

5. Environmental Analysis

5.4 BIOLOGICAL RESOURCES

The Biological Resources section of the draft program environmental impact report (PEIR) evaluates the potential for impacts to biological resources from the proposed San Bernardino Countywide Plan (proposed Project or CWP). The analysis in this section is based in part on the following technical report(s):

- *San Bernardino Countywide Plan Biological Resources Existing Conditions Report*, Dudek, November 2016.

A complete copy of this study is included in the Technical Appendices to this Draft EIR (Volume II, Appendix D).

5.4.1 Environmental Setting

5.4.1.1 REGULATORY BACKGROUND

This section describes the laws, regulations, policies, and planning that apply to the proposed Project. They are condensed and numbered in section 5.4.3.1, *Regulatory Requirements*. Due to their complexity and site specificity, their applicability is typically determined through a site-specific analysis.

Federal Laws

- **Federal Endangered Species Act of 1973 (FESA).** The FESA (16 USC § 1531 et seq.) aims to conserve endangered and threatened species and preserve the ecosystems that they rely on; it is administered by the US Fish and Wildlife Service (USFWS) for terrestrial plant and animal species. The FESA defines an endangered species as “any species that is in danger of extinction throughout all or a significant portion of its range.” It is considered unlawful to “take” any listed species—that is, to “harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to engage in any such conduct” (16 USC §§ 1531–1544).
 - Incidental Take. The FESA allows for incidental take of listed species under Section 7 and Section 10 exemptions. Under Section 7, federal agencies are required to consult with USFWS before taking any action that may threaten an endangered species. Section 10 exemptions apply to actions that do not require federal agency action other than the issuance of the incidental take permit, which can be issued for listed species subsequent to the approval of a Habitat Conservation Plan (HCP).
 - The FESA allows for incidental take of listed species under Section 7 and Section 10 exemptions. Under Section 7, federal agencies are required to consult with USFWS before taking any action that may threaten an endangered species. Section 10 exemptions apply to actions that do not require federal agency action other than the issuance of the incidental take permit, which can be issued for listed species subsequent to the approval of an HCP. USFWS-Designated Critical Habitat. Critical habitat is designated under FESA when a geographical area is considered crucial to the survival of a threatened or endangered species. Federal agencies must consult USFWS on planned activities to ensure that they will not destroy or adversely modify critical habitat. USFWS has designated critical habitat in the County for 19 listed species.

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- **Federal Land Policy and Management Act of 1976 (FLPMA).** This act (43 USC § 1701 et seq.) established public lands policy and management guidelines on public lands managed by the Bureau of Land Management (BLM). The act addresses land use planning, range management, rights-of-way, and designated management areas.
 - **California Desert Conservation Area Plan (CDCA Plan).** Under FLPMA, the CDCA Plan was approved in 1980 to protect biological, geological, paleontological, scenic, and cultural resources in approximately 25 million acres in seven counties, including the County. The plan provides for multiple-use management, but about 10 million acres are managed by the BLM. Major amendments to the CDCA Plan in the County include the BLM Northern and Eastern Colorado Desert Coordinated Management Plan, BLM Northern and Eastern Mojave Desert Management Plan, BLM West Mojave Plan, and Desert Renewable Energy Conservation Plan (DRECP) Land Use Plan Amendment.
- **Migratory Bird Treaty Act (MBTA).** The MBTA implements international treaties between the United States and other nations that protect migratory birds (including their parts, eggs, and nests) from being killed, hunted, pursued, captured, sold, and shipped unless expressly authorized or permitted.
- **Bald and Golden Eagle Protection Act (BGEPA).** The BGEPA was enacted in 1940 and prohibits anyone from “taking” bald and golden eagles (including their parts, nests, or eggs) without a permit from the Secretary of the Interior. BGEPA imposes criminal penalties and defines “take” as “pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest or disturb” (16 USC 668 et seq.). The USFWS recommends that project proponents prepare an eagle conservation plan to mitigate impacts to eagles.
- **Clean Water Act (CWA).** The CWA (33 USC § 1251 et seq.) establishes requirements for restoring and maintaining the chemical, physical, and biological integrity of the nation’s waters.
 - **Section 401.** Requires an applicant for a federal license or permit that allows activities resulting in a discharge to waters of the United States to obtain a state certification that the discharge complies with provisions of the CWA. The Regional Water Quality Control Boards (RWQCB) administer the certification program in California. The County is in the jurisdiction of three RWQCBs—Lahontan (Region 6), Colorado River (Region 7), and Santa Ana (Region 8).
 - **Section 404.** Establishes a permit program administered by the US Army Corps of Engineers (Corps) regulating the discharge of dredged or fill material into waters of the United States, including wetlands. “Waters of the United States” include navigable waters; perennial and intermittent streams, lakes, rivers, and ponds; and wetlands, marshes, and wet meadows (33 CFR 328.3a). Section 404(b)(1) Guidelines allow the discharge of dredged or fill material into the aquatic system only if there is no practicable alternative that would have less adverse impacts (40 CFR, Part 230).
- **Executive Order 13112, Invasive Species.** Under this order, agencies must identify actions that may affect the status of invasive species. Federal agencies may not authorize, fund, or carry out actions that would introduce or spread invasive species unless they determine that the benefits would outweigh the harm, make that determination public, and use all feasible and prudent measures to minimize risk of harm.

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- **Plant Protection Act of 2000.** The act (7 USC § 7701 et seq.) established a federal program to control the spread of noxious weeds. The Secretary of Agriculture publishes a list of designated noxious weeds that cannot be moved through interstate or foreign commerce except under permit.
- **Noxious Weed Act of 1974.** This act (7 USC § 2814), as amended, provides for the control and management of nonindigenous weeds that injure or have the potential to injure the interests of agriculture and commerce, wildlife resources, or the public health. The Secretary of Agriculture has authority to designate plants as noxious weeds; to inspect, seize, and destroy products; and to quarantine areas if necessary to prevent the spread of such weeds.
- **Lacey Act.** This act (16 USC 3371 et. seq.) protects plants and wildlife by creating civil and criminal penalties for a wide variety of violations, including illegal take, possession, transport, or sale of protected species.
- **Wild and Scenic Rivers Act.** This act (16 USC § 1271 et seq.) established a national system of rivers to be preserved in free-flowing condition, and their immediate environments protected. The three classifications of rivers in the system are wild, scenic, or recreational, depending on the nearby level of development.

Federal Agencies

- **US Forest Service (USFS).** The USFS has jurisdiction over the San Bernardino National Forest in the southwest portion of the County and manages its long-term sustainability following the “multiple use” doctrine, which includes suitable commodity and commercial uses. USFS also manages the Angeles National Forest, which edges into the County.
- **Bureau of Land Management (BLM).** The BLM has jurisdiction over [at least 10 million] acres in the County. BLM’s land management includes conserving and/or recovering special-status species and their ecosystems so that protections are no longer needed. When a species is deemed sensitive, BLM must manage it and its habitat to minimize threats and improve habitat. The establishment of the National Landscape Conservation System in 2009 did not provide any new legal protections, but provided a single system to manage and organize conservation lands on a national scale.

State

- **California Endangered Species Act (CESA).** The CESA (Fish and Game Code § 2050 et seq.) prohibits the take of plant and animal species designated in California as endangered, threatened, or candidates for listing as endangered or threatened. State agencies may not approve projects that will jeopardize endangered or threatened species or damage their habitat if there are reasonable alternatives, although CESA authorizes incidental take under specific criteria. The California Department of Fish and Wildlife (CDFW) administers CESA and enforces relevant statutes from the California Fish and Game Code and Title 14 of the California Code of Regulations (CCR).

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- **Natural Community Conservation Planning Act.** The statutory framework (Fish and Game Code § 2800 et seq.) for natural community conservation plans (NCCP), which provide long-term, landscape-scale protection for natural vegetation communities and wildlife diversity. It supports collaborative planning and approval by local governments, state and federal agencies, environmental organizations, landowners, and members of the public. The Town of Apple Valley Multiple Species Habitat Conservation Plan (MSHCP) is the only NCCP currently being planned in the County.
- **California Rare Plant Ranks (CRPR).** The California Native Plant Society (CNPS) maintains a list of special-status plant species based on collected scientific information. Although CNPS's designations have no legal status or protection under federal or state endangered species legislation (CNPS 2015), three designations meet the criteria of Section 15380 of the CEQA Guidelines—CRPR 1A, plants presumed extinct; CRPR 1B, plants rare, threatened, or endangered in California and elsewhere; and CRPR 2, plants rare, threatened, or endangered in California, but more numerous elsewhere.
- **California Fish and Game Code.** Mammals birds reptiles, amphibians and fish species that are fully protected by Sections 3511, 4700, 5050, and 5515 of the code may not be taken or possessed at any time. In 2011, Senate Bill (SB) 618 amended the code to allow incidental take of fully protected species when a conservation plan has been approved and implemented to ensure protection of the species. CDFW may also authorize take for scientific research or live capture and relocation to protect livestock. Because CDFW is responsible for maintaining viable populations of all native species, it has designated certain vertebrate species as species of special concern (SSC) because declining population levels, limited ranges, and/or continuing threats have made them vulnerable to extinction.
 - **California Fish and Game Code, Sections 3503, 3503.5, and 3513.** These sections prohibit the taking and possessing of bird eggs and nests. The administering agency for the sections is CDFW.
 - **14 CCR, Sections 670.2 and 670.5.** These sections include listings of plant and animal species designated as threatened or endangered. The administering agency is CDFW.
- **Native Plant Protection Act of 1977.** This act (Fish and Game Code § 1900 et seq.) directed CDFW to “preserve, protect and enhance rare and endangered plants in this State.” It gave the California Fish and Game Commission the power to designate native plants as “endangered” or “rare” and protect endangered and rare plants from take. CESA, which came later, entered all “rare” animals as “threatened” species, but not rare plants. Thus, there are three listings for plants in California: rare, threatened, and endangered. Because rare plants are not included in CESA, mitigation measures for impacts to rare plants are specified in a formal agreement between CDFW and the project proponent.
- **California Desert Native Plants Act.** This act (Food and Agricultural Code § 80001 et seq.) protects desert native plants, both dead and alive, from harvesting—except under a permit from the commissioner or the sheriff—on both public and privately owned lands in the County as well as Imperial, Kern, Los Angeles, Mono, Riverside, and San Diego counties. Any plant that is a rare, endangered, or threatened species under federal or state law or regulations is excluded.

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- **Porter-Cologne Water Quality Control Act.** This act (California Water Code, § 13000 et seq.) protects water quality and beneficial uses of both surface and groundwater. The California State Water Resources Control Board develops statewide water quality plans, and the RWQCBs develop basin plans and implement both statewide and basin plans. The act also regulates isolated waters that are no longer regulated by the Corps. Developments that impact jurisdictional waters must demonstrate compliance with the act in order to obtain a CWA Section 401 certification—by developing stormwater pollution prevention plans, urban stormwater mitigation plans, and other measures.
- **Lake and Streambed Alteration Program.** Project applicants must submit a complete Lake or Streambed Alteration Program notification package and fee to the CDFW if their project would:
 - Substantially divert or obstruct the natural flow of any river, stream, or lake.
 - Substantially change or use any material from the bed, channel, or bank of, any river, stream, or lake.
 - Deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it may pass into any river, stream, or lake. (California Fish and Game Code, Section 1602, based on 14 CCR, Section 720)

The final proposal that is mutually agreed upon by CDFW and the project applicant becomes the Lake or Streambed Alteration Agreement. The conditions of agreement and a CWA Section 404 permit often overlap.

Streams, including creeks and rivers, are defined as: “a stream is a body of water that flows at least periodically or intermittently through a bed or channel having banks, this includes watercourses having a surface or subsurface flow that supports or has supported riparian vegetation” (14 CCR, Section 1.72). Lakes include “natural lakes or man-made reservoirs” (14 CCR, Section 1.56).

Regional

County Development Code

The following provisions from the County Development Code help minimize biological resources impacts associated with new development projects and are relevant to the proposed Project.

- **Chapter 88.01 (Plant Protection and Management).** This chapter provides regulatory and management guidance for plant resources in unincorporated areas as well as mixed public and private lands. It primarily addresses tree and vegetation removal in public land and private land in unincorporated areas.
 - **Section 88.01.060, Desert Native Plant Protection,** conserves specified desert plant species.
 - **Section 88.01.070, Mountain Forest and Valley Tree Conservation,** conserves forest resources in the Mountain and Valley regions to supplement the Z’berg-Nejedly Forest Practice Act of 1973 (California Public Resources Code, § 4526 et seq.). It regulates private and commercial harvesting of trees on public and private land.

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- **Section 88.01.080, Riparian Plant Conservation**, addresses the health of riparian corridors, their impact on waterways within the region, their use as habitat by various plant and wildlife species, and their stabilization of stream banks.
- **Chapter 88.02, Soil and Water Conservation**, promotes the health of soil communities to limit soil erosion potential and preserve air quality. This code primarily regulates ground-disturbing activities.

Renewable Energy and Conservation Element

The County General Plan Renewable Energy and Conservation Element adopted in 2017 (and updated in early 2019), has several policies that relate to biological resources during the planning of renewable energy development and the decommissioning process, including:

- **RE Policy 4.1:** Apply standards to the design, siting, and operation of all renewable energy facilities that protect the environment, including sensitive biological resources, air quality, water supply and quality, cultural, archaeological, paleontological and scenic resources.
- **Policy 4.4** addresses visual impacts and includes directions to minimize vegetation clearing, conserve and/or replant native plants, and prevent light impacts to nocturnal birds.
- **Policy 4.5** requires a decommissioning plan to reclaim the site to a condition at least as good as before the lands were disturbed.
- **Policies 4.7, 4.8, and 4.9** set priorities for habitat conservation and mitigation and encourage habitat conservation offsets on public lands as well as designs that provide sanctuary for bees, butterflies and birds.
- **Policy 5.1** encourages siting facilities on sites that are already disturbed or degraded.

Siting policies in the Development Code also addresses siting of renewable energy facilities to avoid impacts to critical habitats and species and conflicts with surrounding land uses.

Designated Open Space

The County Board of Supervisors governs an area called County Service Area 120. It was designated open space in July 2009 but is not entirely preserved. This area provides for the management, operation, and protection of open space and mitigation property in the foothills north of the cities of Rancho Cucamonga and Fontana.

Local Habitat Conservation Planning

Several efforts to conserve local habitat (e.g., HCP) have been completed or are being planned in the County. Some are limited to municipal limits or federal lands and do not overlap County jurisdiction. Such plans may limit development or pose additional requirements or analysis when a project overlaps a specified area. A site-specific analysis would determine the full requirements.

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- **West Mojave Plan.** This covers the western part of the county in the Desert Region and was originally envisioned as a multispecies HCP and a land use plan amendment for BLM-administered lands. The HCP component of the plan was not approved, but the West Mojave Plan does serve as a land use plan amendment under the CDCA Plan for BLM lands (see *Federal Laws*, above).
- **North Fontana Interim MSHCP Policy.** This was initiated in 2004 and concentrates on the northern part of Fontana adjacent to the foothills of the San Gabriel Mountains. The plan anticipates buildout of development into the remaining natural areas in north Fontana and addresses the listed and sensitive species found in these areas. This HCP is not formally recognized by the USFWS.
- **City of Colton West Valley HCP.** In 2015, the USFWS issued a 30-year incidental take permit to Colton for the West Valley HCP, which covers impacts to Delhi sands flower-loving fly. The City enforces a fee-based ordinance to finance the protection, restoration, and management of 50.3 acres.
- **Town of Apple Valley MSHCP.** An ongoing planning effort to develop an MSHCP for the Town of Apple Valley and its sphere of influence (SOI). The plan area includes the town's limits, the SOI limits, and a SOI "planning extension" that would include County jurisdiction. Currently, no information is available on covered activities, projects, or which species may be covered for take (harm). If the plan area ultimately includes land in the County's jurisdiction, a specific analysis would need to determine any constraints or requirements.
- **Upper Santa Ana River HCP.** This is a collaborative effort among the water resource agencies of the Santa Ana River Watershed, USFWS, CDFW, and several other government agencies and stakeholder organizations. Its purpose is to provide and maintain a secure source of water for the residents and businesses and to conserve natural rivers and streams that provide habitat for unique and rare species, particularly the Santa Ana sucker. It spans the majority of the Valley Region and the eastern part of San Bernardino National Forest.
- **Upper Santa Ana River Wash HCP.** This plan will cover primarily expanded gravel mining in an area downstream of the Seven Oaks Dam in the southern extent of the City of Highland and the northern extent of the City of Redlands. The covered species include California gnatcatcher, San Bernardino kangaroo rat, Santa Ana River woollystar, and slender-horned spineflower.
- **Desert Renewable Energy Conservation Plan.** The Draft DRECP was originally developed as an HCP/NCCP and a BLM land use plan amendment covering public and private lands across seven counties, including the entire Desert Region of the County. In 2016, the DRECP BLM Land Use Plan Amendment was adopted by the BLM to address renewable energy, land use, and conservation on BLM lands only in the California Desert Region including the County. The DRECP does not provide HCP/NCCP coverage for private lands in the County.
- **Lower Colorado River Multispecies Conservation Program.** Created to balance the use of Colorado River water with the conservation of native species and their habitats, the program works to recover species currently listed under the FESA and reduces the likelihood of additional species listings. The program will be

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implemented over 50 years; it extends over the main stem and historical 100-year floodplain of the Lower Colorado River in the County and includes Lake Havasu.

- **Other Small Project-Specific HCPs.** The USFWS has approved 20 small, single-project, single-species HCPs in the county for: Delhi Sands flower-loving fly (10 approved HCPs), San Bernardino kangaroo rat (6 approved HCPs), and desert tortoise (4 approved HCPs) (USFWS n.d.).

