Bio-1.5, Bio-1.6, Bio-1.7, Bio-2.2, Bio-2.3, and Bio-2); compliance with existing local, state, and federal regulations that protect sensitive habitats; and completion of subsequent project-level planning and environmental review, potential direct and indirect impacts on state or federally protected wetlands would be reduced to a less-than-significant level.

### Energy Measures and Actions

As discussed in Sections 2.4.3.3 and 2.4.3.4, implementation of CAP Update Measure E-3, Action E-3.2, and Action E-3.3 could result in energy efficiency retrofits on existing residential and non-residential structures and County facilities. Potential retrofits could include rooftop or ground-mounted PV solar arrays or small wind turbines, energy storage systems, upgraded mechanical systems, and other similar improvements. Rooftop or ground-mounted PV solar arrays and upgraded mechanical systems would likely be located on disturbed areas with existing infrastructure and would not be located in state or federally protected wetlands. Requirements for new development would include retrofitting and improving existing buildings to meet energy efficiency requirements and installing new energy infrastructure, including small-scale solar and small-scale wind turbines (roof- or ground-mounted systems) and energy storage systems. Implementation of CAP Update Action E-3.3 also could result in the construction of new large-scale renewable energy systems, such as large-scale PV solar and concentrated solar and/or wind turbines.

Specific locations for renewable energy projects have not been identified. Although removal of wetlands is not specifically proposed, implementation of the measures and efforts listed above could result in degradation or removal of these wetlands. Depending on the locations of new facilities, construction activities and project operations, these measures could result in direct and indirect disturbances or loss of federally protected wetlands through ground disturbance or conversion of habitat.

Future projects would be required to be evaluated for project-specific impacts under CEQA at the time of discretionary application. Project-specific mitigation would minimize or eliminate impacts to federally protected wetlands to the extent feasible in compliance with State CEQA Guidelines Section 15126.4. As described above in Section 2.4.2, Regulatory Framework, there are many federal, state, and local regulations in place to

limit impacts to federally protected wetlands in the county. At the federal level, there are prohibitions regarding the discharge of pollutants or fill materials in waters of the United States without obtaining a Section 404 permit and Section 401 Water Quality certification. 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 to all wetlands, the California Porter-Cologne Water Quality Control Act directs the local water boards to develop regional Basin Plans, which, for the San Diego Region, is designed to preserve and enhance the quality of water resources in the region. At the local level, the County's RPO restricts impacts from certain project types to various wetlands, wetland buffers, floodways, and floodplain fringe areas, which would potentially contain federally protected wetlands. In addition, both the Watershed Protection Ordinance and the Zoning Ordinance include special protections for wetlands that would apply to federally protected wetlands and would be applied at the time of discretionary project review. All future development projects would be required to follow County development requirements, including compliance with local policies, ordinances, and applicable permitting procedures related to the protection of sensitive biological resources.

The County's Wind Energy Ordinance allows small wind turbines projects without discretionary review if they meet the zoning verification requirements. Small wind turbine projects could impact state or federally protected wetlands if they installed in or near state or federally protected wetlands. However, small wind turbine projects would be required to obtain necessary approval from federal, state, and local agencies regarding wetland protection prior to project activities, including but not limited to a Section 404 permit, a Section 401 Water Quality certification, and a Lake and Streambed Alteration Agreement. With compliance with applicable policies from the General Plan (Policies COS-3.1 and COS-3.2) and 2011 GPU PEIR mitigation measures (Bio-1.1, Bio-1.5, Bio-1.6, Bio-1.7, Bio-2.2, Bio-2.3, and Bio-2); compliance with existing local, state, and federal regulations that protect sensitive habitats; and completion of subsequent project-level planning and environmental review, potential direct and indirect impacts on state or federally protected wetlands would be reduced to a less-than-significant level.

### Built Environment and Transportation Measures and Actions

As described in Sections 2.4.3.3 and 2.4.3.4, implementation of CAP Update built environment and transportation measures and associated implementing actions could result in construction and operation of electrification improvements, electric vehicle infrastructure, and infrastructure to support bikes and pedestrians. Specific locations for projects associated with implementation of the CAP Update have not been identified. Implementation of the built environment and transportation measures could result in degradation or removal of state or federally protected wetlands. Depending on the locations of construction activities and project operations, these measures could result in direct and indirect disturbances or loss of state or federally protected wetlands through ground disturbance or conversion of habitat.

Future projects that result from implementation of the CAP Update would be required to comply with federal, state, and local regulations pertaining to wetlands protections,

including but not limited to, obtaining a Section 404 permit and Section 401 Water Quality certification prior to discharging pollutants or fill materials in waters of the United States, obtaining CDFW's approval via a Lake and Streambed Alteration Agreement prior to altering a riparian area supported by a lake, river, or stream, including state or federally protected wetlands, and complying with regional Basin Plans which regulate water quality impacts on all wetlands. With compliance with applicable policies from the General Plan (Policies COS-3.1 and COS-3.2) and 2011 GPU PEIR mitigation measures (Bio-1.1, Bio-1.5, Bio-1.6, Bio-1.7, Bio-2.2, Bio-2.3, and Bio-2); compliance with existing local, state, and federal regulations that protect sensitive habitats; and completion of subsequent project-level planning and environmental review, potential direct and indirect impacts on state or federally protected wetlands would be reduced to a less-than-significant level.

### **Summary**

All future development projects would be required to comply with federal, state, and local regulations regarding the protection of state or federal wetlands and to follow County development requirements, including compliance with local policies, ordinances, and applicable permitting procedures related to the protection of sensitive biological resources.

The 2011 GPU PEIR concluded that implementation of relevant mitigation measures and plan policies would reduce impacts to federally protected wetlands to a less-than-significant level. Implementation of the CAP Update would not result in a new or substantial increase in magnitude of impacts on any riparian habitat or other sensitive natural community compared to the 2011 GPU PEIR. With implementation of applicable policies from the General Plan (Policies COS-3.1 and COS-3.2) and 2011 GPU PEIR mitigation measures (Bio-1.1, Bio-1.5, Bio-1.6, Bio-1.7, Bio-2.2, Bio-2.3, and Bio-2); with compliance with existing local, state, and federal regulations that protect sensitive habitats; and with completion of subsequent project-level planning and environmental review, direct and indirect impacts on state or federally protected wetlands resulting from implementation of the project would remain less than significant after mitigation, consistent with the conclusion of the 2011 GPU PEIR. Implementation of the CAP Update **would not result in new or more severe impacts** than disclosed in the 2011 GPU PEIR.

### ***2.4.3.6 Issue 4: Wildlife Movement Corridors and Nursery Sites***

This section describes potential impacts on wildlife movement corridors and nursery sites because of implementation of the project.

#### **Guidelines for Determination of Significance**

Based on Appendix G of the State CEQA Guidelines, the project could result in a significant adverse effect related to biological resources if it would:

- interfere substantially with the movement of any native resident or migratory wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.



## **Impact Analysis**

### **2011 GPU PEIR Determination**

The 2011 GPU PEIR evaluated impacts on wildlife movement corridors and nursery sites, including effects of new development proposed under the General Plan. The 2011 GPU PEIR determined that new development would result in potentially significant direct (e.g., development resulting in blockage of a corridor, removal of nursery habitat), indirect (e.g., noise, nighttime lighting), and cumulative impacts on wildlife movement corridors or nursery sites. The discussion of impacts can be found in Section 2.4, “Biological Resources” (pages 2.4-28 through 2.4-31, 2.4-36, and 2.4-42 through 2.4-43), of the 2011 GPU PEIR and is hereby incorporated by reference. Although these impacts would be reduced with implementation of the General Plan policies and 2011 GPU PEIR mitigation measures, and compliance with applicable regulations, they were determined to remain significant and unavoidable. Specific policies and mitigation measures related to the protection of biological resources are listed above under Section 2.4.2, “Regulatory Framework.”

### **CAP Update Impact Analysis**

Direct impacts on wildlife movement corridors generally occur from blockage or interference with the connectivity between blocks of habitat, a decrease in the width of a corridor or linkage that constrains movement, or the loss of visual continuity within a linkage or corridor. Depending on the locations of new facilities, construction activities and project operations associated with these measures could result in the conversion and fragmentation of habitat, and blockage of important movement corridors. The following section describes the potentially significant impacts on wildlife corridors and nursery sites that could result from the implementation of the proposed CAP Update measures and actions.

#### **Solid Waste Measures and Actions**

As described in Sections 2.4.3.3 and 2.4.3.4, implementation of CAP Update solid waste measures and actions could result in construction and operation of new or expanded solid waste facilities. New or expanded solid waste facilities in rural areas of the county may impact wildlife corridors, habitat linkages, and native wildlife nursery sites if these resources are present. Habitat corridors and linkages may be present in the northern and eastern portions of the unincorporated county, and these may be disrupted if construction results in increased encroachment or fragmentation of these areas, or if construction introduces noise levels or lighting which discourages wildlife use. Nursery sites are located throughout the unincorporated county, and direct impacts to nursery sites may include removal of habitat for development and infrastructure. Implementation of General Plan Policies COS-1.1 through COS-1.5 would protect wildlife movement corridors and nursery sites by establishing preserve systems (including wildlife corridor areas), prohibiting private development on established preserves, requiring monitoring and maintenance of preserves, and requiring cross-jurisdictional collaboration and funding for resource management goals. Additionally, Policies LU-6.1 and LU-6.7 would support the protection

of critical and sensitive resources, including wildlife corridors, through land management policies. Implementation of 2011 GPU PEIR Mitigation Measures Bio-1.1, Bio-1.5, Bio-1.6, Bio-1.7, and Bio-2.3 would also minimize the impacts to wildlife corridors and nursery sites as a result of infrastructure required to implement the CAP Update solid waste measures and actions. Impacts would be less than significant.

#### Water and Wastewater Measures and Actions

As described in Sections 2.4.3.3 and 2.4.3.4, implementation of CAP Update water and wastewater Measures W-1 through W-3 and actions could result in installation of new or replaced ancillary structures (e.g., water efficient appliances, irrigation systems, and stormwater and wastewater treatment systems) within existing development or developed areas. The potential ancillary structures would be installed indoors or within existing or proposed developments. Due to the nature of the proposed improvements (e.g., small size and within existing and proposed development), it is unlikely that these improvements would narrow or remove existing wildlife corridors or native wildlife nursery sites. With compliance with applicable policies from the General Plan (Policies COS-1.1 through COS-1.5) and 2011 GPU PEIR mitigation measures (Bio-1.1, Bio-1.5, Bio-1.6, Bio-1.7, and Bio-2.3); compliance with existing local, state, and federal regulations that protect sensitive habitats; and completion of subsequent project-level planning and environmental review, potential direct and indirect impacts on wildlife movement corridors and nursery sites would be reduced to a less-than-significant level.

#### Agriculture and Conservation Measures and Actions

As described in Sections 2.4.3.3 and 2.4.3.4, implementation of CAP Update agriculture and conservation Measures A-1 through A-2 and actions could result in preservation of conservation, natural, and agricultural lands, protection of trees, and development of programs to incentivize carbon farming and transition to clean fuels. Implementation of these measures and associated implementing actions would reduce development pressure on vacant and undeveloped lands and conserve natural lands including wildlife corridors, habitat linkages, and native wildlife nursery site.

Implementation of Action A-4.1.b would result in evaluation of opportunities to increase affordable farmworker housing in the unincorporated county. New or affordable farmworker housing in rural areas of the county would impact wildlife corridors, habitat linkages, and native wildlife nursery sites if farmworker housing construction results in the temporary or permanent disruption, disturbance, or removal of wildlife corridors, habitat linkages, and nursery sites. Habitat corridors and linkages may be present in the northern and eastern portions of the unincorporated county, and these may be disrupted if construction results in increased encroachment or fragmentation of these areas, or if construction introduces noise levels or lighting which discourages wildlife use. Nursery sites are located throughout the unincorporated county, and direct impacts to nursery sites may include removal of habitat for development and infrastructure.

If development of new farmworker housing results from opportunities identified through implementation of this action, such development would be required to comply with

General Plan Policies COS-1.1 through COS-1.5. These would protect wildlife movement corridors and nursery sites by establishing preserve systems including wildlife corridor areas, prohibiting private development on established preserves, requiring monitoring and maintenance of preserves, and requiring cross-jurisdictional collaboration and funding for resource management goals. Additionally, Policies LU-6.1 and LU-6.7 would support the protection of critical and sensitive resources including wildlife corridors through land management policies. 2011 GPU PEIR Mitigation Measures Bio-1.1, Bio-1.5, Bio-1.6, Bio-1.7, and Bio-2.3 would also reduce impacts to wildlife corridors and nursery sites as a result of infrastructure required to address the CAP Update solid waste measures and actions.

With compliance with applicable policies from the General Plan (Policies COS-1.1 through COS-1.5) and 2011 GPU PEIR mitigation measures (Bio-1.1, Bio-1.5, Bio-1.6, Bio-1.7, and Bio-2.3); compliance with existing local, state, and federal regulations that protect sensitive habitats; and completion of subsequent project-level planning and environmental review, potential direct and indirect impacts on wildlife movement corridors and nursery sites would be reduced to a less-than-significant level.

### Energy Measures and Actions

As discussed in Sections 2.4.3.3 and 2.4.3.4, implementation of CAP Update Measure E-3, Action E-3.2, and Action E-3.3 could result in energy efficiency retrofits on existing residential and non-residential structures and County facilities. Potential retrofits could include rooftop or ground-mounted PV solar arrays, upgraded mechanical systems, and other similar improvements. Implementation of Action E-3.3 also could result in the construction of large-scale renewable energy generation projects including PV or concentrated solar power and/or wind turbines.

Requirements for new energy generation development would include retrofitting and improving existing buildings to meet energy efficiency requirements and installing new energy infrastructure, including small-scale solar and small-scale wind turbines (roof- or ground-mounted systems) and energy storage systems. Large-scale renewable energy infrastructure would generally be constructed in primarily undeveloped locations that are productive for generating renewable energy source. As a result, it is likely that the locations of such renewable energy projects could disrupt some wildlife corridors and disturb some nursery sites. Large-scale energy generation systems could result in impacts to wildlife corridors and nursery sites because of the scale of the facilities which can require large swaths of land and the possible need for access roadways and transmission lines which result in long linear improvements that could result in a physical deterrent to wildlife corridors. Small-scale renewable energy systems would likely be constructed in developed residential areas of the county but could still result in ground disturbance or disruption of habitat because renewable systems can be installed without a discretionary permit if criteria within the Zoning Ordinance are met.

The 2012 Wind Energy EIR evaluated impacts to nursery corridors related to the development of small- and large-scale wind turbine facilities on pages 2.4-36 and 2.4-37 (County of San Diego 2012). Consistent with the *County of San Diego Guidelines for*

*Determining Significance and Report Format and Content Requirements: Biological Resources* (County of San Diego 2010), a Biological Resources Report would be required for discretionary projects and must analyze the potential effects of projects on wildlife movement, corridors, and nursery sites, including the application of maximum feasible mitigation. As described on page 2.4-37 of the 2012 Wind Energy EIR, discretionary projects constructed within the County's adopted South County MSCP are required to maintain corridors and linkages. However, the County's Zoning Ordinance allows for the development of small wind turbines without discretionary review if the project meets established criteria. Because these projects would be processed through a ministerial review process, it is possible for small wind turbines to have adverse impacts on wildlife corridors. The EIR concluded that Mitigation Measures M-Bio-1 and M-Bio-2 would minimize impacts related to large-scale wind turbine projects but found mitigation that would require the County to prepare MSCP plans for North and East County to be infeasible because of the uncertainty of their timing.

Therefore, even though all large-scale wind turbine projects would be subject to discretionary review and required to obtain a MUP, and implement measures to minimize impacts to wildlife corridors, there remains potential for large-scale wind turbine projects to result in direct impacts to wildlife movement and nurseries because of the introduction of new structures or vertical elements, and indirect effects may occur from increased noise levels or nighttime lighting that would discourage movement within corridors or linkages. Nursery sites are located throughout the county and include areas that provide the resources necessary for reproduction of a species, including foraging habitat, breeding habitat, and water sources. Determining whether a specific area is a nursery site requires field surveys, which would be evaluated at the project level during discretionary review. Therefore, direct impacts to nursery sites from implementation of the large wind turbine projects would occur if habitat were removed for development and infrastructure. Indirect impacts to nursery sites would have the potential to result from noise, lighting, changes in drainage patterns, and introduction of pests or domestic animals (pages 2.4-36 to 2.4-37 of the Wind Energy EIR).

Small-scale renewable energy systems would likely be constructed in developed residential areas of the county but could still result in ground disturbance or disruption of habitat if they are installed in areas where wildlife movement corridors or nurseries are present. Future large-scale solar projects would be required to be evaluated for project-specific impacts under CEQA at the time of application and project-specific mitigation would minimize or eliminate impacts to nursery sites and wildlife movement corridors to the extent feasible in compliance with State CEQA Guidelines Section 15126.4. All large-scale renewable energy development projects would be required to follow County development requirements, including compliance with local policies, ordinances, and applicable permitting procedures related to protection of wildlife corridors and sensitive habitat that may contain nursery sites. Furthermore, as described in Section 2.4.2, "Regulatory Framework," several federal, state, and local regulations and policies are in place to protect sensitive biological resources in the county.

The 2012 Wind Energy EIR evaluated impacts on nursery corridors related to the development of small- and large-scale wind turbine facilities on pages 2.4-36 to 2.4-37

(County of San Diego 2012), and states that potential habitat linkages and corridors will be formally designated and protected once the County completes preparation of the MSCP plans in the north and east portions of the unincorporated county. However, protections will not be implemented until the MSCP is finalized. With compliance with applicable policies from the General Plan (Policies COS-1.1 through COS-1.5) and 2011 GPU PEIR mitigation measures (Bio-1.1, Bio-1.5, Bio-1.6, Bio-1.7, and Bio-2.3); compliance with existing local, state, and federal regulations that protect sensitive habitats; and completion of subsequent project-level planning and environmental review, potential direct and indirect impacts on wildlife movement corridors and nursery sites would be minimized. However, implementation of small-and large-scale renewable energy facilities could still adversely affect wildlife corridors and nursery sites because of the ability to install small systems without a discretionary permit, and because of the large swaths of land that would be required for large-scale wind and solar development. The potential disruption or loss of habitat would result in a potentially significant impact.

### Built Environment and Transportation Measures and Actions

As described in Sections 2.4.3.3 and 2.4.3.4, implementation of CAP Update built environment and transportation measures and associated implementing actions could result in construction and operation of electrification improvements, electric vehicle infrastructure, and infrastructure to support bikes and pedestrians. Specific locations for such improvements have not been identified. However, because of the nature and scale of the type of improvements that would result from implementation of these measures, it is anticipated that the improvements (e.g., pedestrian improvements, electric vehicle infrastructure) would occur in existing rights-of-way or other developed areas that support existing residents and would not result in disruption to corridors or nursery sites. With compliance with applicable policies from the General Plan (Policies COS-1.1 through COS-1.5) and 2011 GPU PEIR mitigation measures (Bio-1.1, Bio-1.5, Bio-1.6, Bio-1.7, and Bio-2.3); compliance with existing local, state, and federal regulations that protect sensitive habitats; and completion of subsequent project-level planning and environmental review, potential direct and indirect impacts on wildlife movement corridors and nursery sites would be reduced to a less-than-significant level.

### **Summary**

Most of the measures and action would result in some level of construction and physical disturbance of the land. This analysis assumes that implementation of these projects would result in construction activities that could include: the use of heavy equipment for earthmoving, materials processing, or compost spreading; vehicle trips during construction/equipment replacement/monitoring activities; possible changes in landform and views; and installation or upgrades of mechanical equipment or facilities. Construction activities and project operations associated with these measures could result in direct and indirect disturbances to wildlife corridors and nurseries through ground disturbance, or conversion of habitat. Depending on the location of these projects, construction could result in erosion, direct removal of habitat, or water quality issues. Implementation of the relevant General Plan policies (Policies COS-1.1 through COS-1.5) and 2011 GPU PEIR mitigation measures (Bio-1.1, Bio-1.5, Bio-1.6, Bio-1.7, and Bio-

2.3) listed above would reduce potential impacts on wildlife movement corridors and nursery sites because it would require the preservation of intact or sensitive natural resources and require projects to design contiguous open space area.

While all future development projects would be required to follow County development requirements, including compliance with local policies, ordinances, and applicable permitting procedures related to protection of sensitive biological resources, construction of projects associated with CAP Update Actions E-3.2, E-3.3, T-4.1, and T-5.1 could still result in potential direct and indirect impacts on wildlife movement corridors and nursery sites. Regional conservation plans do not cover all areas of the unincorporated county; therefore, development could occur outside areas where protections are in place. The 2011 GPU PEIR concluded that implementation of the General Plan would have the potential to adversely impact wildlife movement corridors and nursery sites. The potential impact to wildlife movement corridors and nursery sites would remain significant, consistent with the 2011 GPU PEIR. Implementation of the CAP Update **would not result in new or more severe impacts** than disclosed in the 2011 GPU PEIR.

### ***2.4.3.7 Issue 5: Conflict with Local Policies or Ordinances***

This section describes potential impacts related to inconsistency with local policies or ordinances because of implementation of the project.

#### **Guidelines for Determination of Significance**

Based on Appendix G of the State CEQA Guidelines, the project could result in a significant adverse effect related to biological resources if it would:

- conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.

#### **Impact Analysis**

##### **2011 GPU PEIR Determination**

The 2011 GPU PEIR evaluated consistency of planned new development under the General Plan with local policies and ordinances. The discussion of impacts can be found in Section 2.4, “Biological Resources” (pages 2.4-31, 2.4-32, and 2.4-36), of the 2011 GPU PEIR and is hereby incorporated by reference.

Future projects that result from implementation of the General Plan would be required to comply with all applicable local policies and ordinances. There are regulatory processes in place to ensure compliance that would not be impacted by the General Plan. Implementation of the General Plan would result in less-than-significant impacts related to potential conflict with local policies and ordinances, because future projects proposed under the General Plan would be required to comply with applicable local policies and ordinances. Specific policies and mitigation measures related to the protection of biological resources are listed above under Section 2.4.2, “Regulatory Framework.”

## **CAP Update Impact Analysis**

### **Solid Waste Measures and Actions**

As described in Sections 2.4.3.3 and 2.4.3.4, implementation of CAP Update solid waste measures and actions could result in construction and operation of new or expanded solid waste facilities. Construction and operation of all new or expanded solid waste facilities would be required to comply with all applicable federal, state, and local regulations and policies pertaining to biological resources listed in Section 2.4.2, “Regulatory Framework,” including tree preservation policy or ordinance if tree removal would be required. In addition, the General Plan Policy COS-1.2 would prohibit development in established habitat preserves; Policy COS-1.3 requires the monitoring, management, and maintenance of a regional preserve system; and Policy COS-1.9 serves to minimize invasive plants near preserves and promotes the removal of invasive species within biological preserves. Therefore, implementation of CAP Update solid waste measures and associated implementing actions would not result in conflict with any local policies or ordinances protecting biological resources. There would be a less-than-significant impact.

### **Water and Wastewater Measures and Actions**

As described in Sections 2.4.3.3 and 2.4.3.4, implementation of CAP Update water and wastewater Measures W-1 through W-3 and actions could result in installation of new or replaced ancillary structures (e.g., water efficient appliances, irrigation systems, and stormwater and wastewater treatment systems) within exiting development or developed areas. Similar to development of new or expanded solid waste facilities, installation of new or replaced ancillary structures would be required to comply with all applicable federal, state, and local regulations and policies pertaining to biological resources listed in Section 2.4.2, “Regulatory Framework,” including tree preservation policies and ordinances. In addition, General Plan Policy COS-1.2 would prohibit development in established habitat preserves; Policy COS-1.3 requires the monitoring, management, and maintenance of a regional preserve system; and Policy COS-1.9 serves to minimize invasive plants near preserves and promotes the removal of invasive species within biological preserves. Therefore, implementing CAP Update water and wastewater measures and actions would not result in conflict with any local policies or ordinances protecting biological resources. There would be a less-than-significant impact.

### **Agriculture and Conservation Measures and Actions**

As described in Sections 2.4.3.3 and 2.4.3.4, implementation of CAP Update agriculture and conservation Measures A-1 through A-2 and actions could result in preservation of conservation, natural, and agricultural lands, protection of trees, and development of programs to incentivize carbon farming and transition to clean fuels. Implementing these measures would reduce development pressure on vacant and undeveloped land, conserve natural lands, and protect trees, which would result in benefit impacts related to biological resources protection.

Implementation of Action A-4.1.b would result in evaluation of opportunities to increase affordable farmworker housing in the unincorporated county, if opportunities to increase farmworker housing in the unincorporated area are identified. Development of farmworker housing would be required to comply with all applicable federal, state, and local regulations and policies pertaining to biological resources listed in Section 2.4.2, “Regulatory Framework,” including tree preservation policy or ordinance. In addition, General Plan Policy COS-1.2 would prohibit development in established habitat preserves; Policy COS-1.3 requires the monitoring, management, and maintenance of a regional preserve system; and Policy COS-1.9 serves to minimize invasive plants near preserves and promotes the removal of invasive species within biological preserves. Therefore, implementing CAP Update agriculture and conservation measures and actions would not result in conflict with any local policies or ordinances protecting biological resources. There would be a less-than-significant impact.

#### Energy Measures and Actions

As discussed in Sections 2.4.3.3 and 2.4.3.4, implementation of CAP Update Measure E-3, Action E-3.2, and Action E-3.3 could result in energy efficiency retrofits on existing residential and non-residential structures and County facilities. Potential retrofits could include rooftop or ground-mounted PV solar arrays, large or small wind turbines, energy storage systems, upgraded mechanical systems, and other similar improvements. Similar to development of new or expanded solid waste facilities, future energy retrofits improvements would be required to comply with all applicable federal, state, and local regulations and policies pertaining to biological resources listed in Section 2.4.2, “Regulatory Framework,” including tree preservation policy or ordinance. In addition, General Plan Policy COS-1.2 would prohibit development in established habitat preserves; Policy COS-1.3 requires the monitoring, management, and maintenance of a regional preserve system; and Policy COS-1.9 serves to minimize invasive plants near preserves and promotes the removal of invasive species within biological preserves. Therefore, implementing CAP Update energy measures and actions would not result in conflict with any local policies or ordinances protecting biological resources. There would be a less-than-significant impact.

#### Built Environment and Transportation Measures and Actions

As described in Sections 2.4.3.3 and 2.4.3.4, implementation of CAP Update built environment and transportation measures and associated implementing actions could result in construction and operation of electrification improvements, electric vehicle infrastructure, and infrastructure to support bikes and pedestrians. Specific locations for projects associated with implementation of the CAP Update have not been identified. Similar to development of new or expanded solid waste facilities, future transportation infrastructure projects would be required to comply with all applicable federal, state, and local regulations and policies pertaining to biological resources listed in Section 2.4.2, “Regulatory Framework,” including tree preservation policy or ordinance. In addition, General Plan Policy COS-1.2 would prohibit development in established habitat preserves; Policy COS-1.3 requires the monitoring, management, and maintenance of a regional preserve system; and Policy COS-1.9 serves to minimize invasive plants near



preserves and promotes the removal of invasive species within biological preserves. Therefore, implementing CAP Update built environment and transportation measures and associated implementing actions would not result in conflict with any local policies or ordinances protecting biological resources. There would be a less-than-significant impact.

## Summary

All CAP Update measures and associated implementing actions that would require construction and operation of new facilities/structure would be required to comply with local policies and ordinances established to protect biological resources. As described in Section 2.4.2, "Regulatory Framework," several federal, state, and local regulations and policies are in place to protect biological resources in the county. All future development projects would be required to follow County development requirements or other local jurisdiction requirements, including compliance with local policies, ordinances, and applicable permitting procedures related to protection of biological resources. Additionally, project-level planning, environmental analysis, and compliance with existing local regulations and policies would identify potentially significant conflicts with local policies; minimize or avoid those impacts through the design, siting, and permitting process; and provide mitigation for any significant effects as a condition of project approval and permitting.

The 2011 GPU PEIR concluded that implementation of the 2011 GPU PEIR would result in a less-than-significant impact to local policies and ordinances. Consistent with the 2011 GPU PEIR, implementation of the solid waste, water and wastewater, agriculture and conservation, energy and built environment and transportation measures and actions associated with the CAP Update would result in less-than-significant impacts related to conflict with any local policies or ordinances protecting biological resources, such as tree preservation policy or ordinance. Implementation of the CAP Update **would not result in new or more severe impacts** than disclosed in the 2011 GPU PEIR.

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

This section describes potential impacts related to inconsistencies with local HCPs or NCCPs because of implementation of the project.

#### **Guidelines for Determination of Significance**

Based on Appendix G of the State CEQA Guidelines, the project could result in a significant adverse effect related to biological resources if it would:

- conflict with the provisions of an adopted HCP, NCCP, or other approved local, regional, or state habitat conservation plan.

## **Impact Analysis**

### **2011 GPU PEIR Determination**

The 2011 GPU PEIR evaluated consistency of planned new development under the General Plan with the applicable HCPs and NCCPs for the County. The discussion of impacts can be found in Section 2.4, “Biological Resources” (pages 2.4-33, 2.4-34, and 2.4-37), of the 2011 GPU PEIR and is hereby incorporated by reference. Implementation of the General Plan would result in less-than-significant impact related to potential conflict with applicable HCPs and NCCPs, because future projects proposed under the General Plan would be required to comply with applicable HCPs and NCCPs.

### **CAP Update Impact Analysis**

#### **Solid Waste Measures and Actions**

As described in Sections 2.4.3.3 and 2.4.3.4, implementation of CAP Update solid waste measures and actions could result in construction and operation of new or expanded solid waste facilities. Construction and operation of all new or expanded solid waste facilities would be required to comply with all applicable federal, state, and local regulations and policies pertaining to biological resources listed in Section 2.4.2, “Regulatory Framework,” including applicable HCP, NCCP, and other approved HCPs. In addition, General Plan Policy COS-1.2 would prohibit development in established habitat preserves; Policy COS-1.3 requires the monitoring, management, and maintenance of a regional preserve system; Policies COS-1.4 and COS-1.5 require collaboration with other jurisdictions to achieve resource preservation and management goals; Policies COS-1.6 through COS-1.8 facilitate preserve assembly and funding; Policy COS-1.9 serves to minimize invasive plants near preserves and promotes the removal of invasive species within biological preserves; and Policy COS-1.10 calls for public involvement in the preparation of HCPs and resource management plans. Therefore, implementation of CAP Update solid waste measures and associated implementing actions would not result in conflict with any adopted HCP, NCCP, or other approved local, regional, or state HCP. The impact would be less than significant.

#### **Water and Wastewater Measures and Actions**

As described in Sections 2.4.3.3 and 2.4.3.4, implementation of CAP Update water and wastewater Measures W-1 through W-3 and actions could result in installation of new or replaced ancillary structures (e.g., water efficient appliances, irrigation systems, and stormwater and wastewater treatment systems) within existing development or developed areas. Similar to development of new or expanded solid waste facilities, installation of any new or replaced ancillary structures would be required to comply with applicable HCP, NCCP, and other approved HCPs. In addition, General Plan Policy COS-1.2 would prohibit development in established habitat preserves; Policy COS-1.3 requires the monitoring, management, and maintenance of a regional preserve system; Policies COS-1.4 and COS-1.5 require collaboration with other jurisdictions to achieve resource preservation and management goals; Policies COS-1.6 through COS-1.8 facilitate preserve assembly and

funding; Policy COS-1.9 serves to minimize invasive plants near preserves and promotes the removal of invasive species within biological preserves; and Policy COS-1.10 calls for public involvement in the preparation of HCPs and resource management plans. Therefore, implementation of CAP Update water and wastewater measures and associated implementing actions would not result in conflict with any adopted HCP, NCCP, or other approved local, regional, or state HCP. The impact would be less than significant.

#### Agriculture and Conservation Measures and Actions

As described in Sections 2.4.3.3 and 2.4.3.4, implementation of CAP Update agriculture and conservation Measures A-1 through A-2 and actions could result in preservation of conservation, natural, and agricultural lands, protection of trees, and development of programs to incentivize carbon farming and transition to clean fuels. Implementation of these measures would reduce development pressure on vacant and undeveloped land and conserve natural lands, which would result in beneficial impacts to habitat preservation and conservation.

Implementation of Action A-4.1.b would result in evaluation of opportunities to increase affordable farmworker housing in the unincorporated county, if opportunities to increase farmworker housing in the unincorporated area are identified. Development of farmworker housing would be required to comply with applicable HCP, NCCP, and other approved HCPs, which may require avoidance or mitigation of sensitive biological resources during design or construction activities. In addition, General Plan Policy COS-1.2 would prohibit development in established habitat preserves; Policy COS-1.3 requires the monitoring, management, and maintenance of a regional preserve system; Policies COS-1.4 and COS-1.5 require collaboration with other jurisdictions to achieve resource preservation and management goals; Policies COS-1.6 through COS-1.8 facilitate preserve assembly and funding; Policy COS-1.9 serves to minimize invasive plants near preserves and promotes the removal of invasive species within biological preserves; and Policy COS-1.10 calls for public involvement in the preparation of HCPs and resource management plans. Therefore, implementation of CAP Update agriculture and conservation measures and associated implementing actions would not result in conflict with any adopted HCP, NCCP, or other approved local, regional, or state HCP. The impact would be less than significant.

#### Energy Measures and Actions

As discussed in Sections 2.4.3.3 and 2.4.3.4, implementation of CAP Update Measure E-3, Action E-3.2, and Action E-3.3 could result in energy efficiency retrofits on existing residential and non-residential structures and County facilities. Potential retrofits could include rooftop or ground-mounted PV solar arrays, large or small wind turbines, upgraded mechanical systems, and other similar improvements. Similar to development of new or expanded solid waste facilities, energy retrofit improvements would be required to comply with applicable HCP, NCCP, and other approved HCPs. In addition, General Plan Policy COS-1.2 would prohibit development in established habitat preserves; Policy COS-1.3 requires the monitoring, management, and maintenance of a regional preserve system; Policies COS-1.4 and COS-1.5 require collaboration with other jurisdictions to achieve resource preservation and management goals; Policies COS-1.6 through COS-1.8

facilitate preserve assembly and funding; Policy COS-1.9 serves to minimize invasive plants near preserves and promotes the removal of invasive species within biological preserves; and Policy COS-1.10 calls for public involvement in the preparation of HCPs and resource management plans. Therefore, implementation of CAP Update energy measures and associated implementing actions would not result in conflict with any adopted HCP, NCCP, or other approved local, regional, or state HCP. The impact would be less than significant.

#### Built Environment and Transportation Measures and Actions

As described in Sections 2.4.3.3 and 2.4.3.4, implementation of CAP Update built environment and transportation measures and associated implementing actions could result in construction and operation of electrification improvements, electric vehicle infrastructure, and infrastructure to support bikes and pedestrians. Specific locations for projects associated with implementation of the CAP Update have not been identified. However, similar to development of new or expanded solid waste facilities, future transportation infrastructure improvement projects would be required to comply with applicable HCP, NCCP, and other approved HCPs. In addition, General Plan Policy COS-1.2 would prohibit development in established habitat preserves; Policy COS-1.3 requires the monitoring, management, and maintenance of a regional preserve system; Policies COS-1.4 and COS-1.5 require collaboration with other jurisdictions to achieve resource preservation and management goals; Policies COS-1.6 through COS-1.8 facilitate preserve assembly and funding; Policy COS-1.9 serves to minimize invasive plants near preserves and promotes the removal of invasive species within biological preserves; and Policy COS-1.10 calls for public involvement in the preparation of HCPs and resource management plans. Therefore, implementation of CAP Update water and wastewater measures and associated implementing actions would not result in conflict with any adopted HCP, NCCP, or other approved local, regional, or state HCP. The impact would be less than significant.

#### **Summary**

All CAP Update measures and associated implementing actions that would require construction and operation of new facilities/structures would be required to comply with adopted HCPs and NCCPs. As described in Section 2.4.2, “Regulatory Framework,” future development projects located within the county would be required to comply with applicable HCP/NCCP requirements promulgated by local, state, and/or federal agencies to proceed with development. Implementation of General Plan Policies COS-1.2, COS-1.3, COS-1.4, COS-1.5, COS-1.6, COS-1.7, COS-1.8, COS-1.9, and COS-1.10 will further ensure that CAP Update projects do not conflict with any HCP or NCCP.

The 2011 GPU PEIR concluded that implementation of the 2011 GPU PEIR would result in a less-than-significant impact to HCPs and NCCPs. Consistent with the 2011 GPU PEIR, implementation of the solid waste, water and wastewater, agriculture and conservation, energy and built environment and transportation measures and actions associated with the CAP Update would result in less-than-significant impacts related to conflict with the provisions of an adopted HCP, NCCP, or other approved local, regional,

or state HCP. Implementation of the CAP Update **would not result in new or more severe impacts** than disclosed in the 2011 GPU PEIR.

### ***2.4.3.9 Cumulative Impact Analysis***

The geographic scope of the cumulative impact analysis for biological resources is the San Diego region, and includes the unincorporated and incorporated county, as well as surrounding counties. The analysis utilizes the same cumulative study area for biological resources as the 2011 GPU PEIR (see page 2.4-34 of the 2011 GPU PEIR). The scope and approach to the cumulative impact analysis are described in the “Cumulative Impact Assessment Overview” section in the introduction to this chapter.

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

Cumulative development in the San Diego region has the potential to result in impacts to special status plant and wildlife species, including loss of habitat. Adjacent jurisdictions, including incorporated cities, adjacent counties, tribal governments, and federal and State-managed lands would be required to comply with applicable federal and/or State regulations that provide protections for special status plant and wildlife species such as the Federal ESA, the CESA, and the California NCCP Act. In addition, some projects that affect special status species require approval from the USFWS and the CDFW. Conversion of undeveloped areas to other uses is anticipated in regional planning documents. This may result in loss of habitat or edge effects that would affect special status plant and wildlife species, resulting in a cumulative effect on the resources.

The 2011 GPU PEIR concluded that although cumulative impacts on special-status species resulting from the build-out associated with the General Plan would be reduced with implementation of the General Plan Policies COS-1.3, COS-1.6, COS-1.7, COS-1.8, COS-1.9, COS-1.10, COS-1.11, COS-2.1, COS-2.2, LU-6.1, LU-6.2, LU-6.3, LU-6.4, LU-6.6, LU-6.7, LU-10.2, and M-12.9, and 2011 GPU PEIR Mitigation Measures Bio-1.1, Bio-1.5, and Bio-1.6; however, the impact would remain potentially significant. With implementation of these measures, and compliance with applicable state and federal regulations, the cumulative impact on special-status species would be significant and unavoidable.