5.4.1.2 EXISTING CONDITIONS

Valley Region

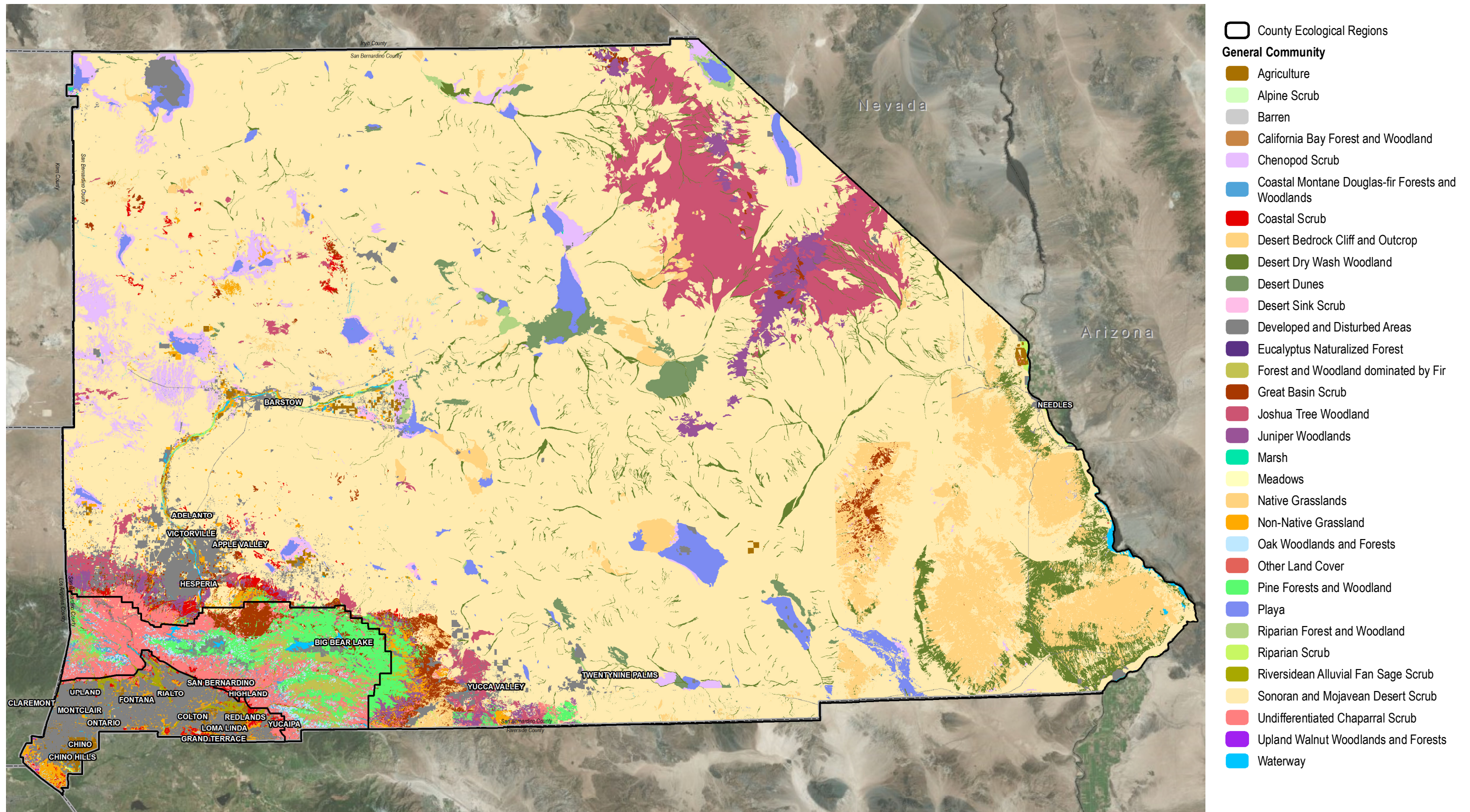
The Valley Region has a diverse geography of valleys and foothills. The inland valleys are bounded on the northeast and northwest by the San Bernardino and San Gabriel Mountain ranges. The Valley Region is largely developed, with approximately 77 percent of the area under County jurisdiction either developed or under agricultural uses. Nevertheless, the undeveloped portions of the county provide important biological resources.

Vegetation Communities

Table 5.4-1 lists general vegetation communities in the Valley Region. For more detail, see Table 12 in the existing conditions report, Appendix D. Vegetation communities within the County are depicted on Figure 5.4-1, and special status vegetation communities in the Valley are shown on Figure 5.4-2.

Table 5.4-1 Vegetation Communities and Land Covers in the Valley Region

General Communities	Acres within County Jurisdiction	% within County Jurisdiction
Agriculture	2,827.1	6.77%
Barren	77.6	0.19%
Coastal Scrub	3,738.0	8.95%
Developed and Disturbed Areas	19,471.9	46.61%
Eucalyptus Naturalized Forest	17.3	0.04%
Juniper Woodlands	13.3	0.03%
Native Grasslands	167.9	0.40%
Non-native Grasslands	3,506.5	8.39%
Oak Woodlands and Forests	222.5	0.53%
Riparian Forest and Woodland	125.1	0.30%
Riparian Scrub	18.9	0.05%
Riversidean Alluvial Fan Sage Scrub	5,567.2	13.33%
Undifferentiated Chaparral Scrub	5,841.4	13.98%
Waterway	182.1	0.44%
Total	41,776.9	



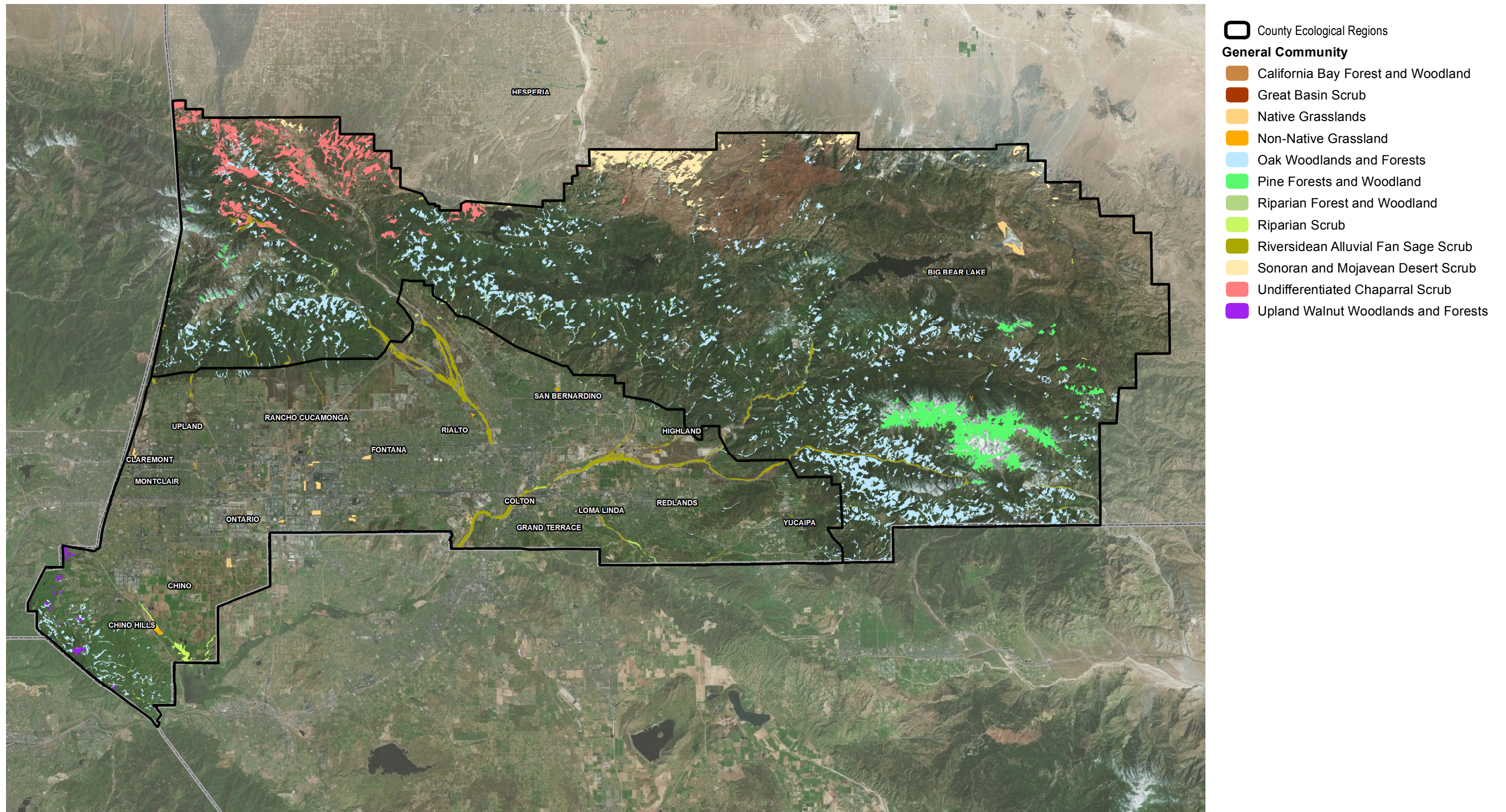
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 Fig. 5.4-1 Vegetation Communities in the County

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 Fig. 5.4-2 Special Status Vegetation Communities in the Valley and Mountain Regions

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Special-Status Species

The USFWS has designated critical habitat for several wildlife species in the Valley Region and one plant species. The acreage of critical habitat is summarized in Table 5.4-2, and locations are depicted on Figure 5.4-3, *Critical Habitat in the Valley Region*.

Table 5.4-2 Acres of Critical Habitat in Valley Region

Critical Habitat Species		Valley Region (acres)	County Jurisdiction (acres)
Common Name	Scientific Name		
Arroyo toad	<i>Anaxyrus californicus</i>	192	103
Coastal California gnatcatcher	<i>Poliophtila californica</i>	7,449	268
Least Bell's vireo	<i>Vireo bellii pusillus</i>	2,062	0.0
Santa Ana sucker	<i>Catostomus santaanae</i>	2,114	138
San Bernardino kangaroo rat	<i>Dipodomys merriami parvus</i>	26,489	7,509
Southwestern willow flycatcher	<i>Empidonax traillii eximus</i>	2,574	27
Western yellow-billed cuckoo	<i>Coccyzus americanus occidentalis</i>	389	0.0
Thread-leaved brodiaea	<i>Brodiaea filifolia</i>	61	0.0

Source: USFWS 2018.

A total of 31 special-status plant species have been documented in the Valley Region, including 3 plant species that are federally and/or state listed. A total of 42 special-status animal species have been documented, including 9 species that are federally endangered or threatened, 6 that are state endangered or threatened, 2 that are state fully protected, and 24 that are nonlisted species. The listed and fully protected plant and wildlife species are listed in Table 5.4-3.

Table 5.4-3 Federal and State Listed Species in the Valley Region

Plant Species		Animal Species	
Species Name	Status	Species Name	Status
Nevin's barberry	FE, SE	arroyo toad	FE
Santa Ana River woollystar	FE, SE	coastal California gnatcatcher	FT
slender-horned spineflower	FE, SE	least Bell's vireo (nesting)	FE, SE
		tricolored blackbird	ST
		white-tailed kite	FP)
		golden eagle	FP
		Santa Ana sucker	FT
		San Bernardino kangaroo rat	FE
		Stephens' kangaroo rat	FE, ST
		Delhi sands flower-loving fly	FE

FE = federally endangered
FT = federally threatened
SE = state endangered
ST = state threatened
FP = fully protected (state)

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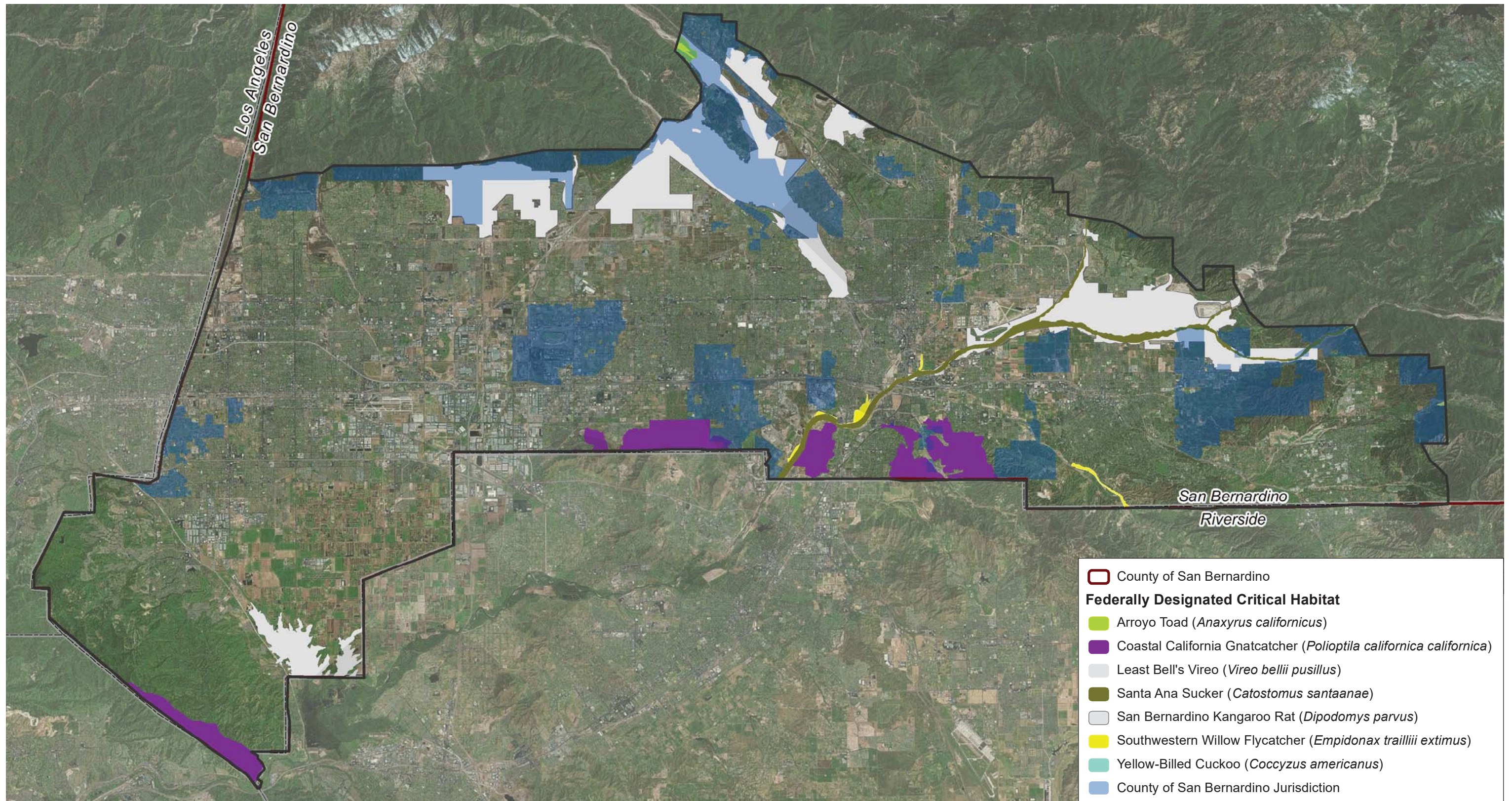
Habitat Linkages and Wildlife Corridors

The foothill areas of the San Gabriel and San Bernardino Mountains and associated washes are considered habitat linkage and wildlife corridors in the Valley Region.

- **San Gabriel–San Bernardino Connection.** Connects two expansive areas of the Angeles and San Bernardino National Forests, including three roughly parallel swaths through the Cajon Wash and Pass. In the Valley Region, Cajon Wash and Lytle Creek are part of this linkage, as is the Etiwanda Fan (San Gabriel foothills) from the County line east to near I-215. Special-status species include San Bernardino kangaroo rat and American badger. I-15 poses the most substantial barriers to wildlife movement.
- **San Bernardino–San Jacinto Connection.** Five swaths connect the San Bernardino and San Jacinto Mountains, and species expected to use it include bobcat. Part of the corridor is in the Valley Region, and linkage areas are identified east of Yucaipa in Wildwood Canyon, Cherry Canyon, Wallace Creek, and Little San Geronio Creek that connect with areas in Riverside County to the south. The linkage does not intersect any major transportation corridors.
- **Puente-Chino Hills Wildlife Corridor.** This corridor is approximately 31 miles long—from the Whittier Narrows in Los Angeles County to the Cleveland National Forest in Orange County. Despite its long history of use and proximity to urban development, there is still sufficient habitat for connectivity. In the County, the corridor runs through Chino Hills State Park, but overlaps many unprotected areas. Natural vegetation communities include walnut and oak woodlands, chaparral, native grasslands, and coastal sage scrub that support habitat for species such as California gnatcatcher, cactus wren, mule deer, cougar, coyote, bobcat, American badger, and gray fox.

Major washes and riparian corridors that act as wildlife corridors include:

- **Cable Creek.** Cable Creek, its tributaries (Ames Canyon and Meyers Canyon), and associated springs provide foothill areas that link to the national forest to the north and east. It extends from Little League Drive to the National Forest boundary. It has riparian and alluvial fan habitat as well as a number of natural springs. Species documented in the area include least Bell's vireo, San Bernardino kangaroo rat, Los Angeles pocket mouse, and mule deer (as a fawning area).
- **Devil Creek.** Devil Creek, its tributaries (Sycamore Canyon and Badger Canyon), and associated springs provide foothill areas that link to the national forest to the north and east. It extends primarily from north of California State University, San Bernardino, east to areas north of the City of San Bernardino. It has riparian habitat and a number of natural springs. Species documented in the area include California gnatcatcher and springsnails.



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Fig. 5.4-3 Critical Habitat in the Valley Region

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COUNTYWIDE PLAN
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Open Space Features

Table 5.4-4 lists additional open space features that overlap the Valley Region in the County's jurisdiction.

Table 5.4-4 Open Space Overlay Features in the Valley Region within County Jurisdiction

Feature	Type	Acres
Cajon Wash	Wildlife Corridor	758.8
Dispersion Corridor	Wildlife Corridor	17.1
East Etiwanda	Wildlife Corridor	21.6
Lytle Creek	Wildlife Corridor	220.1
Mill Creek	Wildlife Corridor	982.7
Plunge Creek	Wildlife Corridor	0.4
San Timoteo Canyon	Wildlife Corridor	481.5
Santa Ana River	Wildlife Corridor	173.1
Spoor Canyon	Wildlife Corridor	322.0
Waterman Canyon	Wildlife Corridor	2.9
Cajon Pass	Policy Area	7,523.9
Crafton Hills Grove	Policy Area	2,786.0
Crafton Hills Open Space	Policy Area	1,679.7
Dispersion Corridor	Policy Area	0.1
Pisgah Peak	Policy Area	470.4

Source: Dudek 2016.