Implementation of CAP Update measures and actions that result in new or expanded solid waste facilities, irrigation systems, stormwater and grey water capture systems, stormwater and wastewater treatment systems, solar arrays, wind turbines, and transportation infrastructure improvements, that could result in new development and construction and operational impacts would result in potentially significant impacts, as described above in Section 2.4.3.3, “Issue 1: Special-Status Plant and Wildlife Species.” Projects would be required to be consistent with the General Plan policies and 2011 GPU PEIR mitigation measures identified above, as well as comply with existing federal, state, and local regulations that protect sensitive resources. However, because the location of future projects developed to implement the CAP Update is not known, the potential exists for such projects to make a considerable contribution to a significant cumulative impact.

Therefore, implementation of the CAP Update would result in a considerable contribution to a significant cumulative effect. The cumulative impact would be significant, consistent with the conclusion in the 2011 GPU PEIR. This **would not be a new or more severe impact** than disclosed in the 2011 GPU PEIR.

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

Cumulative development in the San Diego region could result in impacts to riparian habitat and other sensitive natural communities through direct and indirect loss or degradation. Adjacent jurisdictions, including incorporated cities, adjacent counties, and federal and State-managed lands, would be required to comply with applicable federal and/or State regulations such as the California Lake and Streambed Alteration Program or the California NCCP Act. These programs provide protections for riparian and other sensitive habitats. In addition, many projects that affect riparian or other protected habitat types require approval from the USFWS and the CDFW. Nonetheless, a cumulative effect on sensitive natural communities is anticipated from growth projected to occur in the region.

The 2011 GPU PEIR concluded that although cumulative impacts on riparian habitat and other sensitive natural communities resulting from the build-out associated with the General Plan would be reduced with implementation of the General Plan policies (Policies COS-1.1, COS-1.2, COS-1.3, COS-1.6, COS-1.7, COS-1.8, COS-1.9, COS-2.1, COS-2.2, COS-3.1, and COS-3.2), and 2011 GPU PEIR mitigation measures (Bio-2.1, Bio-2.2, Bio-2.3, Bio-2.4), and compliance with applicable state and federal regulations, cumulative impacts on riparian habitat and other sensitive natural communities would remain significant and unavoidable because the General Plan would allow for development outside of adopted regional conservation plan areas.

Implementation of CAP Update measures and actions that result in new or expanded solid waste facilities, irrigation systems, stormwater and grey water capture systems, stormwater and wastewater treatment systems, solar arrays, wind turbines, and transportation infrastructure improvements, that could result in new development and construction and operational impacts would result in potentially significant impacts, as described above in Section 2.4.3.4, "Issue 2: Riparian Habitat and Other Sensitive Natural Communities." Projects would be required to be consistent with the General Plan policies and 2011 GPU PEIR mitigation measures identified above, as well as comply with existing federal, state, and local regulations that protect sensitive resources. However, because the location of future projects developed to implement the CAP Update is not known, the potential exists for such projects to make a considerable contribution to a significant cumulative impact.

Therefore, implementation of the CAP Update would result in a considerable contribution to a significant cumulative impact. The cumulative impact would be significant, consistent with the conclusion in the 2011 GPU PEIR. This **would not be a new or more severe impact** than disclosed in the 2011 GPU PEIR.

### **Issue 3: State and Federally Protected Wetlands**

Adjacent jurisdictions, including incorporated cities, adjacent counties, tribal lands, and federal and State-managed lands, would be required to comply with applicable federal regulations such as Section 401 and 404 of the CWA. Existing regulations would ensure that a significant cumulative impact associated with federally protected wetlands would not occur. As a result, development in the region would not generate a cumulative effect on the state and federally protected wetlands.

The 2011 GPU PEIR concluded that cumulative impacts on state or federally protected wetlands associated with buildout of the General Plan would be reduced with implementation of the applicable policies from the General Plan (Policies COS-3.1 and COS-3.2) and 2011 GPU PEIR mitigation measures (Bio-1.1, Bio-1.5, Bio-1.6, Bio-1.7, Bio-2.2, Bio-2.3, and Bio-2), and compliance with applicable state and federal regulations. The General Plan policies, 2011 GPU PEIR mitigation measures, and state and federal regulations would collectively require each individual project to avoid wetland areas. In addition, the 2011 GPU PEIR Mitigation Measure Bio-1.6 requires protection of wetlands through implementation of the County RPO, which defines wetlands more broadly than the federal definition. The County RPO requires a standard of no net loss for impacts on wetlands and a 3:1 mitigation ratio for impacts on wetlands, which meets or exceeds requirements for impacts on state protected wetlands. Implementation of the CAP Update would not result in a new or substantial increase in magnitude of impacts on any wetland habitat, and each individual project implemented under the plan would meet these high standards.

The project's direct and indirect effects to state or federally protected wetlands would remain less than significant; therefore, the project would not result in a new significant cumulative impact on state or federally protected wetlands. This **would not be a new or more severe impact** than disclosed in the 2011 GPU PEIR.

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

Regional projects implemented to accommodate projected growth, including transportation improvements, could affect wildlife movement corridors and nursery sites. Adjacent jurisdictions, including incorporated cities, adjacent counties, and federal and State-managed lands would be required to comply with applicable federal and/or State regulations such as the California NCCP Act. Because there is still a potential for a combined effect on wildlife movement corridors and nursery sites, cumulative development in the San Diego region is anticipated to result in a cumulative effect on these resources.

As described in the 2011 GPU PEIR, cumulative impacts on wildlife movement corridors and nursery sites were determined to be significant and unavoidable with implementation of relevant General Plan policies (Policies COS-1.1 through COS-1.5) and 2011 GPU PEIR mitigation measures (Bio-1.1, Bio-1.5, Bio-1.6, Bio-1.7, and Bio-2.3), compliance with existing local, state, and federal regulations that protect sensitive habitats; and completion of subsequent project-level planning and environmental review. Impacts were identified

because the General Plan would allow land uses and development to occur in areas outside of an adopted regional conservation plan, thereby resulting in direct, indirect, and cumulative impacts on corridors, linkages, and nursery sites.

Implementation of CAP Update measures and actions that result in new or expanded solid waste facilities, irrigation systems, stormwater and grey water capture systems, stormwater and wastewater treatment systems, solar arrays, wind turbines, and transportation infrastructure improvements, that could result in new development and construction and operational impacts would result in potentially significant impacts, as described above. Projects would be required to be consistent with the General Plan policies and 2011 GPU PEIR mitigation measures identified above, as well as comply with existing federal, state, and local regulations that protect sensitive resources. However, because the exact location and nature of future projects associated with the CAP Update are unknown, the potential for a contribution to a cumulatively significant impact remains.

Therefore, implementation of the CAP Update would result in a considerable contribution to a significant cumulative effect. The cumulative impact would be significant, consistent with the conclusion in the 2011 GPU PEIR. This **would not be a new or more severe impact** than disclosed in the 2011 GPU PEIR.

#### **Issue 5: Conflict with Local Policies or Ordinances**

Projects under the County's jurisdiction are required to comply with applicable local policies and ordinances, such as the MSCP Plan or the Southern California Coastal Sage Scrub NCCP Process Guidelines, in order for such projects to be approved. However, it cannot be determined with certainty that regional projects in other jurisdictions would conform to applicable local ordinances. Therefore, cumulative development in the San Diego region is anticipated to result in a cumulative effect.

The 2011 GPU PEIR concluded that the General Plan would have the potential to conflict with one or more local policies or ordinances and would therefore contribute to a significant cumulative impact. All future development projects under County oversight would be required to follow County development requirements or other local jurisdiction requirements, including compliance with local policies, ordinances, and applicable permitting procedures related to protection of biological resources. Additionally, project-level planning, environmental analysis, and compliance with existing local regulations and policies would identify potentially significant conflicts with local policies; minimize or avoid those impacts through the design, siting, and permitting process; and provide mitigation for any significant effects as a condition of project approval and permitting.

Most projects associated with implementation of the CAP Update (e.g., irrigation and stormwater systems upgrades and transportation infrastructure improvements) would be undertaken by the County. These projects would be required to comply with all local policies and ordinances. In limited cases, the CAP Update has potential to indirectly result in infrastructure upgrades that are outside the County's jurisdiction (e.g., powerline upgrades to support increased demand for renewable energy and transportation improvements initiated by the State). There is a limited potential for these projects to



conflict with local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance, in a manner that results in a cumulatively significant effect on biological resources. Further, as described in Section 2.11, “Land Use and Planning,” implementation of the project would result in less-than-significant impacts related to the potential conflict with a plan, policy or regulation adopted for the purpose of avoiding or mitigating an environmental impact.

Therefore, the project would not have a considerable contribution to a significant cumulative impact related conflicts with local policies or ordinances protecting biological resources. The impact would be less than significant. This **would not be a new or more severe impact** than disclosed in the 2011 GPU PEIR.

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

Cumulative development in the San Diego region is required to comply with applicable HCPs or NCCPs, such as the San Diego MSCP or the Southern California Coastal Sage Scrub NCCP. However, it cannot be determined with certainty that regional projects in other jurisdictions would take steps to prevent conflicts with federal and State HCP and NCCP agreements. Therefore, cumulative development in the San Diego region is anticipated to result in a cumulative effect.

Because of the lack of certainty that regional projects would prevent conflicts with existing HCP and NCCP agreements, implementation of the CAP Update measures and supporting efforts may potentially result in conflicts with applicable HCPs and NCCPs. As described in Section 2.4.2, “Regulatory Framework,” future development projects located within the county would be required to comply with applicable HCP/NCCP requirements promulgated by local, state, and/or federal agencies to proceed with development.

Therefore, the project would not have a considerable contribution to a significant cumulative impact. The impact would remain less than significant. This **would not be a new or more severe impact** than disclosed in the 2011 GPU PEIR.

## **2.4.4 Summary of New or More Severe Significant Impacts**

Implementation of the CAP Update would not result in new or more severe significant impacts on special-status plant and wildlife species; riparian habitat and other sensitive natural communities, state and federally protected wetlands, wildlife movement corridors and nursery sites; potential for conflict with local policies and ordinances, or conflict with HCPs and NCCPs.

## **2.4.5 Mitigation Measures**

### ***2.4.5.1 Issue 1: Special-Status Plant and Wildlife Species***

The mitigation measures applicable to biological resources that were adopted as a part of the 2011 GPU PEIR and are applicable to the project include the following:

Adopted Mitigation Measure Bio-1.5: Utilize County Guidelines for Determining Significance for Biological Resources to identify adverse impacts to biological resources. Also, utilize the County's Geographic Information System (GIS) records and the Comprehensive Matrix of Sensitive Species to locate special-status species populations on or near project sites. This information will be used to avoid or mitigate impacts as appropriate.

Adopted Mitigation Measure Bio-1.6: Implement the RPO, BMO, and HLP Ordinance to protect wetlands, wetland buffers, sensitive habitat lands, biological resource core areas, linkages, corridors, high-value habitat areas, subregional coastal sage scrub focus areas, and populations of rare, or endangered plant or animal species.

Adopted Mitigation Measure Bio-1.7: Minimize edge effects from development projects located near sensitive resources by implementing the County Noise Ordinance, the County Groundwater Ordinance, the County's Landscaping Regulations (currently part of the Zoning Ordinance), and the County Watershed Protection, Storm Water Management, and Discharge Control Ordinance.

Adopted Mitigation Measure Bio-2.1: Revise the Ordinance Relating to Water Conservation for Landscaping to incorporate appropriate plant types and regulations requiring planting of native or compatible non-native, non-invasive plant species in new development.

The 2012 Wind Energy Ordinance EIR included the following mitigation measures to minimize the potentially significant impacts related to large wind turbine projects:

Adopted Mitigation Measure M-Bio-1: During the environmental review process for future MUPs for wind turbines, the County Guidelines for Determining Significance for Biological Resources shall be applied. When impacts on biological resources are determined to be significant, feasible and appropriate project-specific mitigation measures shall be incorporated. Examples of standard mitigation measures within the County Guidelines include: avoidance of sensitive resources; preservation of habitat; revegetation; resource management; and restrictions on lighting, runoff, access, and/or noise.

Adopted Mitigation Measure M-Bio-2: Update the County Guidelines for Determining Significance for Biological Resources to include, or incorporate by reference, recommendations from the California Department of Fish and Game, the Avian Power Line Interaction Committee, the USFWS Draft Guidance, and the California Energy Commission (e.g., California Guidelines for Reducing Impacts to Birds and Bats from Wind Energy Development). Examples of recommended mitigation measures include: site screening; pre-permitting monitoring; acoustic monitoring; buffer zone inclusion; reduction of foraging resources near turbines; specific lighting to reduce bird collisions; post-construction monitoring; and avian protection plans.

As described in Section 2.4.3.3, additional wind turbine mitigation was considered but rejected as infeasible through the 2012 Wind Energy Ordinance EIR. Mitigation Measures M-Bio-1 and M-Bio-2 shall be incorporated into the Mitigation Monitoring and Reporting Program for the CAP Update SEIR and shall be applied to all large-scale renewable energy projects including but not limited to PV solar infrastructure and wind turbines during the discretionary review process which would occur as a condition of receiving a MUP. As described during the impact analysis, future large-scale renewable energy projects would be required to be evaluated for project-specific impacts under CEQA at the time of application and project-specific mitigation would minimize or eliminate impacts on special-status species to the extent feasible in compliance with State CEQA Guidelines Section 15126.4. However, because of the uncertainty of the types, locations, and scale of future renewable energy projects, it is not possible to guarantee that all impacts on special-status species would be reduced to a level below significance. To reduce impacts to the greatest extent feasible, Mitigation Measures M-Bio-1 and M-Bio-2 from the 2012 Wind Energy Ordinance EIR have been revised and would be applied to the project as CAP Update Mitigation Measures Bio-1 and Bio-2 to include all large-scale renewable energy projects as follows:

CAP Update Mitigation Measure Bio-1: During the environmental review process for future MUPs for large-scale renewable energy projects, the County Guidelines for Determining Significance for Biological Resources shall be applied. When impacts on biological resources are determined to be significant, feasible and appropriate project-specific mitigation measures shall be incorporated. Examples of standard mitigation measures within the County Guidelines include: avoidance of sensitive resources; preservation of habitat; revegetation; resource management; and restrictions on lighting, runoff, access, and/or noise.

CAP Update Mitigation Measure Bio-2: Update the County Guidelines for Determining Significance for Biological Resources to include, or incorporate by reference, recommendations from the California Department of Fish and Wildlife, the Avian Power Line Interaction Committee, the USFWS Draft Guidance, and the California Energy Commission (e.g., California Guidelines for Reducing Impacts to Birds and Bats from Wind Energy Development). Examples of recommended mitigation measures include: site screening; pre-permitting monitoring; acoustic monitoring; buffer zone inclusion; reduction of foraging resources near turbines and transmission lines; specific lighting to reduce bird collisions; post-construction monitoring; and avian protection plans.

### ***2.4.5.2 Issue 2: Riparian Habitat and Other Sensitive Natural Communities***

The mitigation measures applicable to biological resources that were adopted as a part of the 2011 GPU PEIR and are applicable to the project include the following:

Adopted Mitigation Measure Bio-1.6: Implement the RPO, BMO, and HLP Ordinance to protect wetlands, wetland buffers, sensitive habitat lands, biological resource core areas, linkages, corridors, high-value habitat areas, subregional

coastal sage scrub focus areas, and populations of rare, or endangered plant or animal species.

Adopted Mitigation Measure Bio-1.7: Minimize edge effects from development projects located near sensitive resources by implementing the County Noise Ordinance, the County Groundwater Ordinance, the County's Landscaping Regulations (currently part of the Zoning Ordinance), and the County Watershed Protection, Storm Water Management, and Discharge Control Ordinance.

Adopted Mitigation Measure Bio-2.1: Revise the Ordinance Relating to Water Conservation for Landscaping to incorporate appropriate plant types and regulations requiring planting of native or compatible non-native, non-invasive plant species in new development.

Adopted Mitigation Measure Bio-2.2: Require that development projects obtain CWA Section 401/404 permits issued by the California Regional Water Quality Control Board and US Army Corps of Engineers for all project-related disturbances of waters of the US and/or associated wetlands. Also, continue to require that projects obtain Fish and Game Code Section 1602 Streambed Alteration Agreements from the California Department of Fish and Game for all project-related disturbances of streambeds.

CAP Update Mitigation Measures Bio-1 and Bio-2 shall be incorporated into the Mitigation Monitoring and Reporting Program for the CAP Update SEIR and shall be applied to all large-scale renewable energy projects including but not limited to PV solar, solar concentrator, and wind turbine systems during the discretionary review process which would occur as a condition of receiving a MUP. As described during the impacts analysis, future, large-scale renewable energy projects would be required to be evaluated for project-specific impacts under CEQA at the time of application and project-specific mitigation would minimize or eliminate impacts to riparian habitat to the extent feasible in compliance with State CEQA Guidelines Section 15126.4. However, because of the uncertainty of the types, locations, and scale of future renewable energy projects, it is not possible to guarantee that all impacts to riparian habitat would be reduced to a level below significance. Additional mitigation that would implement a development cap upon large-scale renewable energy projects was considered but rejected as infeasible because it may prohibit achievement of the County's GHG emissions reduction target. It is unknown how many numbers and types of renewable large-scale renewable energy facilities would be required to meet the GHG reduction goals of the CAP because the design, siting, and economic feasibility characteristics of the options under consideration vary widely.

No other feasible project-related mitigation beyond existing federal and state permitting requirements and compliance with the County's adopted General Plan policies or mitigation measures is available and could be applied to individual projects under the CAP.

### **2.4.5.3 Issue 3: State and Federally Protected Wetlands**

Project level impacts and contributions to cumulative impacts were determined to be less than significant; therefore, no mitigation measures in addition to the following mitigation measures identified in the 2011 GPU PEIR are required:

Adopted Mitigation Measure Bio-1.6: Implement the RPO, BMO, and HLP Ordinance to protect wetlands, wetland buffers, sensitive habitat lands, biological resource core areas, linkages, corridors, high-value habitat areas, subregional coastal sage scrub focus areas, and populations of rare, or endangered plant or animal species.

Adopted Mitigation Measure Bio-1.7: Minimize edge effects from development projects located near sensitive resources by implementing the County Noise Ordinance, the County Groundwater Ordinance, the County's Landscaping Regulations (currently part of the Zoning Ordinance), and the County Watershed Protection, Storm Water Management, and Discharge Control Ordinance.

Adopted Mitigation Measure Bio-2.1: Revise the Ordinance Relating to Water Conservation for Landscaping to incorporate appropriate plant types and regulations requiring planting of native or compatible non-native, non-invasive plant species in new development.

Adopted Mitigation Measure Bio-2.2: Require that development projects obtain CWA Section 401/404 permits issued by the California Regional Water Quality Control Board and US Army Corps of Engineers for all project-related disturbances of waters of the US and/or associated wetlands. Also, continue to require that projects obtain Fish and Game Code Section 1602 Streambed Alteration Agreements from the California Department of Fish and Game for all project-related disturbances of streambeds.

Adopted Mitigation Measure Bio-2.3: Ensure that wetlands and wetland buffer areas are adequately preserved whenever feasible to maintain biological functions and values.

Adopted Mitigation Measure Bio-2.4: Implement the Watershed Protection, Storm Water Management, and Discharge Control Ordinance to protect wetlands.

No other feasible project-related mitigation beyond existing federal and state permitting requirements and compliance with the County's adopted General Plan policies or mitigation measures is available and could be applied to individual projects under the CAP.

### **2.4.5.1 Issue 4: Wildlife Movement Corridors and Nursery Sites**

The mitigation measures applicable to biological resources that were adopted as a part of the 2011 GPU PEIR and are applicable to the project include the following:

Adopted Mitigation Measure Bio-1.6: Implement the RPO, BMO, and HLP Ordinance to protect wetlands, wetland buffers, sensitive habitat lands, biological resource core areas, linkages, corridors, high-value habitat areas, subregional coastal sage scrub focus areas, and populations of rare, or endangered plant or animal species.

Adopted Mitigation Measure Bio-1.7: Minimize edge effects from development projects located near sensitive resources by implementing the County Noise Ordinance, the County Groundwater Ordinance, the County's Landscaping Regulations (currently part of the Zoning Ordinance), and the County Watershed Protection, Storm Water Management, and Discharge Control Ordinance.

Additional mitigation that would implement a development cap upon large-scale renewable energy projects was considered but rejected as infeasible because it may prohibit achievement of the County's GHG emissions reduction target. It is unknown how many numbers and types of renewable large-scale renewable energy facilities would be required to meet the GHG reduction goals of the CAP because the design, siting, and economic feasibility characteristics of the options under consideration vary widely. No other additional feasible mitigation is available.

Projects that would result in wildlife corridor and nursery site impacts would be required to comply with all local, state, and federal regulations. Additionally, projects that were developed within certain areas of the county would be required to comply with the mitigation requirements of adopted HCPs covering those areas. Where such plans do not exist, the federal and state permitting requirements would apply.

No other feasible project-related mitigation beyond compliance with existing federal and state permitting requirements, the County's adopted General Plan policies, and 2011 GPU PEIR mitigation measures, is available and could be applied to individual projects under the CAP.

#### ***2.4.5.2 Issue 5: Local Policies or Ordinances***

Project level impacts and contributions to cumulative impacts were determined to be less than significant; therefore, no mitigation measures in addition those identified in the 2011 GPU PEIR are required.

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

Project level impacts and contributions to cumulative impacts were determined to be less than significant; therefore, no mitigation measures in addition those identified in the 2011 GPU PEIR are required.

## 2.4.6 Significance Conclusion

### ***2.4.6.1 Issue 1: Special-Status Plant and Wildlife Species***

Construction and operation of new or expanded solid waste facilities, irrigation systems, stormwater and grey water capture systems, stormwater and wastewater treatment systems, solar arrays, small wind turbines, transportation infrastructure, and large-scale renewable energy facilities could result in significant direct impacts on special-status plant and wildlife species and sensitive habitat. These impacts would be more severe than those identified in the 2011 GPU PEIR and the 2012 Wind Energy EIR and would be significant. Additionally, when combined with the growth and development within the cumulative study area, the project's contribution to this cumulative impact would be more severe than the contribution identified in the prior EIRs and would be cumulatively considerable. Implementation of General Plan policies identified in Section 2.4.2.3 and 2011 GPU PEIR mitigation measures, in addition to compliance with applicable regulations, would reduce impacts on special-status plant and wildlife species and sensitive habitat, but not below a level of significance for the reasons described above. Therefore, the project would have a **significant and unavoidable impact** and a **considerable contribution** to a significant cumulative impact on special-status plant and wildlife species, consistent with the conclusion in the 2011 GUP PEIR. This **would not be a new or more severe impact** than disclosed in the 2011 GPU PEIR.

### ***2.4.6.2 Issue 2: Riparian Habitat and Other Sensitive Natural Communities***

Construction and operation of new or expanded solid waste facilities, irrigation systems, stormwater and grey water capture systems, stormwater and wastewater treatment systems, solar arrays, small wind turbines, and transportation infrastructure could result in significant direct impacts on riparian habitat and other sensitive natural communities. These impacts would be more severe than those identified in the 2011 GPU PEIR and the 2012 Wind Energy EIR and would be significant. Where a project would comply with existing regulations and HCP requirements and would receive applicable permits from regulatory agencies, it would reduce its project-specific impacts to a less-than-significant level and would reduce its contribution to cumulative impacts such that it would not be considerable. When combined with the growth and development within the cumulative study area, the project's contribution to this cumulative impact would be more severe than the contribution identified in the prior EIRs and would be cumulatively considerable. Implementation of General Plan policies identified in Section 2.4.2.3 and 2011 GPU PEIR mitigation measures, in addition to compliance with applicable regulations, would reduce impacts on riparian habitat and other sensitive natural communities but not below a level of significance for the reasons described above. Therefore, the project would have a **significant and unavoidable impact** and a **considerable contribution** to a significant cumulative impact on riparian habitat and other sensitive natural communities, consistent with the conclusion in the 2011 GUP PEIR. This **would not be a new or more severe impact** than disclosed in the 2011 GPU PEIR.

### ***2.4.6.3 Issue 3: State and Federally Protected Wetlands***

Implementation of the project could have the potential to result in the loss of state or federally protected wetlands. However, for the reasons described above, implementation of General Plan policies identified in Section 2.4.2.3 and 2011 GPU PEIR mitigation measures, in addition to compliance with federal, state, and local regulations, would reduce this project-level impact to **less than significant**. In addition, because cumulative growth and development would also be required to comply with federal, state, and local regulations and mitigate for any loss of wetlands, the project's contribution to cumulative impacts on state or federally protected wetlands and County RPO wetlands would be similar to the contribution identified in the 2011 GPU PEIR and **would not be cumulatively considerable**. There **would not be a new or more severe impact** than disclosed in the 2011 GPU PEIR.

### ***2.4.6.4 Issue 4: Wildlife Movement Corridors and Nursery Sites***

Construction and operation of new or expanded solid waste facilities, irrigation systems, stormwater and grey water capture systems, stormwater and wastewater treatment systems, solar arrays, small wind turbines, transportation infrastructure, and large-scale renewable energy facilities could result in significant direct impacts on wildlife movement corridors and nursery sites. These impacts would be more severe than those identified in the 2011 GPU PEIR and the 2012 Wind Energy EIR and would be significant. Additionally, when combined with the growth and development within the cumulative study area, the project's contribution to this cumulative impact would be more severe than the contribution identified in the prior EIRs and would be cumulatively considerable. Implementation of General Plan policies identified in Section 2.4.2.3 and 2011 GPU PEIR mitigation measures, in addition to compliance with applicable regulations, would reduce impacts on wildlife movement corridors and nursery sites but not below a level of significance for the reasons described above. Therefore, the project would have a **significant and unavoidable impact** and a **considerable contribution** to a significant cumulative impact on wildlife corridors and nursery sites, consistent with the conclusion in the 2011 GUP PEIR. This **would not be a new or more severe impact** than disclosed in the 2011 GPU PEIR.

### ***2.4.6.5 Issue 5: Conflict with Local Policies or Ordinances***

Implementation of the project would not conflict with any local policies or ordinances that protect biological resources or result in project-level impacts. **Less-than-significant impacts** would occur. Additionally, the project would not contribute to a significant cumulative impact. As such, cumulative impacts **would not be cumulatively considerable**. The proposed project impacts would be equivalent or less severe than those analyzed by the 2011 GPU PEIR. There **would not be new or more severe impacts**.



#### ***2.4.6.6 Issue 6: Conflict with Habitat Conservation Plans and Natural Community Conservation Plans***

Implementation of the project would not conflict with any HCPs or NCCPs or result in project-level impacts. Impacts would be **less than significant**. Additionally, the project would not contribute to a significant cumulative impact. As such, cumulative impacts **would not be cumulatively considerable**. The proposed project impacts would be equivalent or less severe than those analyzed by the 2011 GPU PEIR. There **would not be new or more severe impacts**.

**Table 2.4-2 Special-Status Plant Species Known to Occur in San Diego County**

Species	Federal Listing Status <sup>1</sup>	State Listing Status <sup>1</sup>	CRPR	Habitat
Red sand-verbena <i>Abronia maritima</i>	–	–	4.2	Coastal dunes. 0–328 feet in elevation. Blooms February–November.
Chaparral sand-verbena <i>Abronia villosa</i> var. <i>aurita</i>	–	–	1B.1	Sandy areas. 246–5,249 feet in elevation. Blooms January–September.
Shrubby Indian mallow <i>Abutilon abutiloides</i>	–	–	2B.1	Rocky, granitic. 2,805–2,953 feet in elevation. Blooms August–November.
San Diego thorn-mint <i>Acanthomintha ilicifolia</i>	FT	SE	1B.1	Endemic to active vertisol clay soils of mesas and valleys. Usually on clay lenses within grassland or chaparral communities. 82–3,100 feet in elevation. Blooms April–June.
Pygmy lotus <i>Acmispon haydonii</i>	–	–	1B.3	Creosote bush scrub to pinyon-juniper woodland; rocky sites. 591–4,199 feet in elevation. Blooms January–June.
Nuttall's acmispon <i>Acmispon prostratus</i>	–	–	1B.1	Sand dunes. 0–59 feet in elevation. Blooms March–June.
California adolphia <i>Adolphia californica</i>	–	–	2B.1	Sandy/gravelly to clay soils within grassland, coastal sage scrub, or chaparral; various exposures. 148–2,428 feet in elevation. Blooms December–May.
Shaw's agave <i>Agave shawii</i> var. <i>shawii</i>	–	–	2B.1	Coastal bluffs and slopes within coastal sage scrub. 33–394 feet in elevation. Blooms September–May.
Yucaipa onion <i>Allium marvinii</i>	–	–	1B.2	In openings on clay soils. 2,789–3,510 feet in elevation. Blooms April–May.
Munz's onion <i>Allium munzii</i>	FE	ST	1B.1	Clay and mesic soils within chaparral, cismontane woodland, coastal scrub, pinyon and juniper woodland, and valley and foothill grassland. 975–3,510 feet in elevation. Blooms March–May.
Parish's onion <i>Allium parishii</i>	–	–	4.3	Rocky sites. 2,953–4,806 feet in elevation. Blooms April–May.
San Diego bur-sage <i>Ambrosia chenopodiifolia</i>	–	–	2B.1	Slopes of canyons in open succulent scrub usually with little herbaceous cover. 66–820 feet in elevation. Blooms April–June.
Singlewhorl burrobrush <i>Ambrosia monogyra</i>	–	–	2B.2	Sandy soils. 16–1,558 feet in elevation. Blooms August–November.
San Diego ambrosia <i>Ambrosia pumila</i>	FE	–	1B.1	Sandy loam or clay soil; sometimes alkaline. In valleys, persists where disturbance has been superficial. Sometimes on margins or near vernal pools. 10–1,903 feet in elevation. Blooms April–October.
California androsace <i>Androsace elongata</i> ssp. <i>acuta</i>	–	–	4.2	Highly localized and often overlooked little plant. 492–3,937 feet in elevation. Blooms March–June.
Aphanisma <i>Aphanisma blitoides</i>	–	–	1B.2	On bluffs and slopes near the ocean in sandy or clay soils. 10–1,001 feet in elevation. Blooms February–June.

Species	Federal Listing Status <sup>1</sup>	State Listing Status <sup>1</sup>	CRPR	Habitat
Short-lobed broomrape <i>Aphyllon parishii</i> ssp. <i>brachylobum</i>	–	–	4.2	Sandy soil near beaches; reported to grow on <i>Isocoma menziesii</i> and other shrubs. 10–1,001 feet in elevation. Blooms April–October.
Del Mar manzanita <i>Arctostaphylos glandulosa</i> ssp. <i>crassifolia</i>	FE	–	1B.1	Sandy coastal mesas and ocean bluffs; in chaparral or Torrey pine forest. 98–1,198 feet in elevation. Blooms December–June.
Otay manzanita <i>Arctostaphylos otayensis</i>	–	–	1B.2	Metavolcanic soils with other chaparral associates. 394–5,003 feet in elevation. Blooms January–April.
Rainbow manzanita <i>Arctostaphylos rainbowensis</i>	–	–	1B.1	Usually found in gabbro chaparral. 328–2,854 feet in elevation. Blooms December–March.
San Diego sagewort <i>Artemisia palmeri</i>	–	–	4.2	In drainages and riparian areas in sandy soil within chaparral and other habitats. 49–3,002 feet in elevation. Blooms May–September.
Western spleenwort <i>Asplenium vespertinum</i>	–	–	4.2	Rocky sites. 591–3,281 feet in elevation. Blooms February–June.
Salton milk-vetch <i>Astragalus crotalariae</i>	–	–	4.3	Plains, valley floors, washes and fans in the foothills of desert mountains or on open desert, sandy or gravelly soil. 197–820 feet in elevation. Blooms January–April.
Dean's milk-vetch <i>Astragalus deanei</i>	–	–	1B.1	Open, brushy south-facing slopes in Diegan coastal sage, sometimes on recently burned-over hillsides. 230–2,608 feet in elevation. Blooms February–May.
Jacumba milk-vetch <i>Astragalus douglasii</i> var. <i>perstrictus</i>	–	–	1B.2	Stony hillsides and gravelly or sandy flats in open oak woodland. 1,640–4,511 feet in elevation. Blooms April–June.
Harwood's milk-vetch <i>Astragalus insularis</i> var. <i>harwoodii</i>	–	–	2B.2	Open sandy flats and sandy or stony desert washes; mostly in creosote bush scrub. 164–2,297 feet in elevation. Blooms January–May.
Borrego milk-vetch <i>Astragalus lentiginosus</i> var. <i>borreganus</i>	–	–	4.3	Sandy flats and semi-stabilized dunes, locally abundant after rains. 98–1,050 feet in elevation. Blooms February–May.
Peirson's milk-vetch <i>Astragalus magdalenae</i> var. <i>peirsonii</i>	FT	SE	1B.2	Slopes and hollows in mobile dunes, usually to the lee of the prevailing winds. 197–738 feet in elevation. Blooms December–April.
Providence Mountains milk-vetch <i>Astragalus nutans</i>	–	–	4.3	Sandy or gravelly flats and stony washes in the foothills of desert mountains. 1,476–6,398 feet in elevation. Blooms March–June.
San Diego milk-vetch <i>Astragalus oocarpus</i>	–	–	1B.2	Openings in chaparral or on gravelly flats and slopes in thin oak woodland. 394–5,889 feet in elevation. Blooms May–August.
Jaeger's milk-vetch <i>Astragalus pachypus</i> var. <i>jaegeri</i>	–	–	1B.1	Dry ridges and valleys and open sandy slopes; often in grassland and oak-chaparral. 1,198–3,002 feet in elevation. Blooms December–June.

Species	Federal Listing Status <sup>1</sup>	State Listing Status <sup>1</sup>	CRPR	Habitat
Gravel milk-vetch <i>Astragalus sabulorum</i>	–	–	2B.2	Sandy or gravelly flats, washes, and roadsides. 197–2,904 feet in elevation. Blooms February–June.
Coastal dunes milk-vetch <i>Astragalus tener</i> var. <i>titi</i>	FE	SE	1B.1	Moist, sandy depressions of bluffs or dunes along and near the Pacific Ocean; one site on a clay terrace. 3–148 feet in elevation. Blooms March–May.
Coulter’s saltbush <i>Atriplex coulteri</i>	–	–	1B.2	Ocean bluffs, ridgetops, as well as alkaline low places. Alkaline or clay soils. 7–1,509 feet in elevation. Blooms March–October.
South coast saltscale <i>Atriplex pacifica</i>	–	–	1B.2	Alkali soils. 3–1312 feet in elevation. Blooms March–October.
Parish’s brittlescale <i>Atriplex parishii</i>	–	–	1B.1	Vernal pools, chenopod scrub, playas. Usually on drying alkali flats with fine soils. 16–4,659 feet in elevation. Blooms June–October.
California ayenia <i>Ayenia compacta</i>	–	–	2B.3	Sandy and gravelly washes in the desert; dry desert canyons. 197–6,004 feet in elevation. Blooms March–April.
Encinitas baccharis <i>Baccharis vanessae</i>	FT	SE	1B.1	On sandstone soils in steep, open, rocky areas with chaparral associates. 131–2,805 feet in elevation. Blooms August–November.
Higgin’s barberry <i>Berberis higginsiae</i>	–	–	3.2	Rocky, sometimes granitic. 2,625–3,494 feet in elevation. Blooms March–April.
Nevin’s barberry <i>Berberis nevinii</i>	FE	SE	1B.1	On steep, north-facing slopes or in low grade sandy washes. 951–5,167 feet in elevation. Blooms March–June.
Golden-spined cereus <i>Bergerocactus emoryi</i>	–	–	2B.2	Limited to the coastal belt. 10–1,296 feet in elevation. Blooms May–June.
San Diego goldenstar <i>Bloomeria clevelandii</i>	–	–	1B.1	Mesa grasslands, scrub edges; clay soils. Often on mounds between vernal pools in fine, sandy loam. 164–1,526 feet in elevation. Blooms April–May.
Hirshberg’s rockcress <i>Boechera hirshbergiae</i>	–	–	1B.2	Pebble (or pavement) plains. 4,593–4,642 feet in elevation. Blooms March–May.
Thread-leaved brodiaea <i>Brodiaea filifolia</i>	FT	SE	1B.1	Usually associated with annual grassland and vernal pools; often surrounded by shrubland habitats. Occurs in openings on clay soils. 49–3,346 feet in elevation. Blooms March–June.
Orcutt’s brodiaea <i>Brodiaea orcuttii</i>	–	–	1B.1	Mesic, clay habitats; sometimes serpentine; usually in vernal pools and small drainages. 98–5,299 feet in elevation. Blooms May–July.
Santa Rosa Basalt brodiaea <i>Brodiaea santarosae</i>	–	–	1B.2	Santa Rosa Basalt. 1,919–3,428 feet in elevation. Blooms May–June.
Little-leaf elephant tree <i>Bursera microphylla</i>	–	–	2B.3	Hillsides and washes and on canyon sides in California; rocky sites. 640–2,001 feet in elevation. Blooms June–July.