Protected and Wilderness Areas

Protected and wilderness areas in the Valley Region include:

- **Former Norton Air Force Base Conservation Management Plan.** Approximately 54 acres in two parcels of the Management Plan were designated Core Management Areas (CMA-1 and CMA-2), and 214 acres compose an Open Space Management Area. These areas are managed specifically for the San Bernardino kangaroo rat and Santa Ana River woollystar and are permanently protected by conservation easements.
- **North Etiwanda Preserve.** The original preserve, formally established in 1998, was a single, 763-acre parcel of Riversidean alluvial fan sage scrub set aside as mitigation for the State Route 30 (now SR-210) Improvements Project. In July 2009, the preserve was expanded by 440 acres (total of 1,203 acres). It is currently managed by the County Special Districts Department.
- **Day Canyon Preserve.** A 200-acre conservation area was set aside through a conservation easement to the County Flood Control District as mitigation for impacts from sand and gravel operations.
- **Colton Dunes Conservation Bank.** Vulcan Materials operates the 150-acre conservation bank that contains Delhi sand dunes suitable for the Delhi sands flower-loving fly. The bank is conserved in

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perpetuity through a conservation easement held by the Riverside Land Conservancy and an endowment providing permanent habitat maintenance funded by Vulcan.

- **Vulcan Materials Alluvial Fan Sage Scrub Mitigation Bank.** This bank consists of a 567-acre habitat conservation management area along a six-mile stretch of Cajon Wash and Lytle Creek. There are 24 sensitive wildlife and plant species in this preserve, including the coastal California gnatcatcher, San Bernardino kangaroo rat, and many wildflower species.
- **Lytle Creek Conservation Bank.** This bank is in the Lytle Creek wash area north of SR-210 and southwest of I-215 in the County, near the cities of Fontana and Rialto. The bank permanently protects and preserves approximately 182 acres of suitable habitat for the conservation of San Bernardino kangaroo rat and Santa Ana River woollystar.
- **Chino Hills State Park.** This state park is an open space reserve in the Santa Ana Canyon hills near Riverside. This reserve is a critical link in the Puente-Chino Hills Wildlife Corridor and encompasses oaks, sycamores, and Riversidean sage scrub with continuous grassy hills nearly 31 miles long. This area stretches from the Santa Ana Mountains to Whittier Hills. Riversidean sage scrub supports sensitive wildlife species, including the coastal California gnatcatcher.
- **Prado Basin Mitigation Area.** A water conservation level behind Prado Dam was elevated in a 1995 agreement between Orange County Water District (OCWD), the Corps, and USFWS, nearly doubling the water that could be stored behind the dam. The agreement aimed to enhance the water conservation and environmental values of Prado Basin, which is a breeding ground for the least Bell's vireo. Nearly 465 acres of constructed wetlands were created within and adjacent to the OCWD property.
- **Woolly Star Preserve Area.** In the upper Santa Ana Wash, this 760-acre preserve was established by the Corps along the Santa Ana River Wash as mitigation for the Seven Oaks Dam project.
- **Crafton Hills Conservancy.** Since 1992, the Crafton Hills Open Space Conservancy has acquired land in the Crafton Hills by donation and/or conservation of easements, gifts of land for exchange or sale, and purchase of land with donated funds.
- **Wildwood Canyon State Park.** Wildwood Canyon State Park is in the eastern foothills of the San Bernardino Mountains near the City of Yucaipa and is surrounded by San Bernardino National Forest.
- **Oak Glen Preserve.** The 2,189-acre Oak Glen Preserve is owned by the Wildlands Conservancy. It is adjacent to the San Bernardino National Forest near Yucaipa Ridge.

Jurisdictional Waters

The dominant aquatic feature in the Valley Region is the Santa Ana River, which originates in the San Bernardino Mountains and continues southwest through the county, then through Riverside and Orange counties, and ultimately terminates at the Pacific Ocean. Key tributaries include City Creek, Day Creek, Etiwanda Creek, Plunge Creek, San Sevaine Creek, Lytle Creek, Cajon Wash, San Timoteo Wash, and Mill

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Creek. Many of these drainages and portions of the Santa Ana River carry little to no storm flows during dry conditions due to infiltration in relatively coarse-grained, sandy soils and because of extensive, highly permeable recharge basins in this region. These systems comprise wetland and non-wetland waters of the United States and State and streambeds under the jurisdiction of the Corps, RWQCB, and/or CDFW. Other unnamed tributaries and lakes, ponds, or pools may also be jurisdictional waters.

Mountain Region

A substantial portion of the Mountain Region is occupied by the San Bernardino National Forest, and fewer than 14 percent of the Mountain Region is in County jurisdiction. Although a large portion of the Mountain Region is already under public management through the National Forest, there are opportunities for management of biological resources within County jurisdiction.

Vegetation Communities

Table 5.4-5 lists the general vegetation communities in the Mountain Region. More details are in Table 8 in Appendix D. Vegetation communities within the County are shown on Figure 5.4-1, and special status vegetation communities are depicted in Figure 5.4-2.

Table 5.4-5 Vegetation Communities and Land Covers within the Mountain Region

General Communities	Acres within County Jurisdiction	% within County Jurisdiction
Agriculture	732.0	0.14%
Alpine Scrub	17.8	<0.01%
Barren	5,406.7	1.03%
California Bay Forest and Woodland	9.5	<0.01%
Chenopod Scrub	60.5	0.01%
Coastal Montane Douglas-Fir Forests and Woodlands	13,065.4	2.48%
Coastal Scrub	2,675.9	0.51%
Developed and Disturbed Areas	20,552.9	3.9%
Forest and Woodland Dominated by Fir	52,649.3	9.99%
Great Basin Scrub	26,613.4	5.05%
Joshua Tree Woodland	960.6	0.18%
Juniper Woodlands	906.7	0.17%
Meadows	359.2	0.07%
Native Grasslands	404.2	0.08%
Nonnative Grasslands	1640	0.31%
Oak Woodlands and Forests	38,629.3	7.33%
Pine Forests and Woodland	144,991.2	27.50%
Riparian Forest and Woodland	1,465.6	0.28%

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Table 5.4-5 Vegetation Communities and Land Covers within the Mountain Region

General Communities	Acres within County Jurisdiction	% within County Jurisdiction
Riparian Scrub	603.3	0.11%
Riversidean Alluvial Fan Sage Scrub	2,134.2	0.40%
Sonoran and Mojavean Desert Scrub	5,709.2	1.08%
Undifferentiated Chaparral Scrub	200,897.5	38.10%
Waterway	6,770.6	1.28%
Total	527,255.0	

Special-Status Species

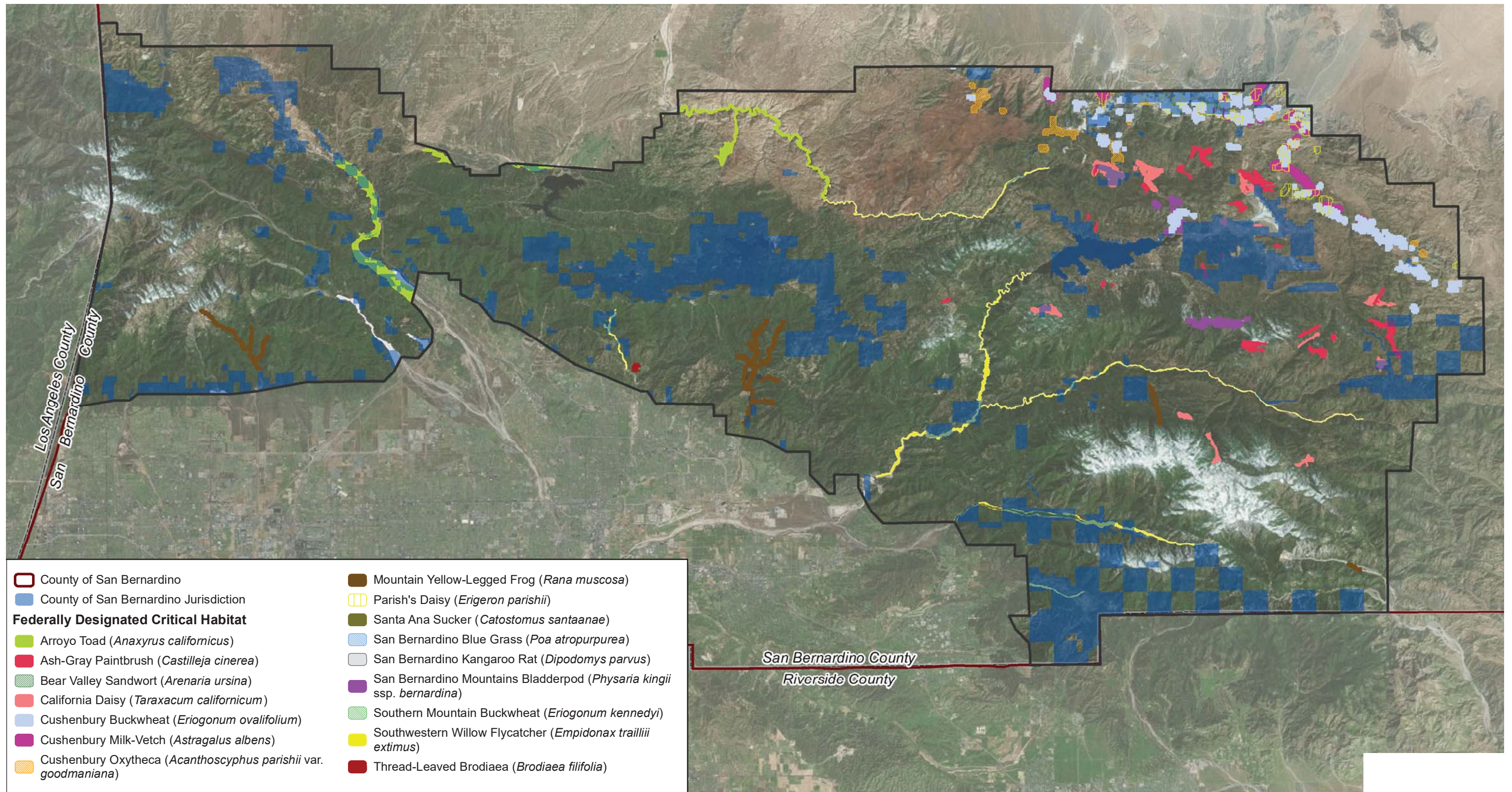
Within the Mountain Region, the USFWS has designated critical habitat for a number of plant species as well as arroyo toad, mountain yellow-legged frog, Santa Ana sucker, San Bernardino kangaroo rat and southwestern willow flycatcher. Table 5.4-6 summarizes the acreages of critical habitat in the Mountain Region and the locations are depicted on Figure 5.4-4, *Critical Habitat in the Mountain Region*.

Table 5.4-6 Acres of Critical Habitat in Mountain Region

Critical Habitat Species		Mountain Region (Acres)	County Jurisdiction (Acres)
Common Name	Scientific Name		
Plants			
ash-gray paintbrush	<i>Castilleja cinerea</i>	1,768	1,756
Big Bear Valley sandwort	<i>Eremogone ursina</i>	1,412	1,401
California dandelion	<i>Taraxacum californicum</i>	1,956	1,945
Cushenbury buckwheat	<i>Eriogonum ovalifolium</i> var. <i>vineum</i>	4,497	4,497
Cushenbury milk-vetch	<i>Astragalus albens</i>	2,232	2,232
Cushenbury oxytheca	<i>Acanthoscyphus parishii</i> var. <i>goodmaniana</i>	1,887	1,887
Parish's daisy	<i>Erigeron parishii</i>	1,603	1,603
San Bernardino blue grass	<i>Poa atropurpurea</i>	1,416	1,405
San Bernardino Mountains bladderpod	<i>Physaria kingii</i> ssp. <i>bernardina</i>	1,026	1,022
southern mountain buckwheat	<i>Eriogonum kennedyi</i> var. <i>austromontanum</i>	903	892
Wildlife			
arroyo toad	<i>Anaxyrus californicus</i>	2,914	2,621
mountain yellow-legged frog	<i>Rana muscosa</i>	2,290	2,138
Santa Ana sucker	<i>Catostomus santaanae</i>	226	214
San Bernardino kangaroo rat	<i>Dipodomys merriami parvus</i>	1,257	1,129
southwestern willow flycatcher	<i>Empidonax traillii extimus</i>	4,524	4,453

Source: USFWS 2018.

Source: USFWS 2018.



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Fig. 5.4-4 Critical Habitat in the Mountain Region

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A total of 91 special-status plant species have been documented in the Mountain Region—14 species federally listed as endangered or threatened, 5 listed as state endangered or rare, and 73 nonlisted special-status species. A total of 44 special-status animal species have been documented—7 species federally endangered or threatened, 8 state endangered or threatened, 1 state threatened candidate, 6 state fully protected, and 28 nonlisted special-status species. The federally and state-listed plant and wildlife species are listed in Table 5.4-7.

The federally threatened Santa Ana sucker has been extirpated from the creeks of the Mountain Region, but planning through the Upper Santa Ana River HCP is underway to reintroduce this species to some of its former range.

Table 5.4-7 Federal and State Listed Species in the Mountain Region

Plant Species		Animal Species	
Species Name	Status	Species Name	Status
ash-gray paintbrush	FT	California red-legged frog	FT
Big Bear Valley sandwort	FT	arroyo toad	FE
bird-foot checkerbloom	FE, SE	mountain yellow-legged frog	FE, SE
California dandelion	FE	least Bell's vireo (nesting)	FE, SE
Cushenbury buckwheat	FE	southwestern willow flycatcher (nesting)	FE, SE
Cushenbury milk-vetch	FE	unarmored threespine stickleback	FE, SE, FP
Cushenbury oxytheca	FE	southern rubber boa	ST
Parish's daisy	FT	bald eagle (nesting and wintering)	SE, FP
San Bernardino blue grass	FE	Swainson's hawk (nesting)	ST
San Bernardino Mountains bladderpod	FE	bank swallow (nesting)	ST
slender-petaled thelypodium	FE, SE	white-tailed kite (nesting)	FP
southern mountain buckwheat	FT	golden eagle (nesting and wintering)	FP
thread-leaved brodiaea	FT, SE	ringtail	FP
triple-ribbed milk-vetch	FE	Nelson's bighorn sheep	FP
Santa Ana River woollystar	FE, SE	Townsend's big-eared bat	SC
slender-horned spineflower	FE, SE	Santa Ana sucker	FE
Mojave tarplant	SE		
Parish's checkerbloom	CA Rare		

FE = federally endangered FT = federally threatened SE = state endangered ST = state threatened FP = fully protected (state)

Habitat Linkages and Wildlife Corridors

In the Mountain Region, the California Essential Habitat Connectivity Project identifies habitat connections between the San Gabriel Mountains, San Bernardino Mountains, and the Little San Bernardino Mountains.

- **San Gabriel–San Bernardino Connection.** Connects two expansive areas of the Angeles and San Bernardino National Forests, including three roughly parallel swaths through the Cajon Wash and Pass. It

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partially overlaps the Mountain Region, providing habitat for special-status species wildlife such as American badger. I-15 and SR-138 pose the most substantial barriers to wildlife movement; three bridges along I-15 accommodate animal movement.

- **San Bernardino–Granite Connection.** Connects the San Bernardino National Forest with extensive natural lands in the Granite, Ord, and Rodman Mountains, but is mostly in the Desert Region.
- **San Bernardino–Little San Bernardino Connection.** Connects San Bernardino National Forest with Joshua Tree National Park and partially overlaps the Mountain Region. Expected species include Nelson’s bighorn sheep, cougar, bobcat, and gray fox. SR-62 is the major transportation route that crosses the linkage.
- **San Bernardino–San Jacinto Connection.** Connects the San Bernardino and San Jacinto Mountains, partially in the Mountain Region, and does not intersect any major transportation corridors. Expected species include bobcat.

A multitude of corridors link existing blocks of habitat, including the San Bernardino Mountains, to habitat blocks in the Desert Region. These corridors include Pipes Canyon and Little Morongo Creek/Canyon. SR-247 is the major transportation corridor that is crossed.

Table 5.4-8 lists additional open space overlay features that overlap the Mountain Region within County jurisdiction. Descriptions of these open space features are included in Appendix D, Table 10.

Table 5.4-8 Open Space Overlay Features in the Mountain Region within County Jurisdiction

Feature	Type	Acres
Banning Canyon	Wildlife Corridor	508.5
Cajon Wash	Wildlife Corridor	1,957.4
Cajon Wash Tributary	Wildlife Corridor	76.9
City Creek	Wildlife Corridor	190.2
Cleghorn Canyon	Wildlife Corridor	83.5
Crowder Canyon	Wildlife Corridor	189.6
Day Canyon	Wildlife Corridor	54.5
Deep Creek	Wildlife Corridor	804.3
Dispersion Corridor	Wildlife Corridor	1,941.9
Dispersion Corridor	Wildlife Corridor	1,118.1
East Etiwanda	Wildlife Corridor	253.2
Grass Valley Creek	Wildlife Corridor	918.7
Little Horsethief Canyon	Wildlife Corridor	142.0
Little San Gorgonio	Wildlife Corridor	797.3
Lone Pine Canyon	Wildlife Corridor	822.5
Lytle Creek	Wildlife Corridor	512.8
Middle Fork Lytle Creek	Wildlife Corridor	49.1
Mill Creek	Wildlife Corridor	1,778.2
Mojave River	Wildlife Corridor	0.2
Mojave River Headwaters	Wildlife Corridor	181.3

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Table 5.4-8 Open Space Overlay Features in the Mountain Region within County Jurisdiction

Feature	Type	Acres
North Fork Lytle Creek	Wildlife Corridor	327.2
Pipes Canyon	Wildlife Corridor	480.5
Santa Ana River	Wildlife Corridor	1,430.0
Sleepy Creek	Wildlife Corridor	164.7
South Fork Lytle Creek	Wildlife Corridor	49.4
South Fork Whitewater River	Wildlife Corridor	1,290.9
Strawberry Creek	Wildlife Corridor	159.5
Waterman Canyon	Wildlife Corridor	326.4
Baldwin Lake	Policy Area	1,200.4
Big Bear Lake Watershed	Policy Area	7,617.6
Cajon Pass	Policy Area	158.6
Holcomb Valley	Policy Area	591.5
Lake Arrowhead	Policy Area	2,302.9
Lake Silverwood	Policy Area	7.5
Limestone Deposits	Policy Area	2,481.8
Pisgah Peak	Policy Area	1,693.8
Shay Meadow	Policy Area	302.9
Spotted Owl Habitat	Policy Area	2,632.9

Source: Dudek 2016.

Protected and Wilderness Areas

The following blocks of public/government lands in the Mountain Region afford varying degrees of protection for biological resources.