Species	Federal Listing Status <sup>1</sup>	State Listing Status <sup>1</sup>	CRPR	Habitat
Brewer's calandrinia <i>Calandrinia breweri</i>	–	–	4.2	Sandy or loamy soils. Disturbed sites, burns. 33–3,937 feet in elevation. Blooms March–June.
Pink fairy-duster <i>Calliandra eriophylla</i>	–	–	2B.3	Sandy or rocky sites in the desert. 394–4,921 feet in elevation. Blooms January–March.
Dunn's mariposa-lily <i>Calochortus dunnii</i>	–	SR	1B.2	On gabbro or metavolcanic soils; also known from sandstone; often associated with chaparral. 837–5,299 feet in elevation. Blooms April–June.
San Jacinto mariposa-lily <i>Calochortus palmeri</i> var. <i>munzii</i>	–	–	1B.2	In open Jeffrey pine forest as well as in chaparral. 3,084–5,955 feet in elevation. Blooms April–July.
Plummer's mariposa-lily <i>Calochortus plummerae</i>	–	–	4.2	Chaparral, cismontane woodland, coastal scrub, lower montane coniferous forest, valley and foothill grassland in granitic, rocky soils. 330–5,580 feet in elevation. Blooms May–July.
Arizona pussypaws <i>Calyptridium arizonicum</i>	–	–	2B.1	In washes. 1,985–2,608 feet in elevation. Blooms March–April.
Lewis' evening-primrose <i>Camissoniopsis lewisii</i>	–	–	3	Sandy or clay soil. 0–984 feet in elevation. Blooms March–May.
San Luis Obispo sedge <i>Carex obispoensis</i>	–	–	1B.2	Usually in transition zone on sand, clay, serpentine, or gabbro. In seeps. 16–2,772 feet in elevation. Blooms April–June.
Arizona carlowrightia <i>Carlowrightia arizonica</i>	–	–	2B.2	Sandy, granitic alluvium; associated with palm oases in California. 886–3,412 feet in elevation. Blooms March–May.
Payson's jewelflower <i>Caulanthus simulans</i>	–	–	4.2	Frequently in burned areas, or in disturbed sites such as streambeds and rocky, steep slopes. Sandy, granitic soils. 295–7,218 feet in elevation. Blooms March–May.
Lakeside ceanothus <i>Ceanothus cyaneus</i>	–	–	1B.2	Closed-cone coniferous forest, chaparral. 656–3,412 feet in elevation. Blooms April–June.
Viejas Mountain ceanothus <i>Ceanothus foliosus</i> var. <i>viejasensis</i>	–	–	1B.2	Gabbro. 2,575–4,495 feet in elevation. Blooms March–June.
Vine Hill ceanothus <i>Ceanothus foliosus</i> var. <i>vineatus</i>	–	–	1B.1	Chaparral. 150–1,000 feet in elevation. Blooms March–May.
Vail Lake Ceanothus <i>Ceanothus ophiochilus</i>	FT	SE	1B.1	Chaparral (gabbroic, pyroxenite-rich outcrops. 1,905–3,495 feet in elevation. Blooms February–March.
Otay Mountain ceanothus <i>Ceanothus otayensis</i>	–	–	1B.2	Metavolcanic or gabbroic soils. 246–3,806 feet in elevation. Blooms January–April.
Pendleton ceanothus <i>Ceanothus pendletonensis</i>	–	–	1B.2	Chaparral, cismontane woodland. Granitic. 360–2,854 feet in elevation. Blooms March–June.
Wart-stemmed ceanothus <i>Ceanothus verrucosus</i>	–	–	2B.2	Chaparral. 3–1,247 feet in elevation. Blooms December–May.

Species	Federal Listing Status <sup>1</sup>	State Listing Status <sup>1</sup>	CRPR	Habitat
Southern tarplant <i>Centromadia parryi</i> ssp. <i>australis</i>	–	–	1B.1	Often in disturbed sites near the coast at marsh edges, in alkaline soils, sometimes with saltgrass. Sometimes on vernal pool margins. 0–3,199 feet in elevation. Blooms May–November.
Smooth tarplant <i>Centromadia pungens</i> ssp. <i>laevis</i>	–	–	1B.1	Alkali meadow, alkali scrub, and disturbed places. 16–3,839 feet in elevation. Blooms April–September.
Peirson's pincushion <i>Chaenactis carphoclinia</i> var. <i>peirsonii</i>	–	–	1B.3	Open rocky or sandy sites. 10–607 feet in elevation. Blooms March–April.
Orcutt's pincushion <i>Chaenactis glabriuscula</i> var. <i>orcuttiana</i>	–	–	1B.1	Sandy sites. 10–262 feet in elevation. Blooms January–August.
Parish's chaenactis <i>Chaenactis parishii</i>	–	–	1B.3	Chaparral. Rocky sites. 4,265–8,202 feet in elevation. Blooms May–July.
Southern mountain misery <i>Chamaebatia australis</i>	–	–	4.2	Gabbro or metavolcanic soils. 984–3,346 feet in elevation. Blooms November–May.
Salt marsh bird's-beak <i>Chloropyron maritimum</i> ssp. <i>maritimum</i> (formerly <i>Cordylanthus maritimus</i> ssp. <i>maritimus</i> )	FE	SE	1B.2	Limited to the higher zones of salt marsh habitat. 0–33 feet in elevation. Blooms May–October.
Peninsular spineflower <i>Chorizanthe leptotheca</i>	–	–	4.2	On granitic soils, in alluvial fans. 984–6,234 feet in elevation. Blooms May–August.
Orcutt's spineflower <i>Chorizanthe orcuttiana</i>	FE	SE	1B.1	Sandy sites and openings; sometimes in transition zones. 10–410 feet in elevation. Blooms March–May.
Long-spined spineflower <i>Chorizanthe polygonoides</i> var. <i>longispina</i>	–	–	1B.2	Gabbroic clay. 98–5,052 feet in elevation. Blooms April–July.
White-bracted spineflower <i>Chorizanthe xanti</i> var. <i>leucotheca</i>	–	–	1B.2	Sandy or gravelly places. 984–3,937 feet in elevation. Blooms April–June.
Seaside cistanthe <i>Cistanthe maritima</i>	–	–	4.2	Sea bluffs; sandy sites. 16–984 feet in elevation. Blooms March–June.
Delicate clarkia <i>Clarkia delicata</i>	–	–	1B.2	Often on gabbro soils. 164–4,462 feet in elevation. Blooms April–June.
San Miguel savory <i>Clinopodium chandleri</i>	–	–	1B.2	Rocky, gabbroic or metavolcanic substrate. 394–3,527 feet in elevation. Blooms March–July.
Summer holly <i>Comarostaphylis diversifolia</i> ssp. <i>diversifolia</i>	–	–	1B.2	Often in mixed chaparral in California, sometimes post-burn. 98–3,100 feet in elevation. Blooms April–June.
Small-flowered morning-glory <i>Convolvulus simulans</i>	–	–	4.2	Wet clay, serpentine ridges. 98–2,297 feet in elevation. Blooms March–July.

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Small-flowered bird's-beak <i>Cordylanthus parviflorus</i>	–	–	2B.3	Joshua tree woodland, pinyon-juniper woodland, Mojavean desert scrub. 2,297–7,218 feet in elevation. Blooms August–October.
Short-bracted bird's-beak <i>Cordylanthus rigidus</i> ssp. <i>brevibracteatus</i>	–	–	4.3	Chaparral, Lower montane coniferous forest, Pinyon and juniper woodland, Upper montane coniferous forest in granitic areas and openings. 2,000–8,500 feet. Blooms July–August (Sep–Oct)
San Diego sand aster <i>Corethrogyne filaginifolia</i> var. <i>incana</i>	–	–	1B.1	Most sites are disturbed, so hard to tell. Possibly in disturbed sites and ecotones. 10–377 feet in elevation. Blooms June–September.
Del Mar Mesa sand aster <i>Corethrogyne filaginifolia</i> var. <i>linifolia</i>	–	–	1B.1	In coastal, shrubby communities on maritime sediments and conglomerates; in openings. 49–492 feet in elevation. Blooms May–September.
Gander's cryptantha <i>Cryptantha ganderi</i>	–	–	1B.1	On dunes and in washes. 509–1,017 feet in elevation. Blooms February–May.
Wiggins' cryptantha <i>Cryptantha wigginsii</i>	–	–	1B.2	Coastal scrub. Often on clay soils. 148–361 feet in elevation. Blooms February–June.
Pointed dodder <i>Cuscuta californica</i> var. <i>apiculata</i>	–	–	3	Sandy areas in Mojavean desert scrub and Sonoran desert scrub. 0–1,640 feet in elevation. Blooms February–August.
Snake cholla <i>Cylindropuntia californica</i> var. <i>californica</i>	–	–	1B.1	Chaparral, coastal scrub. 49–951 feet in elevation. Blooms April–May.
Pink teddy-bear cholla <i>Cylindropuntia fosbergii</i>	–	–	1B.3	Sonoran desert scrub. 279–2,789 feet in elevation. Blooms March–May.
Wolf's cholla <i>Cylindropuntia wolfii</i>	–	–	4.3	Dry places above the valley floors. 328–3,937 feet in elevation. Blooms March–May.
Otay tarplant <i>Deinandra conjugens</i>	FT	SE	1B.1	Coastal plains, mesas, and river bottoms; often in open, disturbed areas; clay soils. 197–902 feet in elevation. Blooms May–June.
Tecate tarplant <i>Deinandra floribunda</i>	–	–	1B.2	Chaparral, coastal scrub. Often in little drainages or disturbed areas. 230–4,003 feet in elevation. Blooms August–October.
Mojave tarplant <i>Deinandra mohavensis</i>	–	SE	1B.3	Low sand bars in riverbed; mostly in riparian areas or in ephemeral grassy areas. 2,100–5,249 feet in elevation. Blooms June–October.
Paniculate tarplant <i>Deinandra paniculata</i>	–	–	4.2	Usually in vernal mesic sites. Sometimes in vernal pools or on mima mounds near them. 82–3,084 feet in elevation. Blooms April–November.
Cuyamaca larkspur <i>Delphinium hesperium</i> ssp. <i>cuyamaca</i>	–	SR	1B.2	Usually found in low, moist areas within meadows. 3,986–6,086 feet in elevation. Blooms May–July.

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Colorado Desert larkspur <i>Delphinium parishii</i> ssp. <i>subglobosum</i>	–	–	4.3	On dry stony fans and slopes. 1,969–5,906 feet in elevation. Blooms March–June.
North island bush-poppy <i>Dendromecon harfordii</i> var. <i>harfordii</i>	–	–	3.2	Rocky areas in chaparral, and closed-cone coniferous forest. 50–1,380 feet in elevation. Blooms March–November.
Western dichondra <i>Dichondra occidentalis</i>	–	–	4.2	On sandy loam, clay, and rocky soils. 164–1,640 feet in elevation. Blooms March–July.
Orcutt's bird's-beak <i>Dicranostegia orcuttiana</i>	–	–	2B.1	Found in coastal scrub associations on slopes; also reported from intermittently moist swales, and in washes. 0–656 feet in elevation. Blooms April–July.
Mt. Laguna aster <i>Dieteria asteroides</i> var. <i>lagunensis</i>	–	SR	2B.1	Openings in woodland or forest. 2,986–6,004 feet in elevation. Blooms July–August.
Arizona cottontop <i>Digitaria californica</i> var. <i>californica</i>	–	–	2B.3	Rocky schist hillsides in California; open plains out of state. 131–4,888 feet in elevation. Blooms July–November.
Low bush monkeyflower <i>Diplacus aridus</i>	–	–	4.3	Dry, open rocky places. 2,461–3,937 feet in elevation. Blooms April–July.
Cleveland's bush monkeyflower <i>Diplacus clevelandii</i>	–	–	4.2	Disturbed gravelly roadsides and slopes. 1,476–6,562 feet in elevation. Blooms April–July.
California ditaxis <i>Ditaxis serrata</i> var. <i>californica</i>	–	–	3.2	On sandy washes and alluvial fans of the foothills and lower desert slopes. 98–3,281 feet in elevation. Blooms March–December.
Slender-horned Spineflower <i>Dodecahema leptoceras</i>	FE	SE	1B.1	Sandy areas in chaparral, cismontane woodland, and coastal scrub (alluvial fans). 655–2,495 feet in elevation. Blooms April–June.
Cuyamaca Lake downingia <i>Downingia concolor</i> var. <i>brevior</i>	–	SE	1B.1	In vernal seeps, lakes, and pools, and on mudflats, with <i>Orthocarpus</i> , <i>Limnanthes</i> , <i>Collinsia</i> . 4,593–4,921 feet in elevation. Blooms May–July.
Banner dudleya <i>Dudleya alainae</i>	–	–	3.2	Rocky sites. 2,428–3,937 feet in elevation. Blooms April–July.
Orcutt's dudleya <i>Dudleya attenuata</i> ssp. <i>attenuata</i>	–	–	2B.1	Rocky mesas, canyons, and ridges. 10–164 feet in elevation. Blooms May–July.
Blochman's dudleya <i>Dudleya blochmaniae</i> ssp. <i>blochmaniae</i>	–	–	1B.1	Open, rocky slopes; often in shallow clays over serpentine or in rocky areas with little soil. 16–1,476 feet in elevation. Blooms April–June.
Short-leaved dudleya <i>Dudleya brevifolia</i>	–	SE	1B.1	On Torrey sandstone soils; in pebbly openings. 98–410 feet in elevation. Blooms April–May.
Many-stemmed dudleya <i>Dudleya multicaulis</i>	–	–	1B.2	In heavy, often clay soils or grassy slopes. 49–2,592 feet in elevation. Blooms April–July.



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Variegated dudleya <i>Dudleya variegata</i>	–	–	1B.2	In rocky or clay soils, sometimes associated with vernal pool margins. 10–1,903 feet in elevation. Blooms April–June.
Sticky dudleya <i>Dudleya viscida</i>	–	–	1B.2	On north and south-facing cliffs and banks. 33–1,804 feet in elevation. Blooms May–June.
California bottle-brush grass <i>Elymus californicus</i>	–	–	4.3	Broadleaved upland forest, cismontane woodland, north coast coniferous forest, riparian woodland. 50–1,540 feet in elevation. Blooms May–August (Nov).
Harwood's eriastrum <i>Eriastrum harwoodii</i>	–	–	1B.2	Desert dunes. 246–2,362 feet in elevation. Blooms March–June.
Laguna Mountains goldenbush <i>Ericameria cuneata</i> var. <i>macrocephala</i>	–	–	1B.3	Endemic to the Laguna Mountains. Among boulders; in crevices in granitic outcrops and in rocky soil. 3,921–6,070 feet in elevation. Blooms September–December.
Palmer's goldenbush <i>Ericameria palmeri</i> var. <i>palmeri</i>	–	–	1B.1	On granitic soils, on steep hillsides. Mesic sites. 16–2,051 feet in elevation. Blooms September–November.
Sessile-leaved yerba santa <i>Eriodictyon sessilifolium</i>	–	–	2B.1	Coastal scrub. Volcanic. 558–557 feet in elevation. Blooms July.
Vanishing wild buckwheat <i>Eriogonum evanidum</i>	–	–	1B.1	Chaparral, cismontane woodland, lower montane coniferous forest, pinyon and juniper woodland. Sandy sites. 3,199–7,349 feet in elevation. Blooms July–October.
San Diego button-celery <i>Eryngium aristulatum</i> var. <i>parishii</i>	FE	SE	1B.1	San Diego mesa hardpan and claypan vernal pools and southern interior basalt flow vernal pools; usually surrounded by scrub. 49–2,887 feet in elevation. Blooms April–June.
Pendleton button-celery <i>Eryngium pendletonense</i>	–	–	1B.1	Clay. Vernal mesic sites. 66–98 feet in elevation. Blooms April–June.
Sand-loving wallflower <i>Erysimum ammophilum</i>	–	–	1B.2	Sandy openings. 0–197 feet in elevation. Blooms February–June.
Palomar monkeyflower <i>Erythranthe diffusa</i>	–	–	4.3	Sandy or gravelly soils. 4,003–6,004 feet in elevation. Blooms April–June.
Annual rock-nettle <i>Euclide rupestris</i>	–	–	2B.2	Sonoran desert scrub. 869–1,001 feet in elevation. Blooms December–April.
Abrams' spurge <i>Euphorbia abramsiana</i>	–	–	2B.2	Sandy sites. -148–4,741 feet in elevation. Blooms September–November.
Arizona spurge <i>Euphorbia arizonica</i>	–	–	2B.3	Sandy soils. 492–2,953 feet in elevation. Blooms March–April.
Cliff spurge <i>Euphorbia misera</i>	–	–	2B.2	Coastal bluff scrub, coastal scrub, Mojavean desert scrub. Rocky sites. 10–1,411 feet in elevation. Blooms December–August.

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Revolvate spurge <i>Euphorbia revoluta</i>	–	–	4.3	Rocky sites. 3,593–10,171 feet in elevation. Blooms August–September.
San Diego barrel cactus <i>Ferocactus viridescens</i>	–	–	2B.1	On exposed, level or south-sloping areas; often in coastal scrub near crest of slopes. 10–1,608 feet in elevation. Blooms May–June.
Palmer's frankenia <i>Frankenia palmeri</i>	–	–	2B.1	Coastal dunes, coastal salt marsh, playas. 0–33 feet in elevation. Blooms May–July.
Chaparral ash <i>Fraxinus parryi</i>	–	–	2B.2	Open mixed chaparral and in the chaparral-sage scrub interface in California. 699–2,034 feet in elevation. Blooms March–May.
Mexican flannelbush <i>Fremontodendron mexicanum</i>	FE	SR	1B.1	Usually scattered along the borders of creeks or in dry canyons; found on gabbro, serpentine, or metavolcanics. 984–1,608 feet in elevation. Blooms March–June.
Utah vine milkweed <i>Funastrum utahense</i>	–	–	4.2	Sandy or gravelly sites in the desert. 328–4,708 feet in elevation. Blooms April–June.
Borrego bedstraw <i>Galium angustifolium</i> ssp. <i>borregoense</i>	–	SR	1B.3	Steep walls and (usually north) slopes in rocky watersheds or canyons. 1,148–4,101 feet in elevation. Blooms March.
Slender bedstraw <i>Galium angustifolium</i> ssp. <i>gracillimum</i>	–	–	4.2	Joshua tree "woodland" and Sonoran desert scrub on granitic and rocky soils. 425–5,085 feet in elevation. Blooms April–June (July).
San Jacinto Mountains bedstraw <i>Galium angustifolium</i> ssp. <i>jacinticum</i>	–	–	1B.3	Lower montane coniferous forest. Open mixed forest. 3,904–8,005 feet in elevation. Blooms June–August.
Desert bedstraw <i>Galium proliferum</i>	–	–	2B.2	Rocky, limestone substrate. 3,904–5,348 feet in elevation. Blooms March–June.
Campbell's liverwort <i>Geothallus tuberosus</i>	–	–	1B.1	Coastal scrub, vernal pools. Liverwort known from mesic soil. 33–1,969 feet in elevation.
Sticky geraea <i>Geraea viscida</i>	–	–	2B.3	Loamy coarse sand to gravelly sand soils; often in post burned areas and in bulldozed areas. 1,476–5,577 feet in elevation. Blooms May–June.
El Paso gilia <i>Gilia mexicana</i>	–	–	2B.3	Alluvial soil in washes, on bajadas, hillsides, arroyos, and plains. 3,445–4,839 feet in elevation. Blooms May.
Mission Canyon bluecup <i>Githopsis diffusa</i> ssp. <i>filicaulis</i>	–	–	3.1	Probably in open, grassy places and mesic, disturbed areas; much overlooked. 1,476–2,297 feet in elevation. Blooms April–June.
San Diego gumplant <i>Grindelia hallii</i>	–	–	1B.2	Frequently occurs in low moist areas in meadows; associated species commonly include <i>Wyethia</i> , <i>Ranunculus</i> , <i>Sidalcea</i> . 607–5,725 feet in elevation. Blooms May–October.

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Palmer's grapplinghook <i>Harpagonella palmeri</i>	–	–	4.2	Clay soils; open grassy areas within shrubland. 66–3,133 feet in elevation. Blooms March–May.
Orcutt's hazardia <i>Hazardia orcuttii</i>	–	ST	1B.1	Often on clay; in grassy edges of chaparral and coastal scrub. 16–279 feet in elevation. Blooms August–October.
Algodones Dunes sunflower <i>Helianthus niveus</i> ssp. <i>tephrodes</i>	–	SE	1B.2	Desert dunes. On partially stabilized desert dunes. 164–328 feet in elevation. Blooms September–May.
Curly herissantia <i>Herissantia crispa</i>	–	–	2B.3	Sonoran desert scrub. 2,297–2,379 feet in elevation. Blooms August–September.
Hogwallow starfish <i>Hesperovax caulescens</i>	–	–	4.2	Valley and foothill grassland, vernal pools. Clay soils; mesic sites. 0–1,657 feet in elevation. Blooms March–June.
Tecate cypress <i>Hesperocyparis forbesii</i>	–	–	1B.1	Primarily on north-facing slopes; groves often associated with chaparral. On clay or gabbro. 197–5,397 feet in elevation.
Cuyamaca cypress <i>Hesperocyparis stephensonii</i>	–	–	1B.1	Restricted to the southwest slopes of Cuyamaca Peak, on gabbroic rock. 3,396–4,692 feet in elevation.
Beach goldenaster <i>Heterotheca sessiliflora</i> ssp. <i>sessiliflora</i>	–	–	1B.1	Sandy sites. 0–16 feet in elevation. Blooms March–December.
Laguna Mountains alumroot <i>Heuchera brevistaminea</i>	–	–	1B.3	Steep, rocky slopes. 4,462–6,562 feet in elevation. Blooms April–July.
Parish's alumroot <i>Heuchera parishii</i>	–	–	1B.3	Alpine boulder and rock fields, lower montane coniferous forest, subalpine coniferous forest, upper montane coniferous forest, 4,920–12,470 feet in elevation. Blooms June–August.
San Diego County alumroot <i>Heuchera rubescens</i> var. <i>versicolor</i>	–	–	3.3	Rocky outcrops. 3,789–6,398 feet in elevation. Blooms May–June.
Graceful tarplant <i>Holocarpha virgata</i> ssp. <i>elongata</i>	–	–	4.2	Coastal sage scrub, foothill woodland, chaparral, valley grassland. 200–3,600 feet in elevation. Blooms May–November.
Vernal barley <i>Hordeum intercedens</i>	–	–	3.2	Vernal pools, dry, saline streambeds, alkaline flats. 16–3,281 feet in elevation. Blooms March–June.
Mesa horkelia <i>Horkelia cuneata</i> var. <i>puberula</i>	–	–	1B.1	Sandy or gravelly sites. 49–5,397 feet in elevation. Blooms February–July.
Ramona horkelia <i>Horkelia truncata</i>	–	–	1B.3	Habitats in California include mixed chaparral, vernal streams, and disturbed areas near roads. Clay soil; at least sometimes on gabbro. 1,312–4,265 feet in elevation. Blooms May–June.
pink velvet-mallow <i>Horsfordia alata</i>	–	–	4.3	Rocky areas in Sonoran desert scrub. 330–1,640 feet in elevation. Blooms February–December.

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Newberry's velvet-mallow <i>Horsfordia newberryi</i>	–	–	4.3	Rocky sites. 10–2,625 feet in elevation. Blooms February–December.
Otay Mountain lotus <i>Hosackia crassifolia</i> var. <i>otayensis</i>	–	–	1B.1	Metavolcanic, often in disturbed areas. 1,247–3,297 feet in elevation. Blooms May–August.
San Diego sunflower <i>Hulsea californica</i>	–	–	1B.3	Burns, clearings, or openings in chaparral and pine-oak woodland. 1,198–6,102 feet in elevation. Blooms April–June.
Mexican hulsea <i>Hulsea mexicana</i>	–	–	2B.3	Volcanic soils or burns and disturbed sites. 3,593–4,265 feet in elevation. Blooms April–June.
Beautiful hulsea <i>Hulsea vestita</i> ssp. <i>callicarpha</i>	–	–	4.2	Rocky or gravelly, granitic sites. 3,002–10,007 feet in elevation. Blooms May–October.
Wright's hymenothrix <i>Hymenothrix wrightii</i>	–	–	4.3	Cismontane woodland, lower montane coniferous forest, valley and foothill grassland. 4,593–5,085 feet in elevation. Blooms June–October.
California satintail <i>Imperata brevifolia</i>	–	–	2B.1	Mesic areas in chaparral, coastal scrub, meadows and seeps (often alkali), Mojavean desert scrub, riparian scrub. 0-3,985 feet in elevation. Blooms September-May .
Slender-leaved ipomopsis <i>Ipomopsis tenuifolia</i>	–	–	2B.3	Dry rocky or gravelly slopes. 2,789–4,199 feet in elevation. Blooms March–May.
Decumbent goldenbush <i>Isocoma menziesii</i> var. <i>decumbens</i>	–	–	1B.2	Sandy soils; often in disturbed sites. 3–3,002 feet in elevation. Blooms April–November.
San Diego marsh-elder <i>Iva hayesiana</i>	–	–	2B.2	Alkali playa, wetland. Marshes and swamps, playas. River washes. 3–1,411 feet in elevation. Blooms April–October.
Ribbed cryptantha <i>Johnstonella costata</i>	–	–	4.3	Sandy and gravelly places. -197–1,640 feet in elevation. Blooms February–May.
Winged cryptantha <i>Johnstonella holoptera</i>	–	–	4.3	Mojavean desert scrub, Sonoran desert scrub. 328–5,545 feet in elevation. Blooms March–April.
Southern California black walnut <i>Juglans californica</i>	–	–	4.2	Chaparral, coastal scrub, cismontane woodland. Slopes, canyons, alluvial habitats. 164–2,953 feet in elevation. Blooms March–August.,
Southwestern spiny rush <i>Juncus acutus</i> ssp. <i>leopoldii</i>	–	–	4.2	Moist saline places. 10–2,953 feet in elevation. Blooms May–June.
Cooper's rush <i>Juncus cooperi</i>	–	–	4.3	Mesic sites; alkaline or saline soils. -853–5,807 feet in elevation. Blooms April–May.
Santa Lucia dwarf rush <i>Juncus luciensis</i>	–	–	1B.2	Vernal pools, ephemeral drainages, wet meadow habitats, and stream sides. 984–6,693 feet in elevation. Blooms April–July.
Warty caltrop <i>Kallstroemia parviflora</i>	–	–	4.2	Sometimes disturbed areas. 2,805–5,594 feet in elevation. Blooms August–November.

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Coulter's goldfields <i>Lasthenia glabrata</i> ssp. <i>coulteri</i>	–	–	1B.1	Usually found on alkaline soils in playas, sinks, and grasslands. 3–4,511 feet in elevation. Blooms February–June.
Pride-of-california <i>Lathyrus splendens</i>	–	–	4.3	Chaparral. Sandy to gravelly soils. 656–5,003 feet in elevation. Blooms March–June.
Heart-leaved pitcher sage <i>Lepechinia cardiophylla</i>	–	–	1B.2	Closed-cone coniferous forest, chaparral, cismontane woodland. 1,706–4,495 feet in elevation. Blooms April–July.
Gander's pitcher sage <i>Lepechinia ganderi</i>	–	–	1B.3	Usually found in chaparral or coastal scrub; sometimes in tecate cypress woodland. Gabbro or metavolcanic substrate. 1,001–3,297 feet in elevation. Blooms June–July.
Blair Valley pepper-grass <i>Lepidium flavum</i> var. <i>felipense</i>	–	–	1B.2	Sonoran desert scrub, pinyon and juniper woodland. Sandy, clay, or silty soils. 1,099–2,756 feet in elevation. Blooms March–May.
Robinson's pepper-grass <i>Lepidium virginicum</i> var. <i>robinsonii</i>	–	–	4.3	Chaparral, coastal scrub. Dry soils, shrubland. 3–2,904 feet in elevation. Blooms January–July.
Santa Rosa Mountains leptosiphon <i>Leptosiphon floribundus</i> ssp. <i>hallii</i>	–	–	1B.3	Sonoran desert scrub, pinyon and juniper woodland. Desert canyons. 3,281–6,562 feet in elevation. Blooms May–July.
Large-flowered leptosiphon <i>Leptosiphon grandiflorus</i>	–	–	4.2	Sandy areas in cismontane woodland, closed-cone coniferous forest, coastal bluff scrub, coastal dunes, coastal prairie, coastal scrub, or valley and foothill grassland
Sea dahlia <i>Leptosyne maritima</i>	–	–	2B.2	Occurs on a variety of soil types, including sandstone. 16–607 feet in elevation. Blooms March–May.
Warner Springs lessingia <i>Lessingia glandulifera</i> var. <i>tomentosa</i>	–	–	1B.1	Along roadsides, sandy soil, in high desert chaparral. 2,854–4,003 feet in elevation. Blooms August–October.
Woolly-headed lessingia <i>Lessingia hololeuca</i>	–	–	3	Broadleafed upland forest, coastal scrub, lower montane coniferous forest, valley and foothill grassland. Clay and serpentinite soils. 50–1,000 feet in elevation. Blooms June–October.
Short-sepaled lewisia <i>Lewisia brachycalyx</i>	–	–	2B.2	Dry to moist meadows in rich loam. 4,495–8,038 feet in elevation. Blooms February–June.
Humboldt lily <i>Lilium humboldtii</i> ssp. <i>humboldtii</i>	–	–	4.2	Openings in chaparral, cismontane woodland, and lower montane coniferous forest
Ocellated humboldt lily <i>Lilium humboldtii</i> ssp. <i>ocellatum</i>	–	–	4.2	Yellow-pine forest or openings, oak canyons. 98–5,906 feet in elevation. Blooms March–July.

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Lemon lily <i>Lilium parryi</i>	–	–	1B.2	Wet, mountainous terrain in forested areas, on shady edges of streams, and in open boggy meadows and seeps. 4,003–9,006 feet in elevation. Blooms July–August.
Parish’s meadowfoam <i>Limnanthes alba</i> ssp. <i>parishii</i>	–	SE	1B.2	Vernally moist areas and temporary seeps of highland meadows and plateaus; often bordering lakes and streams. 1,985–5,922 feet in elevation. Blooms April–June.
Desert beauty <i>Linanthus bellus</i>	–	–	2B.1	Dry slopes and flats; open sandy spots in chaparral, mostly in loamy coarse sandy dg soil types. 3,281–4,593 feet in elevation. Blooms April–May.
Jacumba Mountains linanthus <i>Linanthus maculatus</i> ssp. <i>emaculatus</i>	–	–	1B.1	Sandy or course, opaque-white, decomposed granite soils of washes and on flats near wash margins and on the edges of desert dunes. 1,115–1,919 feet in elevation. Blooms Apr.
Orcutt’s linanthus <i>Linanthus orcuttii</i>	–	–	1B.3	Sometimes in disturbed areas; often in gravelly clearings. 3,002–7,037 feet in elevation. Blooms May–June.
Mountain Springs bush lupine <i>Lupinus albifrons</i> var. <i>medius</i>	–	–	1B.3	Dry, sandy, gently sloping canyon washes, sandy soil pockets, and flats in steeper slopes and drainages. 1,394–4,495 feet in elevation. Blooms March–May.
California box-thorn <i>Lycium californicum</i>	–	–	4.2	Coastal bluff scrub, coastal scrub. 16–492 feet in elevation. Blooms March–August.
Parish’s desert-thorn <i>Lycium parishii</i>	–	–	2B.3	Coastal scrub, Sonoran desert scrub. 443–3,281 feet in elevation. Blooms March–April.
Torrey’s box-thorn <i>Lycium torreyi</i>	–	–	4.2	Sandy, rocky, washes, streambanks, desert valleys. - 164–4,003 feet in elevation. Blooms March–June.
Palmer’s lyrepod <i>Lyrocarpa coulteri</i>	–	–	4.3	Rocky, dry hillsides and washes. 394–2,608 feet in elevation. Blooms December–April.
Brown turbans <i>Malperia tenuis</i>	–	–	2B.3	Sandy places and rocky slopes. 0–1,804 feet in elevation. Blooms March–April.
Spear-leaf matelea <i>Matelea parvifolia</i>	–	–	2B.3	Dry rocky ledges and slopes. 1,444–3,593 feet in elevation. Blooms March–May.
Hairy stickleaf <i>Mentzelia hirsutissima</i>	–	–	2B.3	Washes, fans, slopes; coarse rubble and talus slopes; rocky sites. 0–2,297 feet in elevation. Blooms March–May.
Spiny-hair blazing star <i>Mentzelia tricuspis</i>	–	–	2B.1	Sandy or gravelly slopes and washes. 492–4,199 feet in elevation. Blooms March–May.
Small-flowered microseris <i>Microseris douglasii</i> ssp. <i>platycarpa</i>	–	–	4.2	Alkaline clay in river bottoms. 49–,3510 feet in elevation. Blooms March–May.

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Shevock's copper moss <i>Mielichhoferia shevockii</i>	–	–	1B.2	Moss on metamorphic rocks containing heavy metals; mesic sites. On rocks along roads. 2,461–4,600 feet in elevation.
Slender-lobed four o'clock <i>Mirabilis tenuiloba</i>	–	–	4.3	Sonoran desert scrub. 984–3,600 feet in elevation. Blooms March–May.
Light gray lichen <i>Mobergia calculiformis</i>	–	–	3	Abundant on cobbles in right habitat; only known from one site in Baja and one in San Diego area. 33 feet in elevation.
Small-headed monardella <i>Monardella breweri</i> ssp. <i>microcephala</i>	–	–	2B.2	Chaparral, cismontane woodland, lower montane coniferous forest. Associated with disturbed areas (sometimes), granitic soils, and openings. 755-3,935 feet in elevation. Blooms May-August.
Intermediate monardella <i>Monardella hypoleuca</i> ssp. <i>intermedia</i>	–	–	1B.3	Often in steep, brushy areas. 640–5,500 feet in elevation. Blooms April–September.
Felt-leaved monardella <i>Monardella hypoleuca</i> ssp. <i>lanata</i>	–	–	1B.2	Occurs in understory in mixed chaparral, chamise chaparral, and southern oak woodland. Sandy soil. 984–5,167 feet in elevation. Blooms June–August.
Hall's monardella <i>Monardella macrantha</i> ssp. <i>hallii</i>	–	–	1B.3	Dry slopes and ridges in openings within the above communities. 2,395–7,201 feet in elevation. Blooms June–October.
San Felipe monardella <i>Monardella nana</i> ssp. <i>leptosiphon</i>	–	–	1B.2	Sometimes in openings and fuel breaks or in the understory of forest or chaparral. 2,789–7,956 feet in elevation. Blooms June–July.
Jennifer's monardella <i>Monardella stoneana</i>	–	–	1B.2	Usually found in rocky, intermittent streambeds. 33–2,592 feet in elevation. Blooms June–September.
Willow monardella <i>Monardella viminea</i>	FE	SE	1B.1	In canyons, in rocky and sandy places, sometimes in washes or floodplains. Alluvial, ephemeral washes with adjacent coastal scrub. 148–755 feet in elevation. Blooms June–August.
California spineflower <i>Mucronea californica</i>	–	–	4.2	Sandy soil. 0–4,593 feet in elevation. Blooms March–July.
Appressed muhly <i>Muhlenbergia appressa</i>	–	–	2B.2	Rocky slopes, canyon bottoms. 66–5,249 feet in elevation. Blooms April–May.
Little mouseling <i>Myosurus minimus</i> ssp. <i>apus</i>	–	–	3.1	Vernal pools, valley and foothill grassland. Alkaline soils. 66–2,100 feet in elevation. Blooms March–June.
Mud nama <i>Nama stenocarpa</i>	–	–	2B.2	Lake shores, riverbanks, intermittently wet areas. 16–1,640 feet in elevation. Blooms January–July.
Spreading navarretia <i>Navarretia fossalis</i>	FT	–	1B.1	San Diego hardpan and San Diego claypan vernal pools; in swales and vernal pools, often surrounded by other habitat types. 49–2,789 feet in elevation. Blooms April–June.

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Baja navarretia <i>Navarretia peninsularis</i>	–	–	1B.2	Wet areas in open forest. 3,773–7,759 feet in elevation. Blooms June–August.
Prostrate vernal pool navarretia <i>Navarretia prostrata</i>	–	–	1B.1	Alkaline soils in grassland, or in vernal pools. Mesic, alkaline sites. 10–4,052 feet in elevation. Blooms April–July.
Coast woolly-heads <i>Nemacaulis denudata</i> var. <i>denudata</i>	–	–	1B.2	Coastal dunes. 0–328 feet in elevation. Blooms April–September.
Slender cottonheads <i>Nemacaulis denudata</i> var. <i>gracilis</i>	–	–	2B.2	In dunes or sand. -164–1,312 feet in elevation. Blooms April–May.
Twisselmann's nemacladus <i>Nemacladus twisselmannii</i> var. <i>twisselmannii</i>	–	SR	1B.2	Sandy or rocky granitic soils, open ridgetops, and gentle slopes in Jeffrey pine forest. 3,986–7,808 feet in elevation. Blooms July.
Chaparral nolina <i>Nolina cismontana</i>	–	–	1B.2	Primarily on sandstone and shale substrates; also known from gabbro. 459–4,183 feet in elevation. Blooms May–July.
Dehesa nolina <i>Nolina interrata</i>	–	SE	1B.1	Typically on rocky hillsides or ravines on ultramafic soils. 837–2,411 feet in elevation. Blooms June–July.
California adder's-tongue <i>Ophioglossum californicum</i>	–	–	4.2	Grassy pastures, vernal pool margins, chaparral. Mesic sites. 197–1,722 feet in elevation. Blooms January–June.
Wiggins' cholla <i>Opuntia wigginsii</i>	–	–	3.3	Sandy soils. 98–2,904 feet in elevation. Blooms March.
California Orcutt grass <i>Orcuttia californica</i>	FE	SE	1B.1	Vernal pools, wetland. 33–2,165 feet in elevation. Blooms April–August.
Baja California birdbush <i>Ornithostaphylos oppositifolia</i>	–	SE	2B.1	Chaparral. Associated with <i>Ceanothus verrucosus</i> and <i>Salvia mellifera</i> in California. 180–2,625 feet in elevation. Blooms January–April.
Gander's ragwort <i>Packera ganderi</i>	–	SR	1B.2	Ultramafic. Chaparral. Recently burned sites and gabbro outcrops. 1,591–3,510 feet in elevation. Blooms April–June.
San Jacinto beardtongue <i>Penstemon clevelandii</i> var. <i>connatus</i>	–	–	4.3	Dry rocky hillsides in coarse sandy loam and in cracks in rock outcrops. 1,312–4,921 feet in elevation. Blooms March–May.
Thurber's beardtongue <i>Penstemon thurberi</i>	–	–	4.2	Dry sandy washes. 1,640–4,003 feet in elevation. Blooms May–July.
Golden-rayed pentachaeta <i>Pentachaeta aurea</i> ssp. <i>aurea</i>	–	–	4.2	Chaparral, cismontane woodland, coastal scrub, lower montane coniferous forest, valley and foothill grassland, riparian woodland. 262–6,070 feet in elevation. Blooms March–July.
Narrow-leaf sandpaper-plant <i>Petalonyx linearis</i>	–	–	2B.3	Sandy or rocky canyons. -82–3,658 feet in elevation. Blooms March–May.