- **Sand to Snow National Monument.** Totals 154,000 acres and was designated in February 2016. It extends from BLM lands on the desert floor up to the San Gorgonio Wilderness in the San Bernardino National Forest. About 71,000 acres are in the San Bernardino National Forest, 83,000 acres are on BLM lands, and approximately 101,000 acres are managed as wilderness. The monument has a wide range of ecosystems in the Mountain Region, including riparian forests, freshwater marshes, meadows, chaparral, and alpine conifer forests. It plays an integral role in the San Bernardino–Little San Bernardino Connection and the San Bernardino–San Jacinto Connection.
- **San Bernardino National Forest.** The San Bernardino National Forest is managed by USFS. Two of its three ranger districts are in the County: Mountaintop Ranger District and the Front Country Ranger District. It also has four designated Wilderness Areas in the county:
 - Bighorn Mountain Wilderness (11,800 acres), northeast of Big Bear Lake in the Mountaintop Ranger District
 - Cucamonga Wilderness (8,581 acres), east of Mount Baldy in the Front Country Ranger District
 - San Gorgonio Wilderness (56,722 acres), east of Redlands in the Front Country Ranger District
 - Sheep Mountain Wilderness (2,401 acres), south of Wrightwood in the Front Country Ranger District

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Jurisdictional Waters

Runoff from the mountains is the main water source for both the Santa Ana and Mojave rivers. Water flows south to the Santa Ana River from the southern and western parts of the Mountain Region, and flows north to the Mojave River from the northern part of the region. In the Mountain Region, the south fork of the Santa Ana River is an intact riverine resource and a permanently flooded riverine wetland. Vivian Creek is a permanently flooded mountain wetland (Ferren et al. 1996). Deep Creek and Bear Creek are CDFW-designated wild trout streams and contain high quality riparian resources.

A substantial part of the Mountain Region drains north to the Mojave River, including Grass Valley Creek, Kinley Creek, Willow Creek, and Deep Creek. The Mountain Region also has several large lakes, including Big Bear Lake, Lake Arrowhead, and Silverwood Lake. These systems comprise wetland and non-wetland waters of the United States and State and streambeds under the jurisdiction of the Corps, RWQCB, and/or CDFW. Other unnamed tributaries and isolated lakes, ponds, or pools may also be jurisdictional waters.

Desert Region

Approximately 12 percent of the Desert Region is under County jurisdiction, with the remainder under either tribal jurisdiction, local (city) jurisdiction, or federal jurisdiction, including BLM, National Park Service (NPS), and Department of Defense. The Desert Region is bounded to the south primarily by the San Bernardino and San Gabriel Mountain Ranges. The foothills on the northern side level off quickly, and the southern part of the desert lies primarily flat, with elevations hovering around 1,000 feet above mean sea level (amsl) and scattered low-elevation mountains ranging between 2,000 and 4,000 feet amsl.

The Mojave Desert covers a large portion of the central, northern and eastern parts of the County.

Vegetation Communities

Table 5.4-9 lists the general vegetation communities in the Desert Region. More details are in Table 4 in Appendix D. Vegetation communities within the County are depicted on Figure 5.4-1. Special status vegetation communities within the Desert Region are depicted on Figure 5.4-5.

Table 5.4-9 Vegetation Communities in the Desert Region within County Jurisdiction

General Communities	Acres within County Jurisdiction	% within County Jurisdiction
Agriculture	21,438.0	0.18%
Barren	57.2	<0.01%
Chenopod Scrub	252,088.3	2.15%
Coastal Scrub	23,720.3	0.21%
Desert Bedrock Cliff and Outcrop	801,240.3	6.86%
Desert Dry Wash Woodland	389,065.0	3.33%
Desert Dunes	113,239.5	0.97%
Desert Sink Scrub	19,873.0	0.17%
Developed and Disturbed Areas	148,274.1	1.27%
Great Basin Scrub	93,694.8	0.79%
Joshua Tree Woodland	601,848.6	5.15%
Juniper Woodlands	159,945.1	1.37%

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Table 5.4-9 Vegetation Communities in the Desert Region within County Jurisdiction

General Communities	Acres within County Jurisdiction	% within County Jurisdiction
Marsh	1,141.3	0.01%
Native Grasslands	24,337.7	0.21%
Non-native Grasslands	65,648.8	0.56%
Oak Woodlands and Forests	205.9	<0.01%
Pine Forests and Woodland	56,956.0	0.49%
Playa	234,498.3	2.01%
Riparian Forest and Woodland	25,369.1	0.22%
Riparian Scrub	8,763.5	0.07%
Riversidean Alluvial Fan Sage Scrub	837.1	0.01%
Sonoran and Mojavean Desert Scrub	8,596,097.8	73.56%
Undifferentiated Chaparral Scrub	31,642.9	0.26%
Waterway	13,195.6	0.11%
Total	11,683,178.2	100%

Special-Status Species

In the Desert Region, the USFWS has designated critical habitat for several plant and wildlife species, as summarized in Table 5.4-10 and depicted on Figure 5.4-6, *Critical Habitat in the Desert Region*.

Table 5.4-10 Acres of Critical Habitat in the Desert Region

Critical Habitat Species		Desert Region (Acres)	County Jurisdiction (Acres)
Common Name	Scientific Name		
Plants			
Cushenbury buckwheat	<i>Eriogonum ovalifolium</i> var. <i>vineum</i>	2,462	2,455
Cushenbury milk-vetch	<i>Astragalus albens</i>	2,137	2,133
Cushenbury oxytheca	<i>Acanthoscyphus parishii</i> var. <i>goodmaniana</i>	1,266	1,260
Lane mountain milkvetch	<i>Astragalus jaegerianus</i>	14,177	14,177
Parish's daisy	<i>Erigeron parishii</i>	2,821	2,806
Wildlife			
arroyo toad	<i>Anaxyrus californicus</i>	4,276	1,337
desert tortoise	<i>Gopherus agassizii</i>	3,561,131	3,555,069
southwestern willow flycatcher	<i>Empidonax traillii extimus</i>	7,207	3,829
western yellow-billed cuckoo ^a	<i>Coccyzus americanus occidentalis</i>	4,709	2,756
bonytail chub	<i>Gila elegans</i>	9,271	6,539
razorback sucker	<i>Xyrauchen texanus</i>	1,160	142

Source: USFWS 2018

Source: USFWS 2018

A total of 176 special-status plant species have been documented in the Desert Region, including 6 species that are federally listed as endangered or threatened, 2 that are listed as state endangered, and 168 nonlisted species. A total of 58 special-status animal species have been documented, including 11 species that are federally endangered or threatened, 17 that are state endangered or threatened, 1 state threatened candidate, 8 that are

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state fully protected, and 35 that are nonlisted special-status species. The listed plant and wildlife species are listed in Table 5.4-11.

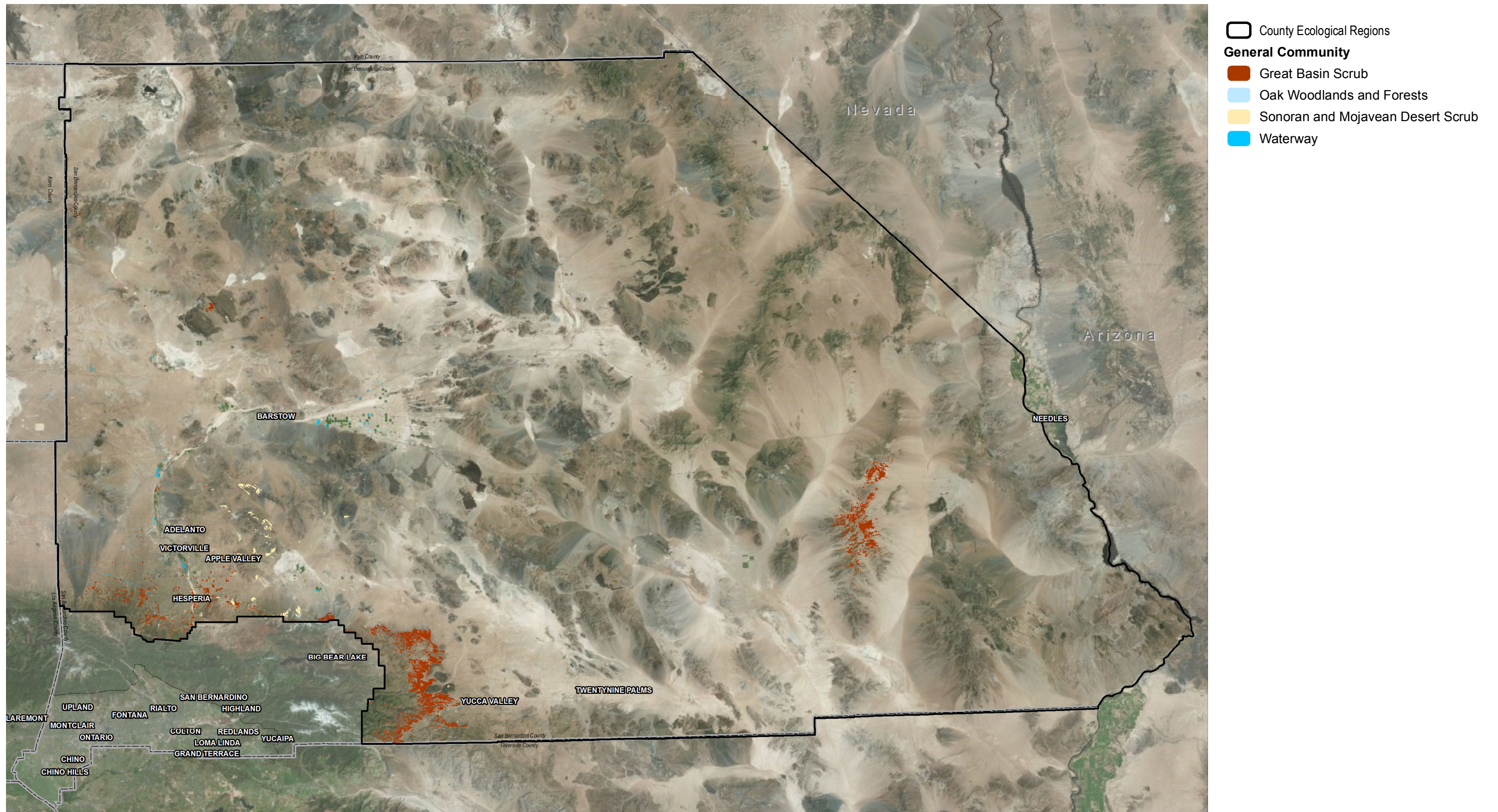
Table 5.4-11 Federal and State Listed Species in the Desert Region


Plant Species		Animal Species	
Species Name	Status	Species Name	Status
Cushenbury oxytheca	FE	California red-legged frog	FT
Cushenbury milk-vetch	FE	arroyo toad	FE
Cushenbury buckwheat	FE	Mohave desert tortoise	FT, ST
Lane Mountain milk-vetch	FE	least Bell's vireo (nesting)	FE, SE
Parish's daisy	FT	southwestern willow flycatcher (nesting)	FE, SE
triple-ribbed milk-vetch	FE	western yellow-billed cuckoo (nesting)	FT, SE
Mojave tarplant	SE	western snowy plover (nesting)	FT
Thorne's buckwheat	SE	bonytail	FE, SE
		Colorado pikeminnow	FE, SE, FP
		Mohave tui chub	FE, SE, FP
		razorback sucker	FE, SE, FP
		California black rail	ST, FP
		Swainson's hawk (nesting)	ST
		bald eagle (nesting and wintering)	SE, FP
		Arizona Bell's vireo (nesting)	SE
		elf owl (nesting)	SE
		Gila woodpecker	SE
		gilded flicker	SE
		tricolored blackbird	ST
		Mohave ground squirrel	ST
		Townsend's big-eared bat	ST candidate
		golden eagle (nesting and wintering)	FP
		white-tailed kite (nesting)	FP
		Nelson's bighorn sheep	FP

FE = federally endangered
FT = federally threatened
SE = state endangered
ST = state threatened
FP = fully protected (state)

Habitat Linkages and Wildlife Corridors

- **San Gabriel–San Bernardino Connection.** Connects two expansive areas of the Angeles and San Bernardino National Forests and partially overlaps the Desert Region. It provides habitat for special-status species wildlife such as American badger. I-15 and SR-138 are the major transportation routes pose the most substantial barriers to wildlife movement. Three bridges along I-15 accommodate animal movement.



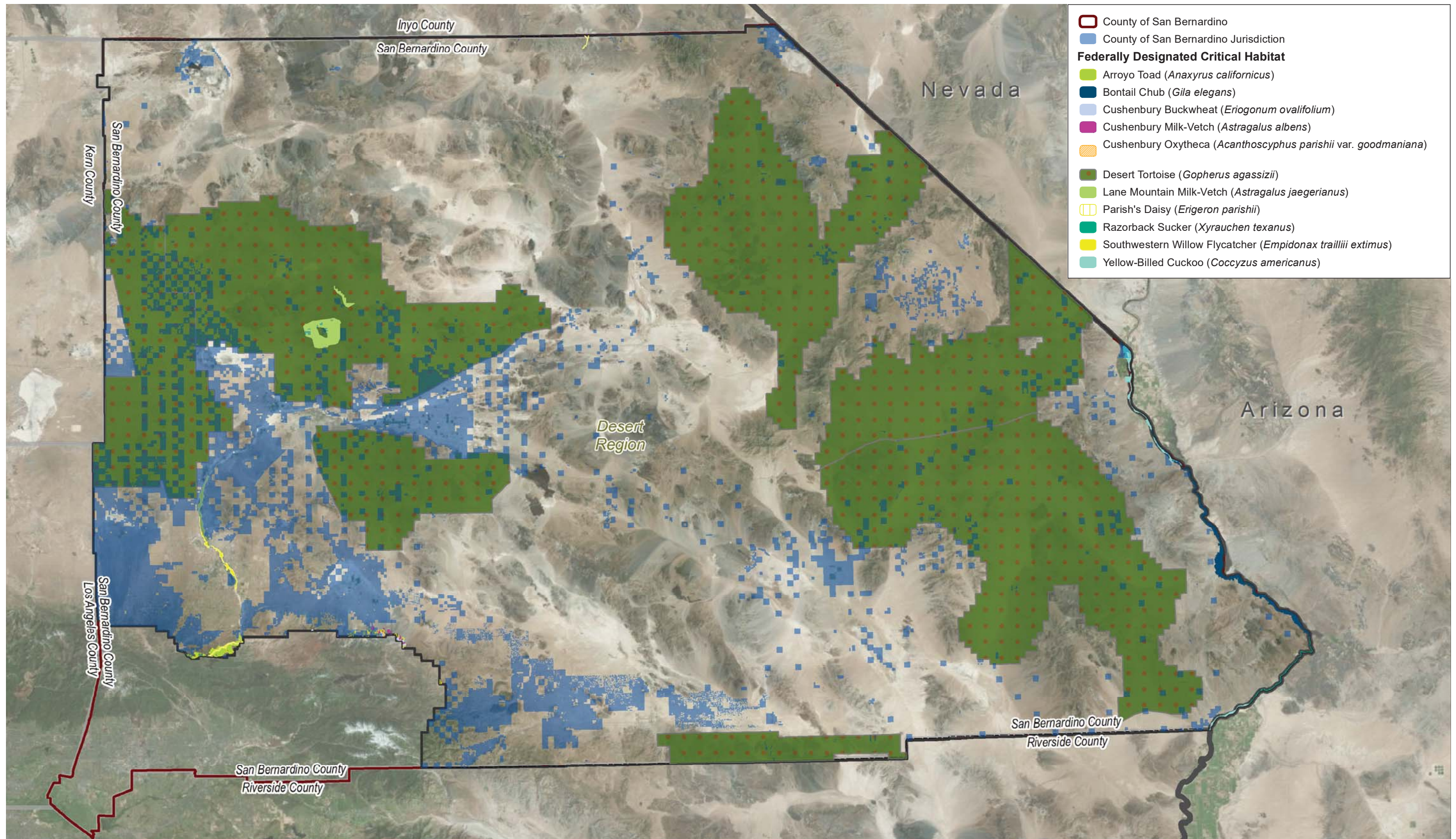
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Fig. 5.4-5 Special Status Vegetation Communities in the Desert

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Fig. 5.4-6 Critical Habitat in the Desert Region

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- **San Bernardino–Little San Bernardino Connection.** Connects San Bernardino National Forest with Joshua Tree National Park. Its five major swaths are primarily in the Desert Region of the county. Expected species include Nelson’s bighorn sheep, cougar, bobcat, and gray fox. SR-62 is the major transportation route that crosses the linkage.
- **San Bernardino–San Jacinto Connection.** Consists of five swaths that connect the San Bernardino and San Jacinto Mountains, partially within the County. It does not intersect any major transportation corridors. Species expected to use this linkage include bobcat.
- **Joshua Tree–Twentynine Palms Connection.** Connects Joshua Tree National Park and Marine Corps Air Ground Combat Center Twentynine Palms through the Morongo Basin. The connection is in an ecological transition zone between the Mojave and Sonoran (Colorado) desert ecoregions and encompasses a unique and diverse assemblage of plant communities. The Little San Bernardino and Eagle Mountains, which are extensions of the Transverse Ranges, separate the Mojave Desert from the Colorado Desert. Focal species include American badger, bobcat, Nelson’s bighorn sheep, and desert tortoise. SR-62 and SR-247 are the only major transportation routes in the linkage.

Several other corridors in the Desert Region link existing blocks of habitat, including the China Lake North and South Ranges, Edwards Air Force Base, Kingston Mesquite Mountains, Mojave National Preserve, Stepladder and Turtle Mountains, Whipple Mountains, Twentynine Palms and Newberry–Rodman, and Joshua Tree National Park.

Desert tortoise linkages also exist between the following tortoise conservation areas: Chemehuevi, Joshua Tree National Park, Pinto Mountains, Ord-Rodman, Freemont Kramer, Mojave National Preserve, Superior Cronese, Death Valley, Ivanpah, and Greenwater Valley (outside the County).

Table 5.4-12 lists additional open space overlay features that overlap the Desert Region within County jurisdiction.

Table 5.4-12 Open Space Overlay Features in the Desert Region within County Jurisdiction

Feature	Type	Acres
Mojave River	Wildlife Corridor	17,187.5
Deep Creek	Wildlife Corridor	63.2
Rattlesnake Canyon	Wildlife Corridor	98.3
Grass Valley Creek	Wildlife Corridor	1.1
Little Horsethief Canyon	Wildlife Corridor	426.0
Sleepy Creek	Wildlife Corridor	5.8
Pipes Canyon	Wildlife Corridor	362.4
Moabi Wildlife Preserve Buffer	Buffer	640.1
Joshua Tree Monument Buffer	Buffer	5,981.6
Pacific Crest Trail	Buffer	404.8
Limestone Deposits	Policy Area	3,720.4
Lake Silverwood	Policy Area	15.3

Source: Dudek 2016.