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Santiago Peak phacelia <i>Phacelia keckii</i>	–	–	1B.3	Open areas, sometimes along creeks. 1,788–5,249 feet in elevation. Blooms May–June.
South coast branching phacelia <i>Phacelia ramosissima</i> var. <i>austrolitoralis</i>	–	–	3.2	Sandy, sometimes rocky sites. 16–984 feet in elevation. Blooms March–August.
Brand's star phacelia <i>Phacelia stellaris</i>	–	–	1B.1	Open areas. 3–1,312 feet in elevation. Blooms March–June.
Arizona pholistoma <i>Pholistoma auritum</i> var. <i>arizonicum</i>	–	–	2B.3	Mojavean desert scrub. 902–2,740 feet in elevation. Blooms March.
Woolly chaparral-pea <i>Pickeringia montana</i> var. <i>tomentosa</i>	–	–	4.3	Chaparral. Gabbroic or granitic substrates; usually clay. 0–5,577 feet in elevation. Blooms May–August.
Thurber's pilostyles <i>Pilostyles thurberi</i>	–	–	4.3	Sandy alluvial plains, sandstone talus. Parasite on <i>Psoralea emoryi</i> . -164–1,198 feet in elevation. Blooms December–April.
Torrey pine <i>Pinus torreyana</i> ssp. <i>torreyana</i>	–	–	1B.2	On dry, sandstone slopes. 230–525 feet in elevation.
Coleman's rein orchid <i>Piperia colemanii</i>	–	–	4.3	Sandy areas in chaparral and lower montane coniferous forest
Chaparral rein orchid <i>Piperia cooperi</i>	–	–	4.2	Chaparral, cismontane woodland, valley and foothill grassland. 49–607 feet in elevation. Blooms March–June.
Narrow-petaled rein orchid <i>Piperia leptopetala</i>	–	–	4.3	Cismontane woodland, lower montane coniferous forest, upper montane coniferous forest. 1,247–7,300 feet in elevation. Blooms May–July.
Wine-colored tufa moss <i>Plagiobryoides vinosula</i>	–	–	4.2	Granitic rock or granitic soil along seeps and streams, sometimes clay. 98–5,692 feet in elevation.
San Bernardino blue grass <i>Poa atropurpurea</i>	FE	–	1B.2	Mesic meadows of open pine forests and grassy slopes, loamy alluvial to sandy loam soil. 4,117–8,711 feet in elevation. Blooms May–July.
San Diego mesa mint <i>Pogogyne abramsii</i>	FE	SE	1B.1	Vernal pools within grasslands, chamise chaparral, or coastal sage scrub communities. 230–640 feet in elevation. Blooms March–July.
Otay Mesa mint <i>Pogogyne nudiuscula</i>	FE	SE	1B.1	Dry beds of vernal pools and moist swales with <i>Eryngium aristulatum</i> var. <i>parishii</i> and <i>Orcuttia californica</i> . 443–541 feet in elevation. Blooms May–July.
Fish's milkwort <i>Polygala cornuta</i> var. <i>fishiae</i>	–	–	4.3	Scree slopes, brushy ridges, and along creeks; often with oaks. 328–3,281 feet in elevation. Blooms May–August.
Desert unicorn-plant <i>Proboscidea althaeifolia</i>	–	–	4.3	Gently sloping sandy flats and washes. 279–3,281 feet in elevation. Blooms May–September.

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White rabbit-tobacco <i>Pseudognaphalium leucocephalum</i>	–	–	2B.2	Sandy, gravelly sites. 115–1,690 feet in elevation. Blooms August–November.
Deep Canyon snapdragon <i>Pseudorontium cyathiferum</i>	–	–	2B.3	Rocky sites. 0–2,625 feet in elevation. Blooms February–April.
Delta woolly-marbles <i>Psilocarphus brevissimus</i> var. <i>multiflorus</i>	–	–	4.2	Vernal pools, wetlands, and flats. 33–1,640 feet in elevation. Blooms May–June.
Cedros Island oak <i>Quercus cedrosensis</i>	–	–	2B.2	Closed-cone coniferous forest, chaparral, coastal scrub. 427–3,199 feet in elevation. Blooms April–May.
Nuttall's scrub oak <i>Quercus dumosa</i>	–	–	1B.1	Generally, on sandy soils near the coast; sometimes on clay loam. 49–1,312 feet in elevation. Blooms February–April.
Engelmann oak <i>Quercus engelmannii</i>	–	–	4.2	Cismontane woodland, chaparral, riparian woodland, valley and foothill grassland. 164–4,265 feet in elevation. Blooms March–June.
Single-leaved skunkbrush <i>Rhus aromatica</i> var. <i>simplicifolia</i>	–	–	2B.3	Pinyon and juniper woodland, usually on granitic soils. 2,395–4,364 feet in elevation. Blooms March–April.
Hoffmann's bitter gooseberry <i>Ribes amarum</i> var. <i>hoffmannii</i>	–	–	3	Chaparral and riparian woodland. 15–3,905 feet in elevation. Blooms March–April.
Moreno currant <i>Ribes canthariforme</i>	–	–	1B.3	Among boulders in oak-manzanita thickets; shaded or partially shaded sites. 1,115–3,937 feet in elevation. Blooms February–April.
Santa Catalina Island currant <i>Ribes viburnifolium</i>	–	–	1B.2	Among shrubs in canyons. 98–1,001 feet in elevation. Blooms February–April.
Coulter's matilija poppy <i>Romneya coulteri</i>	–	–	4.2	In washes and on slopes. Often seen after burns. 66–3,937 feet in elevation. Blooms March–July.
Gambel's water cress <i>Rorippa gambelii</i>	FE	ST	1B.1	Freshwater and brackish marshes at the margins of lakes and along streams, in or just above the water level. 16–1,083 feet in elevation. Blooms April–October.
Small-leaved rose <i>Rosa minutifolia</i>	–	SE	2B.1	On cobbly soil at the head of a small, dry canyon on Otay Mesa. 492–525 feet in elevation. Blooms January–June.
Cuyamaca raspberry <i>Rubus glaucifolius</i> var. <i>ganderi</i>	–	–	3.1	Open, moist forest; gabbro soils. 3,937–5,495 feet in elevation. Blooms May–June.
Parish's rupertia <i>Rupertia rigida</i>	–	–	4.3	Chaparral, lower montane coniferous forest, cismontane woodland, meadows and seeps, pebble plain, valley and foothill grassland. 2,297–8,202 feet in elevation. Blooms June–August.

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Caraway-leaved woodland-gilia <i>Saltugilia caruifolia</i>	–	–	4.3	In disturbed areas near roads and on fuel breaks, in sandy washes, on old burns; and in rocky outcrops. 2,756–7,546 feet in elevation. Blooms May–August.
Munz's sage <i>Salvia munzii</i>	–	–	2B.2	Rolling hills and slopes, in rocky soil. 115–1,886 feet in elevation. Blooms February–April.
Tracy's sanicle <i>Sanicula tracyi</i>	–	–	4.2	Cismontane woodland, lower montane coniferous forest, upper montane coniferous forest. 330–5,200 feet in elevation. Blooms April–July.
Southern mountains skullcap <i>Scutellaria bolanderi</i> ssp. <i>austromontana</i>	–	–	1B.2	In gravelly soils on streambanks or in mesic sites in oak or pine woodland. 1,394–6,562 feet in elevation. Blooms June–August.
Bluish spike-moss <i>Selaginella asprella</i>	–	–	4.3	Dry, rocky soils, crevices; granitic substrate. 5,249–8,858 feet in elevation. Blooms July.
Ashy spike-moss <i>Selaginella cinerascens</i>	–	–	4.1	Chaparral, coastal scrub. 66–2,100 feet in elevation.
Desert spike-moss <i>Selaginella eremophila</i>	–	–	2B.2	Shaded sites, gravelly soils; crevices or among rocks. 656–2,953 feet in elevation. Blooms June.
Chaparral ragwort <i>Senecio aphanactis</i>	–	–	2B.2	Drying alkaline flats. 66–2,805 feet in elevation. Blooms January–April.
San Gabriel ragwort <i>Senecio astephanus</i>	–	–	4.3	Rocky slopes. 1,312–4,921 feet in elevation. Blooms May–July.
Cove's cassia <i>Senna covesii</i>	–	–	2B.2	Dry, sandy desert washes, slopes. 837–4,249 feet in elevation. Blooms March–June.
Hammitt's clay-cress <i>Sibaropsis hammittii</i>	–	–	1B.2	Mesic microsites in open areas on clay soils in <i>Stipa</i> grassland. Often surrounded by <i>Adenostoma</i> chaparral. 2,362–3,494 feet in elevation. Blooms March–April.
Salt Spring checkerbloom <i>Sidalcea neomexicana</i>	–	–	2B.2	Alkali springs and marshes. 0–5,020 feet in elevation. Blooms March–June.
Hellhole scaleseed <i>Spermolepis infernensis</i>	–	–	1B.2	Rocky or sandy soils. 755–2,198 feet in elevation. Blooms March–April.
Western bristly scaleseed <i>Spermolepis lateriflora</i>	–	–	2A	Rocky or sandy soils. 1,198–2,198 feet in elevation. Blooms March–April.
Bottle liverwort <i>Sphaerocarpos drewiae</i>	–	–	1B.1	Liverwort in openings; on soil. 295–1,969 feet in elevation.
Prairie false oat <i>Sphenopholis interrupta</i> ssp. <i>californica</i>	–	–	1B.1	Friable clay lenses. 285 feet in elevation.
Prairie wedge grass <i>Sphenopholis obtusata</i>	–	–	2B.2	Open moist sites, along rivers and springs, alkaline desert seeps. 984–6,562 feet in elevation. Blooms April–July.
Purple stemodia <i>Stemodia durantifolia</i>	–	–	2B.1	Sandy soils; mesic sites. 115–1,263 feet in elevation. Blooms January–December.

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San Diego County needle grass <i>Stipa diegoensis</i>	–	–	4.2	Rocky slopes, sea cliffs and stream banks; often in mesic sites. 33–2,625 feet in elevation. Blooms February–June.
Laguna Mountains jewelflower <i>Streptanthus bernardinus</i>	–	–	4.3	Clay or decomposed granite soils; sometimes in disturbed areas such as stream sides or roadcuts. 4,724–8,202 feet in elevation. Blooms May–August.
Southern jewelflower <i>Streptanthus campestris</i>	–	–	1B.3	Open, rocky areas. 2,953–7,546 feet in elevation. Blooms May–July.
Oil neststraw <i>Stylocline citroleum</i>	–	–	1B.1	Flats, clay soils in oil-producing areas. 164–1,312 feet in elevation. Blooms March–April.
Estuary seablite <i>Suaeda esteroa</i>	–	–	1B.2	Coastal salt marshes in clay, silt, and sand substrates. 0–16 feet in elevation. Blooms May–October.
Woolly seablite <i>Suaeda taxifolia</i>	–	–	4.2	Margins of salt marshes. 0–164 feet in elevation. Blooms January–December.
San Bernardino aster <i>Symphotrichum defoliatum</i>	–	–	1B.2	Vernally mesic grassland or near ditches, streams, and springs; disturbed areas. 7–6,693 feet in elevation. Blooms July–November.
Parry's tetracoccus <i>Tetracoccus dioicus</i>	–	–	1B.2	Stony, decomposed gabbro soil. 541–3,281 feet in elevation. Blooms April–May.
Woven-spored lichen <i>Texosporium sancti-jacobi</i>	–	–	3	Chaparral (openings), often on soil, small mammal pellets, dead twigs, and on <i>Selaginella</i> . 195–2,165 feet in elevation.
Velvety false lupine <i>Thermopsis californica</i> var. <i>semota</i>	–	–	1B.2	Pine forests and meadow edges, on rocky slopes and outcrops, and along roadsides. 3,281–6,135 feet in elevation. Blooms March–June.
Rigid fringepod <i>Thysanocarpus rigidus</i>	–	–	1B.2	Dry, rocky slopes and ridges of oak and pine woodland in arid mountain ranges. 1,394–7,103 feet in elevation. Blooms February–May.
California screw moss <i>Tortula californica</i>	–	–	1B.2	Moss growing on sandy soil. 33–4,790 feet in elevation.
Coastal triquetrella <i>Triquetrella californica</i>	–	–	1B.2	Grows within 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. 33–328 feet in elevation.
San Diego County viguiera <i>Viguiera laciniata</i>	–	–	4.3	Slopes and ridges. 197–2,461 feet in elevation. Blooms February–June.
La Purisima viguiera <i>Viguiera purisimae</i>	–	–	2B.3	Dry, rocky places in open shrubland. 1,198–1,394 feet in elevation. Blooms April–September.
Palmer's jackass clover <i>Wislizenia refracta</i> ssp. <i>palmeri</i>	–	–	2B.2	Known from desert basins, dunes, washes, and benches of sand field ecotones where upland desert scrubs, typically creosote bush scrub or palo verde, transition to halophytic scrub or mesquite. 410–574 feet in elevation. Blooms January–December.

Species	Federal Listing Status <sup>1</sup>	State Listing Status <sup>1</sup>	CRPR	Habitat
Rush-like bristleweed <i>Xanthisma junceum</i>	–	–	4.3	Dry hillsides. 787–3,281 feet in elevation. Blooms May–January.
Orcutt's woody-aster <i>Xylorhiza orcuttii</i>	–	–	1B.2	Arid canyons; often in washes. 0–1,198 feet in elevation. Blooms March–April.

Notes: CRPR = California Rare Plant Rank; CESA = California Endangered Species Act; CEQA = California Environmental Quality Act; ESA = Endangered Species Act; NPPA = Native Plant Protection Act

1 Legal Status Definitions

**Federal:**

FE Federally Listed as Endangered (legally protected by ESA)

FT Federally Listed as Threatened (legally protected by ESA)

**State:**

SE State Listed as Endangered (legally protected by CESA)

SR State Listed as Rare (legally protected by NPPA)

**California Rare Plant Ranks:**

1A Plant species that are presumed extirpated or extinct because they have not been seen or collected in the wild in California for many years. A plant is extinct if it no longer occurs anywhere. A plant that is extirpated from California has been eliminated from California but may still occur elsewhere in its range.

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 Plant species for which there is not enough information to assign the species to one of the other ranks or reject them.

4 Plant species with limited distribution or infrequent occurrence throughout California.

**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)

Sources: CNDDB 2023; CNPS 2023; USFWS 2023.

**Table 2.4-3 Special-Status Wildlife Species Known to Occur in San Diego County**

Species	Federal Listing Status <sup>1</sup>	State Listing Status <sup>1</sup>	Habitat
<b>Amphibians &amp; Reptiles</b>			
Arroyo toad <i>Anaxyrus californicus</i>	FE	SSC	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 <i>Coluber fuliginosus</i>	–	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 gecko (Barefoot banded gecko) <i>Coleonyx switaki</i>	–	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 <i>Arizona elegans occidentalis</i>	–	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 <i>Rana draytonii</i>	FT	SSC	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 <i>Phrynosoma blainvillii</i>	–	SSC	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 patch-nosed snake <i>Salvadora hexalepis virgultea</i>	–	SSC	Brushy or shrubby vegetation in coastal Southern California. Require small mammal burrows for refuge and overwintering sites.
Coast Range newt <i>Taricha torosa</i>	–	SSC	Coastal drainages from Mendocino County to San Diego County. Lives in terrestrial habitats and will migrate over 0.6 mile to breed in ponds, reservoirs, and slow-moving streams.
Coastal whiptail <i>Aspidoscelis tigris stejnegeri</i>	–	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.
Colorado Desert fringe-toed lizard <i>Uma notata</i>	–	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.
Cope's leopard lizard <i>Gambelia copeii</i>	–	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.

Species	Federal Listing Status <sup>1</sup>	State Listing Status <sup>1</sup>	Habitat
Coronado skink <i>Plestiodon skiltonianus interparietalis</i>	–	–	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 tortoise <i>Gopherus agassizii</i>	FT	ST	Most common in desert scrub, desert wash, and Joshua tree habitats; occurs in almost every desert habitat. Require friable soil for burrow and nest construction. Creosote bush habitat with large annual wildflower blooms preferred.
Flat-tailed horned lizard <i>Phrynosoma mcallii</i>	–	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.
Green sea turtle <i>Chelonia mydas</i>	FT	–	Marine. Completely herbivorous; needs adequate supply of seagrasses and algae.
Large-blotched salamander <i>Ensatina klauberi</i>	–	–	Found in conifer and woodland associations. Found in leaf litter, decaying logs, and shrubs in heavily forested areas.
Orange-throated whiptail <i>Aspidoscelis hyperythra</i>	–	–	Inhabits low-elevation coastal scrub, chaparral, and valley-foothill hardwood habitats. Prefers washes and other sandy areas with patches of brush and rocks. Perennial plants necessary for its major food-termites.
Red-diamond rattlesnake <i>Crotalus ruber</i>	–	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.
San Diego banded gecko <i>Coleonyx variegatus abbotti</i>	–	SSC	Coastal and cismontane Southern California. Found in granite or rocky outcrops in coastal scrub and chaparral habitats.
San Diego ringneck snake <i>Diadophis punctatus similis</i>	–	–	Open, 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 <i>Xantusia gracilis</i>	–	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
South coast gartersnake <i>Thamnophis sirtalis</i> ssp.	–	SSC	Southern California coastal plain from Ventura County to San Diego County, and from sea level to about 2,800 feet in elevation. Marsh and upland habitats near permanent water with good strips of riparian vegetation.

Species	Federal Listing Status <sup>1</sup>	State Listing Status <sup>1</sup>	Habitat
Southern California legless lizard <i>Anniella stebbinsi</i>	–	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 <i>Rana muscosa</i>	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.
Two-striped gartersnake <i>Thamnophis hammondi</i>	–	SSC	Coastal California from vicinity of Salinas to northwest Baja California. 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 pond turtle <i>Actinemys marmorata</i>	–	SSC	An aquatic turtle of ponds, marshes, rivers, streams, and irrigation ditches, usually with aquatic vegetation, below 6,000 feet elevation. Need basking sites and upland habitat suitable for the species (i.e., sandy banks, grassy open fields) up to approximately 1,650 feet from water for egg-laying.
Western spadefoot <i>Spea hammondi</i>	–	SSC	Occurs primarily in grassland habitats but can be found in valley-foothill hardwood woodlands. Vernal pools are essential for breeding and egg-laying.
<b>Birds</b>			
American peregrine falcon <i>Falco peregrinus anatum</i>	FD	SD FP	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.
Bank swallow <i>Riparia riparia</i>	–	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.
Belding's savannah sparrow <i>Passerculus sandwichensis beldingi</i>	–	SE	Inhabits coastal salt marshes, from Santa Barbara south through San Diego County. Nests in Salicornia on and about margins of tidal flats.
Bell's sage sparrow <i>Artemisiospiza belli belli</i>	–	–	Nests in chaparral dominated by 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 150 feet apart.
Burrowing owl <i>Athene cunicularia</i>	–	SSC	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.