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Protected and Wilderness Areas

Large blocks of public/government lands in the Desert Region afford varying degrees of protection for biological resources and have conservation value.

- **Sand to Snow National Monument.** Totals 154,000 acres and extends from BLM lands on the desert floor up to the San Gorgonio Wilderness in the San Bernardino National Forest. About 71,000 acres are in the San Bernardino National Forest, 83,000 acres are on BLM lands, and approximately 101,000 acres are managed as wilderness. This monument has a wide range of ecosystems in the Desert Region. This monument plays an integral role in the San Bernardino–Little San Bernardino Connection and the San Bernardino–San Jacinto Connection.
- **Mojave Trails National Monument.** This 1.6 million-acre monument is on BLM lands and extends from east of Newberry Springs to west of Bullhead City on the state boundary between California and Nevada. It has more than 350,000 acres of previously congressionally designated wilderness and is composed of rugged desert mountains, lava flows, and sand dunes.
- **Castle Mountains National Monument.** This area in the eastern Mojave Desert is bounded on three sides by Mojave National Preserve and by the Nevada state line on the fourth. It completes the boundary of the Mojave National Preserve along the California–Nevada border and provides a linkage between the New York Mountains to the northwest and the Piute Mountains to the southeast. Species expected in this area include Nelson’s bighorn sheep, Townsend’s big-eared bat, California leaf-nosed bat, golden eagle, desert tortoise, Bendire’s thrasher, and gray vireo.

Parks and other protected areas in the Desert Region also provide biological value to the county.

- **Joshua Tree National Park.** Two deserts join within the 825,000-acre park—below 3,000 feet amsl, the Colorado Desert is on the eastern side of the park and is characterized by creosote bush, ocotillo, and cholla. Above 3,000 feet amsl lies the cooler, moister Mojave Desert. The Joshua tree is the defining feature in the Mojave. Five species of fan palm in the western part of the park indicate naturally occurring water.
- **Death Valley National Park.** The whole park encompasses approximately 3.4 million acres; 223,000 acres extend into the Desert Region of the County. The park is known for its extreme temperature ranges and is one of the hottest and driest places in North America during the summer months, with little annual rainfall. Its lowest elevation is approximately 282 feet below sea level.
- **Mojave National Preserve.** The 1.6-million-acre preserve in the Mojave Desert is the third largest unit in the national park system in the contiguous United States. The 700,000-acre Mojave Wilderness is in the preserve and managed by the NPSA majority of the preserve is composed of Joshua tree forests as well as numerous dunes.
- **Big Morongo Canyon Preserve.** Managed by BLM, Big Morongo Canyon Preserve covers 31,000 acres in the Little San Bernardino Mountains. It has one of the largest cottonwood and willow riparian habitats in California. Currently, this preserve is designated as an Area of Critical Environment Concern.

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- **Havasu National Wildlife Refuge.** Protects over 30 miles of river and shoreline along the Colorado River, which provides essential habitat for many wildlife species, including Nelson's bighorn sheep and southwestern willow flycatcher. It also contains one of the few remaining natural stretches of the Lower Colorado River within Topock Gorge.
- **California Desert National Conservation Area.** This area encompasses 4.8 million acres of the Desert Region. As a whole, the area encompasses 25 million acres in the Southern California desert, 10 million of which is administered by BLM.
- **Imperial National Wildlife Refuge.** The 26,000-acre wildlife refuge is primarily along the Colorado River in the Sonoran Desert. Approximately 7,200 acres are in the County at the state border with Arizona. It is managed by USFWS. This wildlife refuge is important because it preserves wetland habitat within the desert.
- **East Mojave National Scenic Area.** The East Mojave National Scenic Area was transferred from BLM to NPS in 1994 to become the Mojave National Preserve. What remains is approximately 22,000 acres jointly administered by BLM and the NPS.
- **Kelso Peak and Old Dad Mountains Wildlife Area.** Kelso Peak and Old Dad Mountains Wildlife Area consists of approximately 102,000 acres and is administered by CDFW. It is composed primarily of dry lake beds and low mountains, providing habitat for golden eagles and mountain sheep.
- **Pioneertown Mountains Preserve–Wildlands.** Pioneertown Mountains Preserve covers 25,500 acres and is owned by the Wildlands Conservancy. It is surrounded by the community of Pioneertown, the Sawtooth Mountains, and preserve lands adjacent to the San Bernardino National Forest. This preserve is an important linkage between Joshua Tree National Park, the Big Horn Mountains BLM Wilderness, and the San Bernardino National Forest.
- **Fremont Valley Ecological Reserve.** Approximately 4,100 acres in the Mojave Desert that is dominated by creosote bush scrub community and provides habitat for many mammals and reptiles.
- **West Mojave Desert Ecological Reserve.** Covers 18,000 acres of the Mojave Desert, just east of the Fremont Valley Ecological Reserve. It is dominated by creosote bush and burro weed.

Jurisdictional Waters

The Mojave River is the primary geographic and surface hydrologic feature of the Desert Region. Other prominent hydrologic features are the Lower Colorado River and Armargosa River, with numerous associated major tributaries; Little Morongo Creek, Needles Wash, and Yucca Creek. Many other drainages and washes terminate either in dry lakes or on the desert floor, and significant surface flow is unpredictable and scarce. Flash-flood events, particularly during the monsoon season, are typically the source of substantial surface water. Although ephemeral, these hydrologic features may comprise wetland and non-wetland waters of the United States and State and streambeds under the jurisdiction of the Corps, RWQCB, and/or CDFW. Other unnamed tributaries and isolated lakes (including dry lakes), ponds, or pools may also be jurisdictional waters.

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Conservation Easements and Biological Resources Mitigation Areas (Countywide)

The National Conservation Easement Database, an initiative of the U.S. Endowment for Forestry and Communities, lists 28 conservation easements in the County totaling approximately 11,050 acres. Most of the easements are in the northwest quadrant of the North Desert Region (NCED 2018). Types of agencies and organizations that hold conservation easements on land include resource conservation districts (formerly called soil conservation districts) and land trusts.

Resource Conservation Districts

One resource conservation district (RCD) operates entirely within the desert regions of the County; two other RCDs operate in the Valley Region and in parts of western Riverside County.

The Mojave Desert RCD spans nearly all the North Desert Region, the entire East Desert Region, and parts of the Mountain Region. The Mojave Desert RCD provides mitigation/compensation and environmental credits for developers wanting to build in the high desert portions of the county. Mitigation practices include the removal/retreatment of invasive species in the Mojave River as well as trash removal. To date, the District has nine active contracts totaling 123 acres (MDRCD 2018).

The Inland Empire RCD spans most of Valley Region and portions of the Mountain Region. Mitigation projects include constructed sediment basins in San Timoteo Creek in Redlands and the restoration of habitat in the Devil's Canyon/San Sevaine region of San Bernardino. Inland Empire RCD projects total 578 acres in area (IERCD 2018).

The Riverside-Corona RCD includes part of Valley Region in and near the City of San Bernardino. Riverside-Corona RCD manages over 2,000 acres that it District either owns or holds conservation easements on (RCRCD 2018).

Land Trusts

Several statewide or nationwide land trusts operate in the County. Four land trusts whose work is focused in and near the County are briefly described here.

- The Mojave Desert Land Trust focuses on parcels in national parks and preserves, wilderness areas, areas of critical environmental concern, and wildlife linkage corridors. It has acquired over 60,000 acres and manages over 16,000 acres (MDLT 2018).
- The Wildlands Conservancy has established the largest nonprofit nature preserve system in California, comprising seventeen preserves encompassing 145,000 acres. Five of these preserves, totaling 30,713 acres, are within San Bernardino County, including four preserves in the San Bernardino Mountains and one in the southwestern portion of the Desert Region.
- The Transition Habitat Conservancy focuses on land acquisitions and habitat stewardship in the West Mojave Desert in San Bernardino and Los Angeles counties. It has acquired over 7,000 acres of important habitat and helps manage and improve about 300,000 acres (THC 2018).

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- The San Bernardino Mountains Land Trust has acquired over 12,000 acres of open space land—formerly private inholdings—in the San Bernardino National Forest (SBMLT 2018).
- The Rivers and Lands Conservancy (RLC) currently holds and manages 24 mitigation properties totaling 1,350 acres in four southern California counties (RLC 2018). RLC has acquired over 11,000 acres for preservation and currently manages over 2,400 acres, including land it owns and land it holds conservation easements on. RLC is authorized by the CDFW to hold conservation easements or fee title lands for mitigation purposes in the coastal, inland, and desert regions of southern California. (RLC 2018).

5.4.2 Thresholds of Significance

According to Appendix G of the CEQA Guidelines, a project would normally have a significant effect on the environment if the project would:

- B-1 Have a substantial effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service.
- B-2 Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service.
- B-3 Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including but not limited to marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.
- B-4 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.
- B-5 Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.
- B-6 Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state Habitat Conservation Plan.

5.4.3 Regulatory Requirements and General Plan Policies

5.4.3.1 REGULATORY REQUIREMENTS

This section includes the regulatory requirement measures (RR) that would apply to the proposed Project. More details regarding the laws, regulations, and policies summarized below are provided in Section 5.4.1.1 of this chapter. Implementation of these measures would avoid and/or minimize impacts to biological resources.

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- RR BIO-1** **Jurisdictional Waters Permitting:** Sections 404 and 401 of the Clean Water Act require no net loss of wetlands, and Section 1602 of the California Fish and Game Code requires no obstructions or changes to the natural flow or streambeds. A Clean Water Act, Section 404 permit issued by the Corps and Section 401 permit issued by the California RWQCB would require compensation for all Project-related disturbances of waters of the United States and/or associated wetlands. A Waste Discharge Requirement issued by RWQCB would require compensation for all project-related discharges to waters of the State. A Streambed Alteration Agreement issued by the CDFW would require compensation for all project-related disturbances of any streambed.
- RR BIO-2** **Wild and Scenic Rivers:** The Wild and Scenic Rivers Act (Public Law 90-542; 16 U.S.C. 1271 et seq.) requires preserving certain free-flowing rivers and protecting their immediate environments.
- RR BIO-3** **Nesting Birds:** The Migratory Bird Treaty Act prohibits “take” of any migratory bird or any part, nest, or eggs of any such bird. California Fish and Game Code sections 3503, 3503.5, and 3513 prohibit the take and possession of bird eggs and nest.
- RR BIO-4** **Bald and Golden Eagle:** The Bald and Golden Eagle Protection Act (BGEPA), prohibits “take” of bald and golden eagles including their parts, nest, or eggs. The USFWS recommends that project proponents prepare an eagle conservation plan to avoid, minimize, and mitigate project-related impacts to eagles to ensure no net loss to the eagle population.
- RR BIO-5** **Special-Status Species:** The FESA, administered by the USFWS, prohibits unlawful “take” of any listed species (16 U.S.C. 1531–1544). The CESA, administered by CDFW, prohibits “take” of any listed species (California Fish and Game Code, Section 86). The Lacey Act (16 U.S.C. 3371-3378) prohibits illegal take, possession, transport, or sale of protected species. Sections 3511, 4700, 5050, and 5515 of the California Fish and Game Code prohibits take or possession of fully protected species of mammals, birds, reptiles, amphibians, and fish.
- RR BIO-6** **Invasive Species:** The Plant Protection Act of 2000 (7 U.S.C., Chapter 104) established a federal program to control the spread of noxious weeds and movement of all such weeds in interstate or foreign commerce is prohibited except under permit. The Noxious Weed Act of 1974 provides for the control and management of nonindigenous weeds and to inspect, seize, and destroy products and to quarantine areas if necessary to prevent the spread of such weeds. The National Invasive Species Council of 1999 (Executive Order 13112) requires measures to minimize risk of harm caused by invasive species.
- RR BIO-7** **Desert Native Plant Protection:** The California Desert Native Plants Act prohibits unlawful harvesting of species of the Agavaceae (century plants, nolas, and yuccas); all species of the family Cactaceae; all species of the family Fouquieriaceae (ocotillo, candlewood); all species of the genus *Prosopis* (mesquites); all species of the genus *Parkinsonia* (paloverdes); catclaw acacia (*Acacia greggii*); desert holly (*Atriplex hymenelytra*); smoke tree (*Psoralea argemone*); and desert ironwood (*Oleña tesota*), both dead and alive. Permanent impacts to these species would

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require a permit and fee, not be less than \$1 per plant, except for Joshua trees (*Yucca brevifolia*), which will not be less than \$2 per plant.

5.4.3.2 POLICY PLAN

The County has a complex matrix of land uses, land ownerships, and land use designations that influence resource conservation across the landscape. The County proposes to establish goals, together with implementation policies, related to the protection of special-status biological resources and cooperation with federal, state, and local resource agencies. The proposed policies related to the conservation of biological resources are in the natural resources element and the land use element.

- Policy NR-5.1 **Coordinated habitat planning.** We participate in landscape-scale habitat conservation planning and coordination with existing or proposed Habitat Conservation and Natural Resource Management Plans for private and public lands to increase certainty for both the conservation of species, habitats, wildlife corridors, and other important biological resources and functions and for land development and infrastructure permitting
- Policy NR-5.2 **Capacity for resource protection and management.** We coordinate with public and nongovernmental agencies to seek funding and other resources to protect, restore, and maintain open space, habitat, and wildlife corridors for threatened, endangered, and other sensitive species.
- Policy NR-5.3 **Multiple-resource benefits.** We prioritize conservation actions that demonstrate multiple resource preservation benefits, such as biology, climate change adaptation and resiliency, hydrology, cultural, scenic, and community character
- Policy NR-5.4 **Off-base recovery efforts.** We coordinate with military installations to facilitate off-base recovery of threatened and endangered species and landscape-scale conservation.
- Policy NR-5.5 **Mitigation and future responsibilities.** We require that new development satisfy habitat conservation responsibilities without shifting conservation responsibilities onto military property.
- Policy NR-5.6 **Mitigation banking.** We support the proactive assemblage of lands to protect biological resources and facilitate development through private or public mitigation banking. We require public and private conservation lands or mitigation banks to ensure that easement and fee title agreements provide funding methods sufficient to manage the land in perpetuity.
- Policy NR-5.7 **Development review, entitlement, and mitigation.** We comply with state and federal regulations regarding protected species of animals and vegetation through the development review, entitlement, and environmental clearance processes.

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- Policy NR-5.8 **Invasive species.** We require the use of non-invasive plant species with new development and encourage the management of existing invasive plant species that degrade ecological function.
- Policy LU-2.3 **Compatibility with natural environment.** We require that new development is located, scaled, buffered, and designed for compatibility with the surrounding natural environment and biodiversity.

5.4.4 Environmental Impacts

This section includes: (1) the methods for analyzing impacts; (2) an overview of the impacts; and (3) a description of the potential impacts to special-status biological resources, organized by significance threshold for the Valley, Mountain and Desert Regions.

5.4.4.1 METHODOLOGY

Based on a review of relevant maps and biological resources documentation for the county, this PEIR presents an assessment of special-status resources that have been observed or have the potential to occur in the County. This analysis allows only a general identification of habitats; programmatic impacts are discussed in broad, qualitative terms of habitat types that could be impacted due to the buildout of the CWP. This assessment does not satisfy the need for project-level CEQA analysis for individual projects. Individual projects under the proposed CWP will require project-level analysis at the time these projects are proposed based on the details of the projects and the existing conditions at the time such projects are pursued. Future projects that may result in significant impacts to biological resources will require identification of project-specific mitigation measures at that time consistent with the CWP, the County Development Code, appropriate local HCPs, and federal and state laws, policies, and regulations as applicable.

Definition of Special-Status Resources

Presented below are definitions of special-status resources analyzed in this chapter, including special-status plant species, wildlife species, and vegetation communities.

■ Special-Status Plant Species

- Listed as state endangered, threatened, or rare and/or listed as endangered or threatened by the USFWS (listed species), or candidates for future listing.
- Considered by the California Native Plant Society to be “rare, threatened, or endangered in California” (CRPRs 1 and 2).
- Considered a locally significant species, that is, a species that is not rare from a statewide perspective but is rare or uncommon in a local context, such as within a county or region, or is so designated in local or regional plans, policies, or ordinances.

■ Special-Status Wildlife Species

- Listed as threatened or endangered (“listed species”) or candidates for future listing under the federal FESA or CESA.

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- Designated as a species of concern by the CDFW.
- Fully protected species under California Fish and Game Code Sections 3511, 4700, 5050, and 5515.
- Species protected by 14 CCR Division 1, Subdivision 2, Chapter 5 (fur-bearing animals), Section 460 (for example, kit fox).

Vegetation communities considered special-status are those with an “S” ranking of 1, 2, or 3 (CDFG 2010) or associations that are considered a high priority for inventory. Special-status vegetation communities also include those with protection under the existing Development Code, which includes compliance with the Desert Native Plant Act for the Desert Region and compliance with Oak Woodland protection. Additionally, some wetland habitat types may be considered special status.

Definition of Impacts

Future projects implemented under the proposed CWP could result in both direct and indirect impacts to biological resources. These impacts are defined below.

Direct Impacts: The loss of individual species and/or their habitats through the alteration, disturbance, or destruction of biological resources. These include temporary impacts, such as the disturbance or removal of vegetation during construction that is replaced, and permanent impacts, that is, 100 percent loss of a biological resource.

Indirect Impacts: Reasonably foreseeable effects outside of the direct area of impact (usually the limits of grading). These may include increased human activity, decreased water quality and altered hydrology, soil compaction, elevated noise and dust levels, and the introduction of invasive species. Indirect impacts can be temporary (e.g., construction) or permanent (e.g., maintenance).

The impact analysis addresses potential impacts from proposed policies and from proposed land use changes. Potential impacts to special-status biological resources from proposed policies were assessed qualitatively. To determine impacts from land use changes, proposed and existing land uses were compared to determine if existing land uses that support habitat for special-status species is proposed for a land use that would result in the loss of habitat. GIS software was used to compare existing and proposed land uses.

Generally, proposed land use changes that would result in development in previously conserved areas (e.g., existing open space to proposed low density residential) or would result in higher density development (e.g., existing rural residential to proposed commercial) had the potential to impact special-status biological resources. Changes in the opposite direction—from more to less dense or from developed to open space—would have a positive impact. Table 5.4-13 summarizes land use changes that could result in adverse impacts to biological resources and includes the following existing land uses: Agriculture/Ranches, Open Space and Recreation, Public/Quasi Public Facilities, Rural Residential; Transportation, Communications and Utilities; Undeveloped, and Water. Figure 5.4-7, *Potential Biological Resource Impact Areas*, depicts where such existing land uses are proposed for more intense land use categories and could result in impacts to biological resources.

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Table 5.4-13 Summary of Potential Biological Resources Impacts by Land Use Change

Existing Land Use	Proposed Land Use		
	Impact	No Impact	Positive Impacts
Agriculture/Ranches	Commercial	Limited Industrial	Open Space
	General Industrial	Public Facility	Resource/Land Management
	Low Density Res. 2-5 du/ac max	Rural Living 1 du/2.5 ac max	
	Medium Density Res. 5-20 du/ac	Very Low Density Res. 0-2 du/ac max	
	Special Development		
Commercial and Services		Commercial	Low Density Res. 2-5 du/ac max
		General Industrial	Open Space
		Limited Industrial	Resource/Land Management
		Medium Density Res. 5-20 du/ac	Rural Living 1 du/2.5 ac max
		Public Facility	Very Low Density Res. 0-2 du/ac max
Education		Special Development	
		Commercial	Open Space
		Limited Industrial	Resource/Land Management
		Low Density Res. 2-5 du/ac max	Rural Living 1 du/2.5 ac max
		Medium Density Res. 5-20 du/ac	Very Low Density Res. 0-2 du/ac max
General Office		Public Facility	
		Low Density Res. 2-5 du/ac max	

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Table 5.4-13 Summary of Potential Biological Resources Impacts by Land Use Change

Existing Land Use	Proposed Land Use		
	Impact	No Impact	Positive Impacts
Industrial		Commercial	Low Density Res. 2-5 du/ac max
		General Industrial	Medium Density Res. 5-20 du/ac
		Limited Industrial	Open Space
		Public Facility	Resource/Land Management
		Special Development	Rural Living 1 du/2.5 ac max
			Very Low Density Res. 0-2 du/ac max
Military Installations		Commercial	Rural Living 1 du/2.5 ac max
		Public Facility	
		Resource/Land Management	
Mixed Commercial and Industrial		Commercial	Rural Living 1 du/2.5 ac max
			Very Low Density Res. 0-2 du/ac max
Mixed Residential		Commercial	Low Density Res. 2-5 du/ac max
			Rural Living 1 du/2.5 ac max
Mixed Residential and Commercial		Commercial	
Mobile Homes and Trailer Parks		Commercial	Open Space
		General Industrial	Resource/Land Management
		Limited Industrial	
		Low Density Res. 2-5 du/ac max	
		Medium Density Res. 5-20 du/ac	
		Rural Living 1 du/2.5 ac max	
		Special Development	
		Very Low Density Res. 0-2 du/ac max	

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Table 5.4-13 Summary of Potential Biological Resources Impacts by Land Use Change

Existing Land Use	Proposed Land Use		
	Impact	No Impact	Positive Impacts
Multi-Family Residential		Commercial	Low Density Res. 2-5 du/ac max
		General Industrial	Open Space
		Limited Industrial	Resource/Land Management
		Medium Density Res. 5-20 du/ac	Rural Living 1 du/2.5 ac max
		Public Facility	Very Low Density Res. 0-2 du/ac max
		Special Development	
Open Space and Recreation	Commercial	Open Space	
	General Industrial	Resource/Land Management	
	Low Density Res. 2-5 du/ac max		
	Medium Density Res. 5-20 du/ac		
	Public Facility		
	Rural Living 1 du/2.5 ac max		
	Special Development		
	Very Low Density Res. 0-2 du/ac max		
Public/Quasi-Public Facilities	Commercial	Open Space	
	General Industrial	Public Facility	
	Limited Industrial	Resource/Land Management	
	Low Density Res. 2-5 du/ac max		
	Medium Density Res. 5-20 du/ac		
	Rural Living 1 du/2.5 ac max		
	Special Development		
	Very Low Density Res. 0-2 du/ac max		

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Table 5.4-13 Summary of Potential Biological Resources Impacts by Land Use Change

Existing Land Use	Proposed Land Use		
	Impact	No Impact	Positive Impacts
Rural Residential	Commercial	Low Density Res. 2-5 du/ac max	Open Space
	General Industrial	Public Facility	Resource/Land Management
	Limited Industrial	Rural Living 1 du/2.5 ac max	
	Medium Density Res. 5-20 du/ac	Very Low Density Res. 0-2 du/ac max	
	Special Development		
Single Family Residential		Commercial	Open Space
		General Industrial	Resource/Land Management
		Limited Industrial	
		Low Density Res. 2-5 du/ac max	
		Medium Density Res. 5-20 du/ac	
		Public Facility	
		Rural Living 1 du/2.5 ac max	
		Special Development	
		Very Low Density Res. 0-2 du/ac max	
Transportation, Communications, and Utilities	Commercial	Open Space	
		General Industrial	Resource/Land Management
		Limited Industrial	
		Low Density Res. 2-5 du/ac max	
		Medium Density Res. 5-20 du/ac	
		Public Facility	
		Rural Living 1 du/2.5 ac max	
		Special Development	
		Very Low Density Res. 0-2 du/ac max	

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Table 5.4-13 Summary of Potential Biological Resources Impacts by Land Use Change

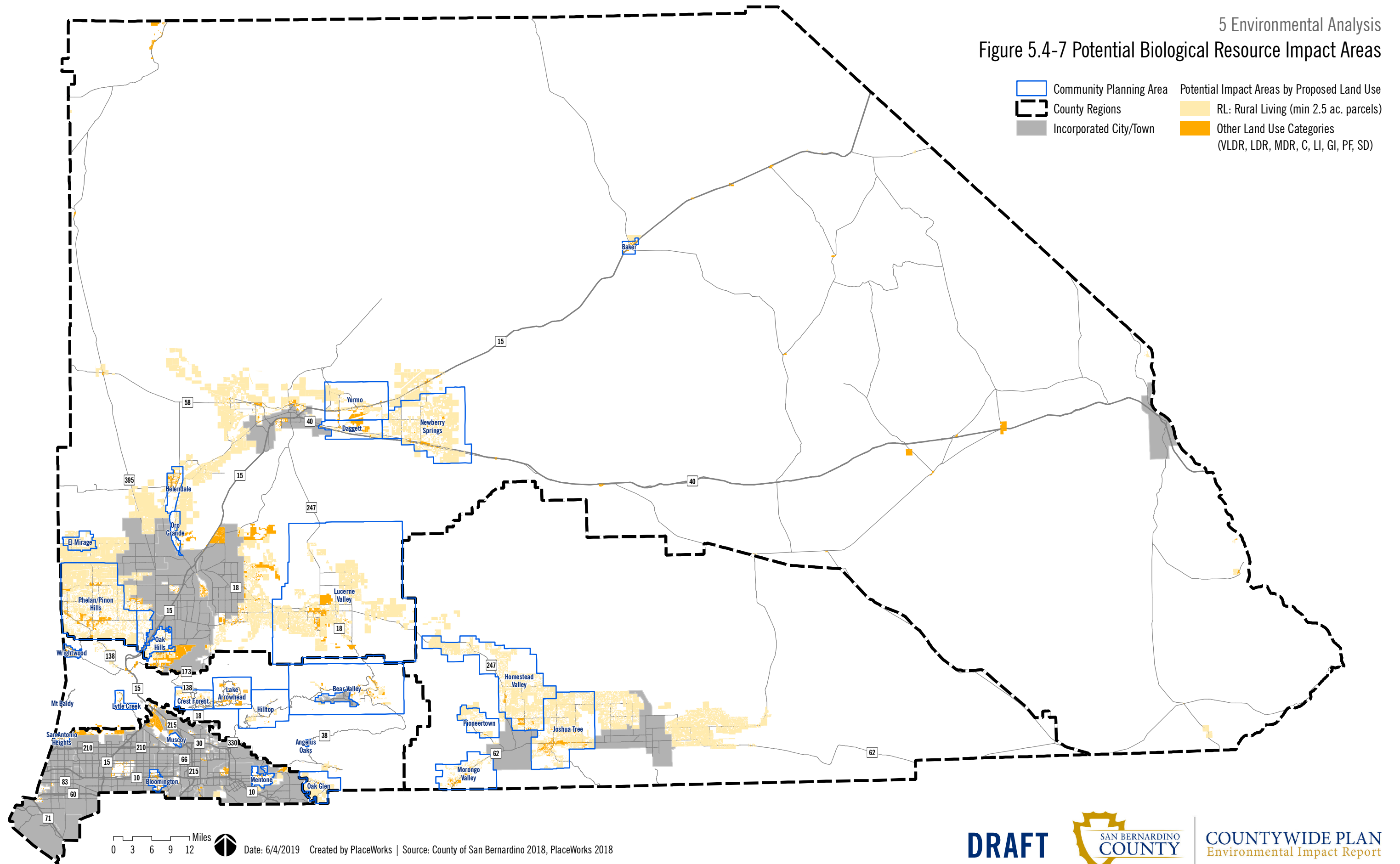
Existing Land Use	Proposed Land Use		
	Impact	No Impact	Positive Impacts
Under Construction		Commercial	Open Space
		General Industrial	
		Low Density Res. 2-5 du/ac max	
		Medium Density Res. 5-20 du/ac	
		Public Facility	
		Rural Living 1 du/2.5 ac max	
		Special Development	
		Very Low Density Res. 0-2 du/ac max	
Undeveloped	Commercial	Open Space	
	General Industrial	Public Facility	
	Limited Industrial	Resource/Land Management	
	Low Density Res. 2-5 du/ac max		
	Medium Density Res. 5-20 du/ac		
	Rural Living 1 du/2.5 ac max		
	Special Development		
	Very Low Density Res. 0-2 du/ac max		
Water	Commercial	Open Space	
	Low Density Res. 2-5 du/ac max	Public Facility	
	Medium Density Res. 5-20 du/ac	Resource/Land Management	
	Rural Living 1 du/2.5 ac max		
	Special Development		
	Very Low Density Res. 0-2 du/ac max		

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Figure 5.4-7 Potential Biological Resource Impact Areas



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Limitations

The analysis represents the potential loss of habitat based upon buildout of proposed land uses. The impact analysis is limited by the level of mapping available at a County-wide scale, both for biological resources and the potential impact footprint. Individual projects would be required to analyze potential impacts and avoid, minimize, and/or mitigate impacts to special-status resources, as described in CWP policy NR-5.7.

5.4.4.2 IMPACTS

The following impact analysis addresses thresholds of significance for which the Notice of Preparation disclosed potentially significant impacts. The applicable thresholds are identified in brackets after the impact statement. Most development under the CWP would be in a few limited areas of the County, mostly in the Valley Region. Most population growth due to CWP buildout would be in two areas: the Bloomington CPA in the Valley Region and future master planned communities in the Town of Apple Valley SOI in the Desert Region.

Impact 5.4-1: Implementation of the Countywide Plan would impact several special-status species. [Threshold B-1]

A substantial adverse effect to special-status plant species would occur if the CWP would: (1) reduce the population size or reduce the area of occupied habitat of a rare, threatened, or endangered species; or (2) reduce the population size or reduce the area of occupied habitat of a locally uncommon species. A substantial adverse effect on a special-status wildlife species would occur if the CWP would: (1) reduce the known distribution of a species; (2) reduce the local or regional population of a species; (3) increase predation of a species, leading to population reduction; (4) reduce habitat availability sufficiently to affect potential reproduction; or (5) reduce habitat availability sufficiently to constrain the distribution of a species and not allow for natural changes in distributional patterns over time.

The proposed CWP includes policies that would result in positive impacts to special-status species by requiring the protection and preservation of such resources. CWP policy NR-5.1, Coordinated Habitat Planning, would increase the certainty for the conservation of species, habitat and wildlife corridors which would directly benefit special-status species. Policy NR-5.2, Capacity for Resource Protection and Management, would increase funding and other resources to protect, restore, and maintain open space, habitat, and wildlife corridors for special-status species. Policy NR-5.3, Multiple-resource Benefits, prioritizes conservation actions that demonstrate multiple resource preservation benefits and may indirectly benefit special-status species through prioritizing areas with higher functions and values. Policy NR-5.4, Off-base Recovery Efforts, would facilitate recovery of listed species. Policy NR-5.5, Mitigation and Future Responsibilities, requires that new development satisfy habitat conservation responsibilities and provides an extra layer of confirmation that mitigation responsibilities for special-status species are met. Policy NR-5.6, Mitigation Banking, would benefit special-status species as mitigation through banking has been shown to result in larger patches of higher value habitat than individual mitigation projects. Policy NR-5.7, Development Review, Entitlement, and Mitigation, states that projects will comply with state and federal regulations for protected species. This policy also provides an extra layer of confirmation that development projects under the CWP would go through their respective

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environmental clearance process and impacts to special-status species would be mitigated. Policy NR-5.8, Invasive Species, would indirectly benefit special-status species as it would reduce the potential for invasive species planted in development areas to encroach into habitat for special-status species and reduce the functions of that habitat.

Air Quality Policy NR-1.6, Fugitive Dust emissions, would indirectly benefit special-status species by minimizing exposure of these species to fugitive dust. Open Space Policy NR-3.1, Open Space Preservation, Open Space Policy NR-3.2, Residential Clustering, Open Space Policy NR-3.4, Land Exchange, and Open Space Policy NR-3.5, Private Conservation Efforts, would benefit special-status species by encouraging conservation efforts and potentially preserving habitat for these species. Open Space Policy NR-3.1, Off-highway Vehicle Areas, would benefit special-status species by reducing impacts from off-highway vehicles including habitat degradation, noise, and dust.

None of the CWP policies would result in adverse impacts to special-status species.

Development in accordance with the proposed CWP land use designations would allow for the conversion of undeveloped land to new urban uses, or the redevelopment of existing developed areas. Development would introduce new uses in or adjacent to habitats that support a number of special-status species. Direct impacts to special-status species could result from the conversion of habitat either temporarily, as a result of grading, excavation, and construction activities, or permanently from the ongoing operation and/or maintenance of a project or plan. Indirect impacts could result from generation of fugitive dust, elevated noise levels, increased sediment loads in runoff from construction activities and the adverse effect of invasive plant species. Indirect impacts could also result from permanent alterations to hydrology upstream of habitats supporting special-status species, including increased runoff, sedimentation, or pollutant loads, and increased human activity. Discussions of these potential impacts are provided below by bioregion.

Valley Region

Buildout of the CWP would result in development occurring within areas designated by the USFWS as Critical Habitat for listed species. Whether or not these areas of buildout would result in adverse modification to Critical Habitat would depend on presence/absence of species constituent elements within specific build out areas and would be analyzed on a project-specific level as identified in CWP policy NR-5.7 Development Review, Entitlement, and Mitigation. Some areas within designated USFWS Critical Habitat are within proposed conserved land uses such as Resource Land Management where they are not currently designated for preservation or within land uses with lower impacts than under existing conditions. Table 5.4-14 summarizes the acreage of Critical Habitat in the Valley Region that falls within development areas and within positive land use changes.

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Table 5.4-14 Critical Habitat in the Valley Region within Proposed Land Use Changes

Critical Habitat Species		Fully Developed Land Uses (acres)*	Partially Developed Land Uses (acres)**	Positive Land Use Changes (acres)***
Common Name	Scientific Name			
Arroyo toad	<i>Anaxyrus californicus</i>	29.3	1.3	--
Santa Ana sucker	<i>Catostomus santaanae</i>	94.7	1.7	12.9
San Bernardino kangaroo rat	<i>Dipodomys merriami parvus</i>	1,630.5	364.1	1,184.9
Southwestern willow flycatcher	<i>Empidonax traillii eximius</i>	15.0	4.9	--
Coastal California Gnatcatcher	<i>Poliophtila californica</i>		196.8	--

* Fully Developed are those proposed land uses that typically result in buildout of the majority of a site including commercial, limited industrial, low density residential, medium density residential, and special development. Some of these land uses would still incorporate avoidance of habitat as determined by project specific environmental clearance.

** Partially Developed are those proposed land uses that typically result in substantial habitat areas remaining after development including very low density residential and rural living.

*** Positive land use changes include open space and resource/land management land uses; however, it also includes low density residential, very low density residential and rural living where the existing land use was fully developed (such as commercial, industrial, multi-family residential).

As discussed in Section 5.4.1.2 of this chapter, a total of 31 special-status plant species have been documented in the Valley Region, including three species that are federally and/or state listed as endangered or threatened, and 27 non-listed species. A total of 36 special-status animal species have been documented in the Valley Region, including 10 species that are federally endangered or threatened, six that are state endangered or threatened, one that is a state threatened candidate, two that are state fully protected, and 24 that are non-listed species. Suitable and/or occupied habitat for special-status species could be permanently impacted through build out of the CWP. The CWP would also result in positive impacts to some areas of suitable and/or occupied habitat for special-status species through preservation of areas not currently preserved. Table 5.4-15 summarizes the acreage of potential habitat for special-status species in the Valley Region that falls within development areas and within positive land use changes.

Table 5.4-15 Potential Habitat for Special-Status Species in the Valley Region within Proposed Land Use Changes

Habitat Type	Fully Developed Land Uses* (acres)	Partially Developed Land Uses** (acres)	Positive Land Use Changes*** (acres)
Eucalyptus Naturalized Forest	0.5	16.8	0.0
Native grassland	37.3	0.0	0.0
Non-native grassland	655.0	1,973.1	128.6
Chaparral	2,903.5	1,580.1	111.7
Coastal Scrub	491.7	2,000.8	102.1
Forest and Woodlands	98.0	87.0	0.0
Riversidean Alluvial Fan Sage Scrub	1,156.2	206.8	946.7
Riparian Woodland	48.2	37.6	0.0

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Table 5.4-15 Potential Habitat for Special-Status Species in the Valley Region within Proposed Land Use Changes

Habitat Type	Fully Developed Land Uses* (acres)	Partially Developed Land Uses** (acres)	Positive Land Use Changes*** (acres)
Riparian and Desert Wash	0.0	20.7	5.8
Wetlands and Waters	10.4	1.4	43.2
Total	5,400.8	5,924.3	1,338.1

Notes:

* Fully Developed are those proposed land uses that typically result in buildout of the majority of a site including commercial, limited industrial, low density residential, medium density residential, and special development. Some of these land uses would still incorporate avoidance of habitat as determined by project specific environmental clearance.

** Partially Developed are those proposed land uses that typically result in substantial habitat areas remaining after development including very low density residential and rural living.

*** Positive land use changes include open space and resource/land management land uses; however, it also includes low density residential, very low density residential and rural living where the existing land use was fully developed (such as commercial, industrial, multi-family residential).