Species	Federal Listing Status <sup>1</sup>	State Listing Status <sup>1</sup>	Habitat
California black rail <i>Laterallus jamaicensis coturniculus</i>	–	ST FP	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 brown pelican <i>Pelecanus occidentalis californicus</i>	FD	SD FP	Colonial nester on coastal islands just outside the surf line. Nests on coastal islands of small to moderate size which afford immunity from attack by ground-dwelling predators. Roosts communally.
California condor <i>Gymnogyps californianus</i>	FE	SE FP	Require vast expanses of open savannah, grasslands, and foothill chaparral in mountain ranges of moderate altitude. Deep canyons containing clefts in the rocky walls provide nesting sites. Forages up to 100 miles from roost or nest.
California horned lark <i>Eremophila alpestris actia</i>	–	–	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 <i>Sternula antillarum browni</i>	FE	SE FP	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 <i>Strix occidentalis occidentalis</i>	P	SSC	Multi-layered forest habitat with high canopy closure and a mixture of tree sizes and densities, as well as large diameter old-growth trees for nesting and roosting
Coastal cactus wren <i>Campylorhynchus brunneicapillus sandiegensis</i>	–	SSC	Southern California coastal sage scrub. Wrens require tall <i>Opuntia</i> cactus for nesting and roosting.
Coastal California gnatcatcher <i>Polioptila californica californica</i>	FT	SSC	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.
Cooper's hawk <i>Accipiter cooperii</i>	–	–	Woodland, chiefly of open, interrupted, or marginal type. Nest sites mainly in riparian growths of deciduous trees, as in canyon bottoms on river floodplains; also, live oaks.
Double-crested cormorant <i>Phalacrocorax auritus</i>	–	–	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 <i>Buteo regalis</i>	–	–	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.

Species	Federal Listing Status <sup>1</sup>	State Listing Status <sup>1</sup>	Habitat
Golden eagle <i>Aquila chrysaetos</i>	–	FP	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 <i>Ammodramus savannarum</i>	–	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.
Least Bell's vireo <i>Vireo bellii pusillus</i>	FE	SE	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, <i>Baccharis</i> , mesquite.
Least bittern <i>Ixobrychus exilis</i>	–	SSC	Colonial nester in marshlands and borders of ponds and reservoirs which provide ample cover. Nests usually placed low in tules, over water.
Light-footed Ridgway's rail <i>Rallus longirostris levipes</i>	FE	SE FP	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 <i>Lanius ludovicianus</i>	–	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 dense shrubs and brush for nesting.
Long-eared owl <i>Asio otus</i>	–	SSC	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.
Northern harrier <i>Circus hudsonius</i>	–	SSC	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.
Osprey <i>Pandion haliaetus</i>	–	–	Ocean shore, bays, fresh-water lakes, and larger streams. Large nests built in treetops within 15 miles of a good fish-producing body of water.
Prairie falcon <i>Falco mexicanus</i>	–	–	Inhabits dry, open terrain, either level or hilly. Breeding sites located on cliffs. Forages far afield, even to marshlands and ocean shores.
Purple martin <i>Progne subis</i>	–	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.
Short-tailed albatross <i>Phoebastria albatrus</i>	FE	SSC	Forages at sea, but specific geographic and seasonal distribution patterns within the marine range are not well understood.

Species	Federal Listing Status <sup>1</sup>	State Listing Status <sup>1</sup>	Habitat
Southern California rufous-crowned sparrow <i>Aimophila ruficeps canescens</i>	–	–	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 <i>Empidonax traillii extimus</i>	FE	SE	Riparian woodlands in Southern California.
Swainson's hawk <i>Buteo swainsoni</i>	–	ST	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 <i>Agelaius tricolor</i>	–	ST SSC	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.
Vermilion flycatcher <i>Pyrocephalus rubinus</i>	–	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 snowy plover <i>Charadrius alexandrinus nivosus</i>	FT	SSC	Sandy beaches, salt pond levees and shores of large alkali lakes. Needs sandy, gravelly, or friable soils for nesting.
Western yellow-billed cuckoo <i>Coccyzus americanus occidentalis</i>	FT	SE	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 <i>Plegadis chihi</i>	–	–	Shallow fresh-water marsh. Dense tule thickets for nesting interspersed with areas of shallow water for foraging.
White-tailed kite <i>Elanus leucurus</i>	–	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.
Yellow rail <i>Coturnicops noveboracensis</i>	–	SSC	Summer resident in eastern Sierra Nevada in Mono County. Fresh-water marshlands.
Yellow warbler <i>Setophaga petechia</i>	–	SSC	Riparian plant associations near 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 <i>Icteria virens</i>	–	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.

Species	Federal Listing Status <sup>1</sup>	State Listing Status <sup>1</sup>	Habitat
Yuma Ridgway's rail <i>Rallus obsoletus yumanensis</i>	FE	ST FP	Nests in freshwater marshes along the Colorado River and along the south and east ends of the Salton Sea. Prefers stands of cattails and tules dissected by narrow channels of flowing water.
<b>Fish</b>			
Arroyo chub <i>Gila orcuttii</i>	–	SSC	Native to streams from Malibu Creek to San Luis Rey River basin. Introduced into streams in Santa Clara, Ventura, Santa Ynez, Mohave, and San Diego river basins. Slow water stream sections with mud or sand bottoms. Feeds heavily on aquatic vegetation and associated invertebrates.
Desert pupfish <i>Cyprinodon macularius</i>	FE	SE	Desert ponds, springs, marshes, and streams in Southern California. Can live in salinities from fresh water to 68 ppt, can withstand temperatures from 9–45 degrees Celsius and dissolved oxygen levels down to 0.1 ppm.
Mohave tui chub <i>Siphateles bicolor mohavensis</i>	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.
Razorback sucker <i>Xyrauchen texanus</i>	FE	SE FP	Found in the Colorado River bordering California. Adapted for swimming in swift currents but also need quiet waters. Spawn in areas of sand/gravel/rocks in shallow water.
Steelhead - southern California DPS <i>Oncorhynchus mykiss irideus</i> pop. 10	FE	–	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.
Tidewater goby <i>Eucyclogobius newberryi</i>	FE	SSC	Brackish water habitats along the California coast from Agua Hedionda Lagoon, San Diego County to the mouth of the Smith River. Found in shallow lagoons and lower stream reaches, they need still but not stagnant water and high oxygen levels.
Unarmored threespine stickleback <i>Gasterosteus aculeatus williamsoni</i>	FE	SE FP	Weedy pools, backwaters, and among emergent vegetation at the stream edge in small Southern California streams. Cool (i.e., less than 24 degrees Celsius), clear water with abundant vegetation.
<b>Invertebrates</b>			
American bumble bee <i>Bombus pensylvanicus</i>	–	–	Coastal prairie, valley and foothill grassland, and Great Basin grassland. Forages on a variety of flowers and nests above ground under long grass or underground.
A miner bee <i>Perdita stephanomeriae</i>	–	–	Desert dunes.
Borrego parnopes cuckoo wasp <i>Parnopes borregoensis</i>	–	–	Southern California, including Inyo, San Bernardino, and San Diego counties, and south to Mexico (Baja California), at least historically.
Busck's gallmoth <i>Eugnosta busckana</i>	–	–	Coastal dunes and coastal scrub. Requires host plant California brittlebush ( <i>Encelia californica</i> ) for breeding.

Species	Federal Listing Status <sup>1</sup>	State Listing Status <sup>1</sup>	Habitat
California mellitid bee <i>Melitta californica</i>	–	–	Desert regions of southwest Arizona, southeast California, and Baja California, Mexico. Also collected from Torrey Pines, San Diego County.
Carlson's dune beetle <i>Anomala carlsoni</i>	–	–	Known primarily from creosote scrub in vicinity of Algodones Dunes, Imperial County. Also taken from Borrego, San Diego County. Host preferences unknown.
Cheeseweed owlfly (cheeseweed moth lacewing) <i>Oliarces clara</i>	–	–	Inhabits the lower Colorado River drainage. Found under rocks or in flight over streams. <i>Larrea tridentata</i> is the suspected larval host.
Crotch bumble bee <i>Bombus crotchii</i>	–	SC	Coastal California east to the Sierra-Cascade crest and south into Mexico. Food plant genera include <i>Antirrhinum</i> , <i>Phacelia</i> , <i>Clarkia</i> , <i>Dendromecon</i> , <i>Eschscholzia</i> , and <i>Eriogonum</i> .
Globose dune beetle <i>Coelus globosus</i>	–	–	Inhabitant of coastal sand dune habitat; erratically distributed from Ten Mile Creek in Mendocino County south to Ensenada, Mexico. Inhabits foredunes and sand hummocks; it burrows beneath the sand surface and is most common beneath dune vegetation.
Haromonius halictid bee <i>Halictus harmonius</i>	–	–	Known only from the foothills of the San Bernardino Mts., possibly also the San Jacinto Mts.
Hermes copper butterfly <i>Lycaena hermes</i>	FT	–	Found in southern mixed chaparral and coastal sage scrub at western edge of Laguna Mountains. Host plant is <i>Rhamnus crocea</i> .
Knull's metallic wood-boring beetle <i>Trichinorhipis knulli</i>	–	–	Endemic to California, where it has been collected from Riverside and Imperial Counties.
Laguna Mountains skipper <i>Pyrgus ruralis lagunae</i>	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 <i>Horkelia bolanderi clevelandi</i> . Larvae feed on leaves and overwinter on the host plant.
Marsh-elder long-horned beetle <i>Deltaspis ivae</i>	–	–	Found in a few scattered locations in San Diego and Riverside counties; larva breeds in <i>Iva hayesiana</i> root collars.
Mesa shoulderband <i>Helminthoglypta coelata</i>	–	–	Known only from a few locations in western San Diego County. Found in rockslides, beneath bark and rotten logs, and among coastal vegetation.
Mimic tryonia (California brackishwater snail) <i>Tryonia imitator</i>	–	–	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	Federal Listing Status <sup>1</sup>	State Listing Status <sup>1</sup>	Habitat
Monarch - California overwintering population <i>Danaus plexippus</i> pop. 1	FC	–	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.
Obscure bumble bee <i>Bombus caliginosus</i>	–	–	Coastal areas from Santa Barbara County to north to Washington state. Food plant genera include <i>Baccharis</i> , <i>Cirsium</i> , <i>Lupinus</i> , <i>Lotus</i> , <i>Grindelia</i> , and <i>Phacelia</i> .
Peak shoulderband <i>Helminthoglypta milleri</i>	–	–	Known only from the type locality at Cuyamaca Peak in San Diego County. Found in rock piles.
Quino checkerspot butterfly <i>Euphydryas editha quino</i>	FE	–	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 <i>Plantago erecta</i> , <i>Plantago insularis</i> , and <i>Orthocarpus purpurescens</i> .
Riverside fairy shrimp <i>Streptocephalus woottoni</i>	FE	–	Endemic to western Riverside, Orange, and San Diego counties in areas of tectonic swales/earth slump basins in grassland and coastal sage scrub. Inhabit seasonally astatic pools filled by winter/spring rains. Hatch in warm water later in the season.
San Diego fairy shrimp <i>Branchinecta sandiegonensis</i>	FE	–	Endemic to San Diego and Orange County mesas. Vernal pools.
Sandy beach tiger beetle <i>Cicindela hirticollis grvida</i>	–	–	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.
Senile tiger beetle <i>Cicindela senilis frosti</i>	–	–	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.
Thorne's hairstreak <i>Callophrys thornei</i>	–	–	Associated with the endemic tecate cypress ( <i>Cupressus forbesii</i> ). Only known from vicinity of Otay Mountain.
Vernal pool fairy shrimp <i>Branchinecta lynchi</i>	FT	–	Endemic to the grasslands of the Central Valley, Central Coast mountains, and South Coast mountains, in astatic rain-filled pools. Inhabit small, clear-water sandstone-depression pools and grassed swale, earth slump, or basalt-flow depression pools.
Wandering (=saltmarsh) skipper <i>Panoquina errans</i>	–	–	Southern California coastal salt marshes. Requires moist saltgrass for larval development.
Warner Springs shoulderband <i>Rothelix warnerfontis</i>	–	–	Known only from two localities near Warner Springs, San Diego County. Found in wood rat nests; as development eliminates rat nests, snail has become scarce.

Species	Federal Listing Status <sup>1</sup>	State Listing Status <sup>1</sup>	Habitat
Wawona riffle beetle <i>Atractelmis wawona</i>	–	–	Aquatic; found in riffles of rapid, small to medium clear mountain streams; 2,000-5,000 feet in elevation. Strong preference for inhabiting submerged aquatic mosses
Western beach tiger beetle <i>Cicindela latesignata latesignata</i>	–	–	Mudflats and beaches in coastal Southern California.
Western tidal-flat tiger beetle <i>Cicindela gabbii</i>	–	–	Inhabits estuaries and mudflats along the coast of Southern California. Generally found on dark-colored mud in the lower zone; occasionally found on dry saline flats of estuaries.
<b>Mammals</b>			
American badger <i>Taxidea taxus</i>	–	SSC	Most abundant in drier open stages of most shrub, forest, and herbaceous habitats, with friable soils. Needs sufficient food, friable soils, and open, uncultivated ground. Preys on burrowing rodents. Digs burrows.
Big free-tailed bat <i>Nyctinomops macrotis</i>	–	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 <i>Macrotus californicus</i>	–	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.
Colorado Valley woodrat <i>Neotoma albigula venusta</i>	–	–	Low-lying desert areas in southeastern California. Closely associated with beaver-tail cactus and mesquite. Intolerant of cold temperatures. Eats mainly succulent plants. Distribution influenced by abundance of nest building material
Dulzura pocket mouse <i>Chaetodipus californicus femoralis</i>	–	SSC	Variety of habitats including coastal scrub, chaparral, and grassland in San Diego County. Attracted to grass-chaparral edges.
Earthquake Merriam's kangaroo rat <i>Dipodomys merriami collinus</i>	–	–	Known only from San Diego and Riverside County. Associated with sage scrub, chaparral, and nonnative grassland. Need sandy loam substrates for digging of burrows.
Fringed myotis <i>Myotis thysanodes</i>	–	–	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.
Hoary bat <i>Lasiurus cinereus</i>	–	–	Prefers open habitats or habitat mosaics, with access to trees for cover and open areas or habitat edges for feeding. Roosts in dense foliage of medium to large trees. Feeds primarily on moths. Requires water.
Jacumba pocket mouse <i>Perognathus longimembris internationalis</i>	–	SSC	Desert riparian, desert scrub, desert wash, coastal scrub, and sagebrush. Rarely found on rocky sites, uses all canopy coverages.

Species	Federal Listing Status <sup>1</sup>	State Listing Status <sup>1</sup>	Habitat
Lesser long-nosed bat <i>Leptonycteris yerbabuenae</i>	FE	–	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 <i>Myotis evotis</i>	–	–	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 <i>Myotis volans</i>	–	–	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 <i>Perognathus longimembris brevinasus</i>	–	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 <i>Choeronycteris mexicana</i>	–	SSC	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.
Mountain lion <i>Puma concolor</i>	–	SC	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 <i>Chaetodipus fallax fallax</i>	–	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 <i>Perognathus longimembris pacificus</i>	FE	SSC	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 <i>Antrozous pallidus</i>	–	SSC	Most common in open, dry habitats with rocky areas for roosting. Roosts must protect bats from high temperatures. Very sensitive to disturbance of roosting sites.



Species	Federal Listing Status <sup>1</sup>	State Listing Status <sup>1</sup>	Habitat
Pallid San Diego pocket mouse <i>Chaetodipus fallax pallidus</i>	–	SSC	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 <i>Perognathus longimembris bangsi</i>	–	SSC	Most common in creosote-dominated desert scrub. Rarely found on rocky sites. Occurs in all canopy coverage classes.
Peninsular bighorn sheep DPS <i>Ovis canadensis nelsoni</i> 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 <i>Nyctinomops femorosaccus</i>	–	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 Bernardino kangaroo rat <i>Dipodomys merriami parvus</i>	FE	SC SSC	Alluvial scrub vegetation on sandy loam substrates characteristic of alluvial fans and flood plains. Needs early to intermediate seral stages.
San Diego black-tailed jackrabbit <i>Lepus californicus bennettii</i>	–	SSC	Intermediate canopy stages of shrub habitats and open shrub and tree edges. Coastal sage scrub habitats in Southern California.
San Diego desert woodrat <i>Neotoma lepida intermedia</i>	–	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.
Silver-haired bat <i>Lasionycteris noctivagans</i>	–	–	Primarily a coastal and montane forest dweller feeding over streams, ponds and open brushy areas. Roosts in hollow trees, beneath exfoliating bark, abandoned woodpecker holes and rarely under rocks. Needs drinking water.
Southern grasshopper mouse <i>Onychomys torridus ramona</i>	–	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.
Spotted bat <i>Euderma maculatum</i>	–	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 <i>Dipodomys stephensi</i>	FE	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.

Species	Federal Listing Status <sup>1</sup>	State Listing Status <sup>1</sup>	Habitat
Townsend's big-eared bat <i>Corynorhinus townsendii</i>	–	SSC	Throughout California in a wide variety of habitats. Most common in mesic sites. Roosts in the open, hanging from walls and ceilings. Roosting sites limiting. Extremely sensitive to human disturbance.
Western mastiff bat <i>Eumops perotis californicus</i>	–	SSC	Many open, semi-arid to arid habitats, including conifer and deciduous woodlands, coastal scrub, grasslands, and chaparral. Roosts in crevices in cliff faces, high buildings, trees, and tunnels.
Western red bat <i>Lasiurus blossevillii</i>	–	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 <i>Myotis ciliolabrum</i>	–	–	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 <i>Lasiurus xanthinus</i>	–	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 <i>Myotis yumanensis</i>	–	–	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: CNDDB = California Natural Diversity Database; CEQA = California Environmental Quality Act.

<sup>1</sup> Legal Status Definitions

Federal:

- FE Federally Listed as Endangered (legally protected)
- FT Federally Listed as Threatened (legally protected)
- FC Federal Candidate for listing (legally protected)
- FD Federally Delisted (not currently protected)
- P Proposed for listing (not currently protected)

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)
- SD State Delisted
- SC State Candidate for Listing (legally protected)

Sources: CNDDB 2023; USFWS 2023.

**Table 2.4-4 Federally Designated Critical Habitat for Species Listed Under the Endangered Species Act**

Species
<b>Plants</b>
San Diego Thornmint <i>Acanthomintha ilicifolia</i>
San Diego Ambrosia <i>Ambrosia pumila</i>
Thread-leaved Brodiaea <i>Brodiaea filifolia</i>
Otay Tarplant <i>Deinandra (=Hemizonia) conjugens</i>
Mexican Flannelbush <i>Fremontodendron mexicanum</i>
Willowy Monardella <i>Monardella viminea</i>
Spreading Navarretia <i>Navarretia fossalis</i>
Cushenbury Oxytheca <i>Oxytheca parishii var. goodmaniana</i>
San Bernardino Bluegrass <i>Poa atropurpurea</i>
<b>Invertebrates</b>
San Diego Fairy Shrimp <i>Branchinecta sandiegonensis</i>
Quino Checkerspot Butterfly <i>Euphydryas editha quino (=E. e.wrighti)</i>
Hermes Copper Butterfly <i>Lycaena hermes</i>
Laguna Mountains Skipper <i>Pyrgus ruralis lagunae</i>
Riverside Fairy Shrimp <i>Streptocephalus woottoni</i>
<b>Fish</b>
Tidewater Goby <i>Eucyclogobius newberryi</i>
<b>Amphibians and Reptiles</b>
Arroyo (=arroyo Southwestern) Toad <i>Anaxyrus californicus</i>

Species
<b>Birds</b>
Western Snowy Plover <i>Charadrius nivosus nivosus</i>
Southwestern Willow Flycatcher <i>Empidonax traillii extimus</i>
Coastal California Gnatcatcher <i>Polioptila californica californica</i>
Least Bell's Vireo <i>Vireo bellii pusillus</i>
<b>Mammals</b>
Peninsular Bighorn Sheep <i>Ovis canadensis nelsoni</i>

Source: Compiled by Ascent Environmental in 2023.