The proposed buildout of the CWP could also result in direct impacts to special-status species that have been documented in these areas. In the northern portion of the City of Rancho Cucamonga, the coastal California gnatcatcher and Parry's spineflower (*Chorizanthe parryi* var. *parryi*, CRPR 1B) have been documented within proposed impact areas. In the Devore area (east of Interstate 15, west of Interstate 215, and south of State Route 210) there are historic occurrences of San Bernardino kangaroo rat, coastal California gnatcatcher, and least Bell's vireo within proposed development areas. In this same area, Cajon Wash, which has historic occurrences of San Bernardino kangaroo rat, Santa Ana river woollystar, and coastal California gnatcatcher, is proposed for conservation under the CWP. In the Loma Linda hills, east of Reche Canyon and west of San Timoteo Canyon, a documented occurrence of Nevin's barberry occurs within a proposed impact area; however, immediately east of this development area, an occurrence of Nevin's barberry occurs within a proposed conservation area. Documented occurrences provide only a snapshot of potential impacts. Species documented within proposed development areas would not necessarily be impacted either due to no longer occurring in that locale or due to avoidance measures implemented by projects. Conversely, species that have not been documented in a locale may be present at the time of development and may be impacted.

Implementation of the proposed CWP may result in actions that could adversely affect special-status species. Compliance with regulatory requirements would reduce potential impacts to special-status species. Compliance with RR-BIO-3, Nesting Birds, and RR-BIO-4, Bald and Golden Eagle Avoidance, would avoid impacts to nesting special-status bird species including bald and golden eagles. Compliance with RR-BIO-5, Special-status Species Avoidance, would avoid take of federally- and state-listed species and state fully protected species as well as ensure mitigation for any impacts to those species is completed. Compliance with RR-BIO-6, Minimization of Invasive Species, would indirectly benefit special-status species through management of invasive species which would otherwise spread through native habitat, reducing their habitat function. Compliance with RR-BIO-7, Desert Native Plant Protection, would benefit special-status desert plant species through avoidance and/or salvage of subject protected species. Impacts to special-status species would remain potentially significant after implementation of regulatory requirements; however, implementation of Policy

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NR-5.7, Development Review, Entitlement, and Mitigation, impacts to special-status species would be analyzed and avoided, minimized and mitigated for each project.

Mountain Region

Buildout of the CWP would result in development occurring within areas designated by the USFWS as Critical Habitat for listed species. Whether or not these areas of buildout would result in adverse modification to Critical Habitat would depend on presence/absence of species constituent elements within specific build out areas and would be analyzed on a project-specific level as identified in CWP policy NR-5.7 Development Review, Entitlement, and Mitigation. Some areas within designated USFWS Critical Habitat are within proposed conserved land uses such as Resource Land Management where they are not currently designated for preservation or within land uses with lower impacts than under existing conditions. Table 5.4-16 summarizes the acreage of Critical Habitat in the Mountain Region that falls within development areas and within positive land use changes.

Table 5.4-16 Critical Habitat in the Mountain Region within Proposed Land Use Changes

Critical Habitat Species		Fully Developed Land Uses* (acres)	Partially Developed Land Uses** (acres)	Positive Land Use Changes*** (acres)
Plants				
Ash-gray Indian paintbrush	Castilleja cinerea	0.0	4.9	6.7
Big Bear Valley sandwort	Eremogone ursina	0.0	4.6	6.7
California dandelion	Taraxacum californicum	9.5	24.7	65.4
Cushenbury buckwheat	Eriogonum ovalifolium var. vineum	0.0	0.0	6.5
Cushenbury oxytheca	Acanthoscyphus parishii var. goodmaniana	0.0	0.0	34.3
San Bernardino blue grass	Poa atropurpurea	9.5	3.8	65.4
San Bernardino Mountains bladderpod	Physaria kingii ssp. bernardina	2.8	0.0	261.7
southern mountain buckwheat	Eriogonum kennedyi var. austromontanum	0.0	4.6	0.4
Wildlife				
arroyo toad	Anaxyrus californicus	6.4	44.1	1,115.6
Santa Ana sucker	Catostomus santaanae	0.0	2.1	0.5
San Bernardino kangaroo rat	Dipodomys merriami parvus	4.8	0.0	725.4
southwestern willow flycatcher	Empidonax traillii eximius	27.0	372.3	99.6
<p>* Fully Developed are those proposed land uses that typically result in buildout of the majority of a site including commercial, limited industrial, low density residential, medium density residential, and special development. Some of these land uses would still incorporate avoidance of habitat as determined by project specific environmental clearance.</p> <p>** Partially Developed are those proposed land uses that typically result in substantial habitat areas remaining after development including very low density residential and rural living.</p> <p>*** Positive land use changes includes open space and resource/land management land uses; however, it also includes low density residential, very low density residential and rural living where the existing land use was fully developed (such as commercial, industrial, multi-family residential).</p>				

As discussed in Section 5.4.1.2 of this chapter, a total of 91 special-status plant species have been documented in the Mountain Region, including 14 species that are federally listed as endangered or threatened, five that are listed as state endangered or rare, and 73 non-listed special-status species. A total of 44 special-status animal

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species have been documented in the Mountain Region, including seven species that are federally endangered or threatened, eight that are state endangered or threatened, one that is a state threatened candidate, six that are state fully protected, and 28 that are non-listed special-status species. Suitable and/or occupied habitat for special-status species could be permanently impacted through build out of the CWP. The CWP would also result in positive impacts to some areas of suitable and/or occupied habitat for special-status species through preservation of areas not currently preserved. Table 5.4-17 summarizes the acreage of potential habitat for special-status species in the Mountain Region that falls within development areas and within positive land use changes.

Table 5.4-17 Potential Habitat for Special-Status Species in the Mountain Region within Proposed Land Use Changes

Habitat Type	Developed Land Uses* (acres)	Partially Developed Land Uses** (acres)	Positive Land Uses Changes*** (acres)
Alkali Scrub	1.0	22.2	0.0
Sonoran and Mojavean Desert Scrub	0.0	55.0	236.6
Chaparral	743.6	7,997.3	1,212.6
Coastal Scrub	5.0	122.2	82.0
Great Basin Scrub	153.0	397.8	113.5
Forest and Woodlands	2,992.6	7,580.5	3,369.0
Joshua Tree Woodland	0.0	255.6	11.2
Juniper Woodland	0.0	0.1	0.8
Native grassland	2.6	66.4	0.0
Non-native grassland	28.8	268.2	18.8
Riparian Woodland	0.0	1.9	0.0
Riparian and Desert Wash	15.2	133.0	46.7
Riversidean Alluvial Fan Sage Scrub	15.0	109.6	193.0
Wetlands and Waters	26.3	153.6	377
Total	3,983.1	17,163.4	5,661.2

Notes:

* Permanent Impacts are those proposed land uses that typically result in buildout of the majority of a site including commercial, limited industrial, low density residential, medium density residential, and special development. Some of these land uses would still incorporate avoidance of habitat as determined by project specific environmental clearance.

** Partial Impacts are those proposed land uses that typically result in substantial habitat areas remaining after development including very low density residential and rural living.

The proposed buildout of the CWP could also result in direct impacts to special-status species that have been documented in these areas. Special-status plants including San Antonio milkvetch, San Gabriel linanthus and short joint beavertail occur in areas proposed for development in the Wrightwood area. However, Cajon Wash would be preserved and has documented occurrences of Plummer's mariposa lily, slender-horned spineflower, southwestern willow flycatcher, Santa Ana speckled dace, and least Bell's vireo. In the center of the Mountain Region in the vicinity of Twin Peak, Crestline and Lake Arrowhead, the following special-status species have been documented within proposed impact areas: Nevin's barberry, San Bernardino Mountains owl's clover (*Castilleja lasiorhyncha*), San Bernardino flying squirrel (*Glaucomys oregonensis californicus*), bald eagle, white-eared pocket mouse (*Perognathus alticollis alticollis*). In the Big Bear area, ash-gray paintbrush, Big Bear Valley sandwort,

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southern mountain buckwheat (*Eriogonum kennedyi* var. *austromontanum*), San Bernardino Mountains bladderpod, San Bernardino blue grass, California dandelion, and slender-petaled thelypodium (*Thelypodium stenopetalum*) have been documented in proposed development area. Also, in the Big Bear areas, proposed preservation areas have documented occurrences of ash-gray paintbrush, Big Bear Valley sandwort, southern mountain buckwheat, San Bernardino Mountains bladderpod, bird-foot checkerbloom (*Sidalcea pedata*), California dandelion, and slender-petaled thelypodium.

Documented occurrences provide only a snapshot of potential impacts. Species documented within proposed development areas would not necessarily be impacted either due to no longer occurring in that locale or due to avoidance measures implemented by projects. Conversely, species that have not been documented in a locale may be present at the time of development and may be impacted.

Implementation of the proposed CWP may result in actions that could adversely affect special-status species. As discussed under the Valley Region, implementation of the proposed CWP policies as well as compliance with regulatory requirements would avoid, minimize and/or mitigate impacts to special-status species by requiring the protection and preservation of such resources. Absent implementation of CWP policies, potential impacts to special-status species from implementation of the proposed CWP would be significant.

Desert Region

Buildout of the CWP would result in development occurring within areas designated by the USFWS as Critical Habitat for listed species. Whether or not these areas of buildout would result in adverse modification to Critical Habitat would depend on presence/absence of species constituent elements within specific build out areas and would be analyzed on a project-specific level as identified in CWP policy NR-5.7 Development Review, Entitlement, and Mitigation. Some areas within designated USFWS Critical Habitat are within proposed conserved land uses such as Resource Land Management where they are not currently designated for preservation or within land uses with lower impacts than under existing conditions. Table 5.4-18 summarizes the acreage of Critical Habitat in the Desert Region that falls within development areas and within positive land use changes.

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Table 5.4-18 Critical Habitat in the Desert Region within Proposed Land Use Changes

Critical Habitat Species		Fully Developed Land Uses* (acres)	Partially Developed Land Uses** (acres)	Positive Land Uses Changes*** (acres)
Common Name	Scientific Name			
Plants				
Cushenbury buckwheat	Eriogonum ovalifolium var. vineum	0.0	5.9	168.1
Cushenbury milk-vetch	Astragalus albens	0.0	27.6	73.2
Cushenbury oxytheca	Acanthoscyphus parishii var. goodmaniana	0.0	0.0	73.1
Lane mountain milk-vetch	Astragalus jaegerianus	0.0	0.0	8.2
Parish's daisy	Erigeron parishii	168.9	0.7	367.1
Wildlife				
arroyo toad	Anaxyrus californicus	168.4	123.2	202.8
desert tortoise	Gopherus agassizii	2,735.4	32,190.8	14,243.3
southwestern willow flycatcher	Empidonax traillii extimus	16.4	610.4	79.5
western yellow-billed cuckoo	Coccyzus americanus occidentalis	0.0	214.2	526.4
bonytail	Gila elegans	0.0	0.0	157.7
razorback sucker	Xyrauchen texanus	0.0	0.0	36.2

* Fully Developed are those proposed land uses that typically result in buildout of the majority of a site including commercial, limited industrial, low density residential, medium density residential, and special development. Some of these land uses would still incorporate avoidance of habitat as determined by project specific environmental clearance.

** Partially Developed are those proposed land uses that typically result in substantial habitat areas remaining after development including very low density residential and rural living.

*** Positive land use changes includes open space and resource/land management land uses; however, it also includes low density residential, very low density residential and rural living where the existing land use was fully developed (such as commercial, industrial, multi-family residential).

As discussed in Section 5.4.1.2 of this chapter, a total of 176 special-status plant species have been documented in the Desert Region, including six species that are federally listed as endangered or threatened, two that are listed as state endangered, and 168 non-listed species. A total of 58 special-status animal species have been documented in the Desert Region, including 11 species that are federally endangered or threatened, 17 that are state endangered or threatened, one state threatened candidate, eight that are state fully protected, and 35 that are non-listed special-status species. Suitable and/or occupied habitat for special-status species could be permanently impacted through build out of the CWP. The CWP would also result in positive impacts to some areas of suitable and/or occupied habitat for special-status species through preservation of areas not currently preserved. Table 5.4-19 summarizes the acreage of potential habitat for special-status species in the Desert Region that falls within development areas and within positive land use changes.

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Table 5.4-19 Potential Habitat for Special-Status Species in the Desert Region within Proposed Land Use Changes

Habitat Type	Fully Developed Land Uses* (acres)	Partially Developed Land Uses** (acres)	Positive Land Use Changes*** (acres)
Alkali Scrub	766.9	24,914.2	5,278.0
Desert Dunes	0.0	2,902.2	1007.4
Playa	61.2	4,053.6	24,846.3
Sonoran and Mojavean Desert Scrub	18,093.7	341,082.2	52,659.7
Chaparral	207.0	10,685.6	179.5
Coastal Scrub	153.1	7,217.7	117.9
Forest and Woodlands	57.6	1,128.1	557.0
Great Basin Scrub	413.8	12,771.0	677.0
Joshua Tree Woodland	1,799.2	29,447.5	5,486.8
Juniper Woodlands	727.2	8,259.4	1,343.8
Native grassland	0.0	0.0	98.7
Non-native grassland	1,357.9	6,935.6	2,440.4
Riparian and Desert Wash	716.2	8,549.3	3,777.8
Wetlands and Waters	387.9	648.2	417.2
Total	24,741.7	458,594.6	98,887.5

Notes:

* Fully Developed are those proposed land uses that typically result in buildout of the majority of a site including commercial, limited industrial, low density residential, medium density residential, and special development. Some of these land uses would still incorporate avoidance of habitat as determined by project specific environmental clearance.

** Partially Developed are those proposed land uses that typically result in substantial habitat areas remaining after development including very low density residential and rural living.

*** Positive land use changes includes open space and resource/land management land uses; however, it also includes low density residential, very low density residential and rural living where the existing land use was fully developed (such as commercial, industrial, multi-family residential).

The proposed buildout of the CWP could potentially result in direct impacts to special-status species that have been documented in these areas. The following is a summary of special-status species documented within impact areas of the Desert Region:

- **Victorville area:** desert tortoise, long-eared owl (*Asio otus*), burrowing owl (*Athene cunicularia*), Palmer's mariposa-lily (*Calochortus palmeri* var. *palmeri*), short-joint beavertail (*Opuntia basilaris* var. *brachyclada*), gray vireo (*Vireo vicinior*).
- **Apple Valley area:** golden eagle, burrowing owl, Mohave ground squirrel,
- **Lucerne Valley area:** burrowing owl, alkali mariposa-lily (*Calochortus striatus*), purple-nerve cymopterus (*Cymopterus multinervatus*), Salina Pass wild-rye (*Elymus salina*), Parish's popcorn flower (*Plagiobothrys parishii*),

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Parish's alkali grass (*Puccinellia parishii*), California alkali grass (*Puccinellia simplex*), salt spring checkerbloom (*Sidalcea neomexicana*), Le Conte's thrasher (*Toxostoma lecontei*), Mohave ground squirrel

- **Adelanto:** desert tortoise
- **Northwest of Hinkley:** burrowing owl, western snowy plover (*Charadrius alexandrinus nivosus*), mountain plover (*Charadrius montanus*), desert cymopterus (*Cymopterus deserticola*), desert tortoise, loggerhead shrike (*Lanius ludovicianus*), Mohave river vole (*Microtus californicus mohavensis*), Yuma Ridgway's rail (*Rallus obsoletus yumanensis*), Mohave ground squirrel, Mojave fringe-toed lizard (*Uma scoparia*)
- **Twenty-nine Palms and Yucca Valley:** burrowing owl, desert tortoise, San Bernardino milk-vetch, pinyon rockcress (*Boechera dispar*), Little San Bernardino Mountains linanthus (*Linanthus maculatus* ssp. *maculatus*), Shockey's rockcress (*Boechera shockleyi*), Latimer's woodland-gilia (*Saltugilia latimeri*), Le Conte's thrasher

Documented occurrences provide only a snapshot of potential impacts. Species documented within proposed development areas would not necessarily be impacted either due to no longer occurring in that locale or due to avoidance measures implemented by projects. Conversely, species that have not been documented in a locale may be present at the time of development and may be impacted.

Implementation of the proposed CWP may result in actions that could adversely affect special-status species. As discussed under the Valley Region, implementation of the proposed CWP policies as well as compliance with regulatory requirements would avoid, minimize, and/or mitigate impacts to special-status species by requiring the protection and preservation of such resources. Absent implementation of CWP policies, potential impacts to special-status species from implementation of the proposed CWP would be significant.

Level of Significance before Mitigation: Impact 5.1-1 would be significant.

Impact 5.4-2: Implementation of the Countywide Plan would result in the loss of several special-status vegetation communities. [Threshold B-2]

A substantial adverse effect on riparian habitat or other special-status natural communities would occur if the CWP would result in a net loss of riparian habitat or other special-status natural community.

The proposed CWP includes policies that would result in positive impacts to special-status vegetation communities by requiring the protection and preservation of such resources. CWP policy NR-5.1, Coordinated Habitat Planning, would increase the certainty for the conservation of species, habitat and wildlife corridors which would directly benefit special-status vegetation communities through their preservation. Policy NR-5.2, Capacity for Resource Protection and Management, would increase funding and other resources to protect, restore, and maintain open space, habitat, and wildlife corridors which would potentially include special-status vegetation communities. Policy NR-5.3, Multiple-resource Benefits, prioritizes conservation actions that demonstrate multiple resource preservation benefits and may indirectly benefit special-status vegetation communities through prioritizing areas with higher functions and values. Policy NR-5.5, Mitigation and Future Responsibilities, requires that new development satisfy habitat conservation responsibilities and provides an extra layer of confirmation that mitigation responsibilities for special-status vegetation communities are met.

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Policy NR-5.6, Mitigation Banking, would benefit special-status vegetation communities through their preservation in mitigation banks. Policy NR-5.7, Development Review, Entitlement, and Mitigation, states that projects will comply with state and federal regulations for protected species. This policy provides an extra layer of confirmation that development projects under the CWP would go through their respective environmental clearance process and impacts to special-status vegetation would be mitigated. Policy NR-5.8, Invasive Species, would indirectly benefit special-status vegetation communities as it would reduce the potential for invasive species planted in development areas to encroach into native vegetation communities and reduce the functions of that habitat. Air Quality Policy NR-1.6, Fugitive Dust emissions, would also indirectly benefit special-status vegetation communities by minimizing exposure of these communities to fugitive dust. Open Space Policy NR-3.1, Open Space Preservation, Open Space Policy NR-3.2, Residential Clustering, Open Space Policy NR-3.4, Land Exchange, and Open Space Policy NR-3.5, Private Conservation Efforts, would benefit special-status vegetation communities by encouraging conservation efforts and potentially preserving these communities within preserved areas. Open Space Policy NR-3.1, Off-highway Vehicle Areas, would benefit special-status vegetation communities by reducing impacts from off-highway vehicles.

None of the CWP policies would result in adverse impacts to special-status vegetation communities.

Development in accordance with the proposed CWP would allow for the conversion of undeveloped land to new urban uses that could result in direct and indirect impacts to special-status vegetation communities. Direct impacts to special-status vegetation communities could result from the conversion of habitat either temporarily, as a result of grading, excavation, and construction activities, or permanently from the ongoing operation and/or maintenance of a project or plan. Indirect impacts could result from generation of fugitive dust, increased sediment loads in runoff from construction activities or the adverse effect of invasive plant species. Indirect impacts could also result from permanent alterations to hydrology upstream of habitats, including increased runoff, sedimentation, or pollutant loads, and increased human activity, which could result in trampling and disturbance. Should new development occur within undeveloped areas of the County due to land use designation changes, acreages of special-status natural communities could be permanently reduced, resulting in a potentially significant impact to special-status natural communities. Discussions of these potential impacts are provided below by bioregion.

Valley Region

As described in Section 5.4.1, special-status vegetation communities are present within the Valley Region. Some areas mapped with special-status vegetation communities are within proposed development areas of the CWP and some areas are within proposed preserved land uses where they are not currently proposed for conservation. Table 5.4-20 summarizes acreage of special-status vegetation communities within developed and conserved land uses under the CWP.

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Table 5.4-20 Special-Status Vegetation Communities in the Valley Region within Proposed Changed Land Uses

General Communities	Vegetation Communities and Land Covers	Developed Land Uses* (acres)	Partially Developed Land Uses** (acres)	Land Uses with Positive Impacts*** (acres)
Coastal Scrub	Buckwheat	333.1	898.7	23.2
	California sagebrush	158.6	1086.6	78.8
	Encelia scrub	0.0	15.5	0.0
Subtotal		491.7	2000.8	102.0
Native Grasslands	Alkaline mixed grasses	37.3	0	0
	Subtotal	37.3	0	0
Oak Woodlands and Forests	Canyon live oak	36.0	44.5	0
	Coast live oak	52.4	37.7	0
	Interior mixed hardwood	9.7	4.8	0
Subtotal		98.0	87.0	0.0
Riparian Forest and Woodland	California sycamore	21.1	0	0
	Riparian mixed hardwood	27.1	58.2	0
Subtotal		48.2	58.2	0.0
Riparian Scrub	Baccharis (riparian)	0.0	0	0
Subtotal		0.0	0	0
Riversidean Alluvial Fan Sage Scrub	Riversidean alluvial scrub	903.3	200.7	536.2
	Scalebroom	252.9	6.1	410.5
Subtotal		1156.2	206.8	946.7
Undifferentiated Chaparral Scrub	Chamise	78.2	121.5	32.1
	Lower montane mixed chaparral	1048.1	624.2	24.6
Subtotal		1126.3	745.7	56.8
Total		2957.7	3098.6	1111.3

Notes:

* Developed Land Uses are those proposed land uses that typically result in buildout of the majority of a site including commercial, limited industrial, low density residential, medium density residential, and special development. Some of these land uses would still incorporate avoidance of habitat as determined by project specific environmental clearance.

** Partially Developed are those proposed land uses that typically result in substantial habitat areas remaining after development including very low density residential and rural living.

*** Positive land use changes includes open space and resource/land management land uses; however, it also includes low density residential, very low density residential and rural living where the existing land use was fully developed (such as commercial, industrial, multi-family residential).

Implementation of the proposed CWP may result in actions that could adversely affect special-status species. Compliance with regulatory requirements would reduce potential impacts to special-status vegetation communities. Compliance with RR-BIO-1, Jurisdictional Waters Permitting, would result in mitigation for riparian and wetland communities. Compliance with RR-BIO-5, Special-status Species Avoidance, would result in mitigation for special-status vegetation communities where they also provide habitat for an impacted listed species. Compliance with RR-BIO-6, Minimization of Invasive Species, would indirectly benefit special-status vegetation communities through management of invasive species which would otherwise spread through native habitat, reducing their habitat function. Impacts to special-status vegetation communities remain potentially significant with compliance with regulatory requirements; however, implementation of Policy NR-5.7,

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Development Review, Entitlement, and Mitigation, impacts to special-status vegetation communities would be analyzed and avoided, minimized and mitigated for each project. Absent implementation of this CWP policy, potential impacts to special-status vegetation communities from implementation of the proposed CWP would be significant.

Mountain Region

As described in Section 5.4.1, special-status vegetation communities are present within the Mountain Region. Some areas mapped with special-status vegetation communities are within proposed development areas of the CWP and some areas are within proposed preserved land uses where they are not currently proposed for conservation. Table 5.4-21 summarizes acreage of special-status vegetation communities within developed and conserved land uses under the CWP.

Table 5.4-21 Special-Status Vegetation Communities in the Mountain Region within Proposed Land Use Changes

General Communities	Vegetation Communities and Land Covers	Developed Land Uses* (acres)	Partially Developed Land Uses** (acres)	Positive Land Use Changes*** (acres)
Coastal Montane Douglas-Fir Forests and Woodlands	Bigcone Douglas-fir	12.4	379.8	16.4
Subtotal		12.4	379.8	16.4
Coastal Scrub	Buckwheat	0.2	115.2	48.0
	California sagebrush	4.8	1.2	31.7
	Encelia scrub	0.0	0.0	2.0
Subtotal		5.0	116.4	81.7
Great Basin Scrub	Great Basin mixed scrub	0.0	0.0	50.6
	Intermontane seral shrubland	0.0	0.7	18.0
	Rabbitbrush	47.8	82.2	6.0
Subtotal		47.8	82.9	74.6
Joshua Tree Woodland	Joshua tree	0.0	255.6	10.3
Subtotal		0.0	255.6	10.3
Meadows	Wet meadow	1.9	81.0	6.6
Subtotal		1.9	81.0	6.6
Native Grasslands	Alkaline mixed grasses	2.6	66.4	0.0
Subtotal		2.6	66.4	0.0
Non-Native Grasslands	Perennial grasses and forbs	2.4	0.0	0.0
Subtotal		2.4	0.0	0.0
Oak Woodlands and Forest	Canyon live oak	71.3	1205.8	66.4
	Coast live oak	0.0	174.9	0.0
	Coastal mixed hardwood	0.0	0.0	0.0
	Interior mixed hardwood	8.2	156.8	4.6
Subtotal		79.5	1537.5	71.0

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Table 5.4-21 Special-Status Vegetation Communities in the Mountain Region within Proposed Land Use Changes

General Communities	Vegetation Communities and Land Covers	Developed Land Uses* (acres)	Partially Developed Land Uses** (acres)	Positive Land Use Changes*** (acres)
	California sycamore	0.0	1.5	5.3
	Fremont cottonwood	0.0	14.5	3.3
	Riparian mixed hardwood	12.8	103.3	23.7
Subtotal		12.8	119.3	32.3
	Baccharis (Riparian)	0.0	7.2	7.3
	Willow	0.0	0.4	0.5
	Willow (shrub)	0.0	0.0	0.3
Subtotal		0.0	7.6	8.1
Riversidean Alluvial Fan Sage Scrub	Riversidean alluvial scrub	2.1	36.5	131.0
	Scalebroom	12.9	73.1	62.1
Subtotal		15.0	109.6	193.1
Sonoran and Mojavean Desert Scrub	Desert buckwheat	0.0	2.3	43.4
	Desert mixed shrub	0.0	0.9	60.6
Subtotal		0.0	3.1	104.0
Undifferentiated Chaparral Scrub	Ceanothus mixed chaparral	204.0	357.7	12.2
	Chamise	7.1	2451.1	114.8
	Great Basin–mixed chaparral transition	1.6	0.0	15.9
	Lower montane mixed chaparral	274.3	2778.2	537.5
	Manzanita chaparral	8.8	0.0	56.8
	Scrub oak	14.4	1004.8	110.2
	Semi-desert chaparral	166.2	709.4	231.6
	Upper montane mixed chaparral	17.3	73.5	51.7
Subtotal		693.7	7,374.7	1130.7
Total		873.1	10133.8	1728.8

Notes:

* Developed Land Uses are those proposed land uses that typically result in buildout of the majority of a site including commercial, limited industrial, low density residential, medium density residential, and special development. Some of these land uses would still incorporate avoidance of habitat as determined by project specific environmental clearance.

** Partially Developed Land uses are those proposed land uses that typically result in substantial habitat areas remaining after development including very low density residential and rural living.

***Land Uses with positive impacts are those areas not currently in a conservation or resource protection status that are proposed for either Open Space or

Implementation of the proposed CWP may result in actions that could adversely affect special-status vegetation communities. As discussed under the Valley Region, implementation of the proposed CWP policies and compliance with regulatory requirements would avoid, minimize and/or mitigate impacts to special-status vegetation communities by requiring the protection and preservation of such resources. Absent implementation of CWP policies, potential impacts to special-status vegetation communities from implementation of the proposed CWP would be significant.

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Desert Region

As described in Section 5.4.1, special-status vegetation communities are present within the Desert Region. Some areas mapped with special-status vegetation communities are within proposed development areas of the CWP and some areas are within proposed preserved land uses where they are not currently proposed for conservation. Table 5.4-22 summarizes acreage of special-status vegetation communities within developed and conserved land uses under the CWP.

Table 5.4-22 Special-Status Vegetation Communities in the Desert Region within Proposed Land Use Changes

General Communities	Vegetation Communities and Land Covers by Group	Developed Land Uses* (acres)	Partially Developed Land Uses** (acres)	Positive Land Uses Changes*** (acres)
Chenopod Scrub	North American warm desert bedrock cliff and outcrop	0.0	105.2	34.1
	Southwestern North American salt basin and high marsh	11.2	8,223.1	2,377.1
Subtotal		11.2	8,328.3	2,411.2
Coastal Scrub	Central and south coastal California seral scrub	6.0	689.7	0.0
	Central and south coastal Californian coastal sage scrub	147.1	6,528.1	117.9
Subtotal		153.1	7,217.8	117.9
Desert Bedrock Cliff and Outcrop	North American warm desert bedrock cliff and outcrop	109.4	1946.0	1,518.2
Subtotal		109.4	1,946.0	1,518.2
Desert Dry Wash Woodland	Madrean warm semi-desert wash woodland/scrub	172.6	3,676.5	2,187.6
	Mojavean semi-desert wash scrub	0.0	14.5	1.3
	Sonoran–Coloradan semi-desert wash woodland/scrub	148.4	359.1	20.3
	Southwestern North American riparian/wash scrub	0.0	0.0	0.0
Subtotal		321.0	4,050.1	2,209.2
Desert Dunes	North American warm desert dunes and sand flats	0.0	2,902.2	1,007.4
Subtotal		0.0	2,902.2	1,007.4
Desert Sink Scrub	Southwestern North American salt basin and high marsh	342.0	4,518.8	208.7
Subtotal		342.0	4,518.8	208.7
Great Basin Scrub	Intermontane deep or well-drained soil scrub	0.0	1,734.8	0.7
	Intermontane seral shrubland	321.3	3,529.0	219.2
	Inter-mountain dry shrubland and grassland	33.6	7,094.7	195.9
	Mojave and Great Basin upper bajada and toeslope	0.0	78.6	0.0
Subtotal		354.9	12437.1	415.8

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Table 5.4-22 Special-Status Vegetation Communities in the Desert Region within Proposed Land Use Changes

General Communities	Vegetation Communities and Land Covers by Group	Developed Land Uses* (acres)	Partially Developed Land Uses** (acres)	Positive Land Uses Changes*** (acres)
Joshua Tree Woodland	Mojave and Great Basin upper bajada and toeslope	1,799.2	29,359.6	5,496.8
Subtotal		1,799.2	29,359.6	5,496.8
	Southwestern North American salt basin and high marsh	0.0	11.6	0.0
Subtotal		0.0	11.6	0.0
Native Grasslands	North American warm desert dunes and sand flats	0.0	0.0	22.2
	Southern Great Basin semi-desert grassland	0.0	0.0	76.5
Subtotal		0.0	0.0	98.7
Oak Woodlands and Forests	Californian broadleaf forest and woodland	0.0	10.8	0.0
	Canyon Live Oak	0.0	9.9	0.0
Subtotal		0.0	20.7	0.0
Marsh	California Warm Temperate marsh/seep	0.0	0.0	4.8
	Southwestern North American salt basin and high marsh	0.0	0.0	9.4
Subtotal		0.0	0.0	14.2
Playa	Southwestern North American salt basin and high marsh	0.0	0.0	809.2
Subtotal		0.0	0.0	809.2
Riparian Forest and Woodland	Fremont Cottonwood	0.0		0.5
	North American warm desert dunes and sand flats*	3.8	2,999.8	480.4
	Sonoran–Coloradan semi-desert wash woodland/scrub	0.0	4.8	0.0
	Southwestern North American riparian evergreen and deciduous woodland	96.0	263.2	178.1
Subtotal		99.8	3,267.8	659.0
Riparian Scrub	Madrean warm semi-desert wash woodland/scrub		0.0	0.0
	Southwestern North American riparian/wash scrub	158.9	1,042.1	910.4
	Willow	3.9	0.0	11.1
Subtotal		162.8	1,042.1	921.5
Riversidean Alluvial Fan Sage Scrub	Mojavean semi-desert wash scrub	130.9	189.2	0.0
Subtotal		130.9	189.2	0.0

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Table 5.4-22 Special-Status Vegetation Communities in the Desert Region within Proposed Land Use Changes

General Communities	Vegetation Communities and Land Covers by Group	Developed Land Uses* (acres)	Partially Developed Land Uses** (acres)	Positive Land Uses Changes*** (acres)
Sonoran and Mojavean Desert Scrub	Arizonan upland Sonoran Desert scrub	14.6	884.0	339.2
	Intermontane deep or well-drained soil scrub	1,076.7	2,205.7	166.8
	Intermontane seral shrubland	31.0	946.7	21.6
	Lower bajada and fan Mojavean–Sonoran Desert scrub	15,877.1	330,291.5	49,044.5
	Mojave and Great Basin upper bajada and toeslope	1,004.7	5,012.6	4,312.7
	Mojavean semi-desert wash scrub	72.4	1,152.6	395.7
	North American warm desert dunes and sand flats	0.0	0.0	15.0
	Sonoran–Coloradan semi-desert wash woodland/scrub	17.3	589.1	16.9
Subtotal		18,093.8	341,082.2	54,312.4
Waterway	Madrean warm semi-desert wash woodland/scrub	131.5	460.9	83.1
	Riparian	0.0	0.0	0.0
	Wetland	252.9	166.1	122.5
Subtotal		384.4	627.0	205.6
Total		21,970.7	417,112.9	70,406.3

Notes:

* Developed are those proposed land uses that typically result in buildout of the majority of a site including commercial, limited industrial, low density residential, medium density residential, and special development. Some of these land uses would still incorporate avoidance of habitat as determined by project specific environmental clearance.

** Partially Developed are those proposed land uses that typically result in substantial habitat areas remaining after development including very low density residential and rural living.

*** Positive land use changes includes open space and resource/land management land uses; however, it also includes low density residential, very low density residential and rural living where the existing land use was fully developed (such as commercial, industrial, multi-family residential).

Implementation of the proposed CWP may result in actions that could adversely affect special-status vegetation communities. As discussed under the Valley Region, implementation of the proposed CWP policies and compliance with regulatory requirements would avoid, minimize and/or mitigate impacts to special-status vegetation communities by requiring the protection and preservation of such resources. Absent implementation of CWP policies, potential impacts to special-status vegetation communities would be significant.

Level of Significance before Mitigation: Impact 5.1-2 would be significant.

Impact 5.4-3: Implementation of the Countywide Plan would impact jurisdictional waters. [Threshold B-3]

A substantial adverse effect to federally protected wetlands would occur if the CWP would result in a net loss of federally protected wetlands. Other jurisdictional waters including non-wetland waters of the United States under the jurisdiction of the Corps, wetland and non-wetland waters of the State under the jurisdiction of the SWRCB, and streambeds and lakes under the jurisdiction of CDFW are also addressed under this threshold.

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The proposed CWP includes policies that would minimize or avoid impacts to jurisdictional waters by requiring the protection and preservation of such resources. The following policies would benefit jurisdictional waters by minimizing impacts to water quality: Policy NR-2.1, Coordination on Water Quality, ensures a safe supply of drinking water through collaboration with involved agencies; Policy NR-2.2, Groundwater Management Plans, would minimize impacts to groundwater quality from non-point pollution sources; Policy NR-2.5, Wastewater Discharge, confirms compliance with federal and state water quality standards; Policy NR-2.6, Stormwater Discharge, protects water quality by ensuring new development compliance with the County's NPDES permit. Policy NR-2.4, Water Extraction and Export, indirectly benefits waters as it limits the extraction and export out of the local groundwater basin of native groundwater for commercial purposes in situations that result in significant impacts to the environment. Policy NR-2.7, Permeable Surfaces, requires the use of permeable surfaces to reduce stormwater runoff and assist in groundwater recharge, reducing the potential for indirect effects to jurisdictional waters from changes in hydrology. Policy NR-5.6, Mitigation Banking, benefits jurisdictional waters as it is one of the preferred mitigation vehicles of the resource agencies as mitigation banks have been shown to have greater resource value than individual mitigation projects. Policy NR-5.8, Invasive Species, indirectly benefits jurisdictional waters as it would reduce the potential for invasive species planted.

None of the CWP policies would result in adverse impacts to jurisdictional waters.

Development resulting from implementation of the proposed CWP may result in both direct and indirect significant adverse impacts to jurisdictional wetlands or waters. Development on or adjacent to these areas could potentially affect these resources either directly through fill or indirectly through the alteration of the hydrologic regime. Discussions of these potential impacts are provided below by bioregion.

As discussed under methods above, impacts are discussed in broad, qualitative terms of habitat and water types that could be impacted due to the buildout of the CWP. This assessment does not satisfy the need for project-level CEQA analysis for individual projects. Whether or not individual projects would result in impacts to jurisdictional waters would depend on resources present at the time such projects are pursued and would be analyzed on a project specific level as identified in CWP policy NR-5.7 Development Review, Entitlement, and Mitigation. Future projects that may result in significant impacts to jurisdictional wetlands and/or waters and will require identification of project-specific mitigation measures at that time, as applicable.

Valley Region

As discussed in Section 5.4.1.2, the Santa Ana River is the primary water feature in the Valley Region and has numerous named and unnamed tributaries all of which comprise jurisdictional waters. Other unnamed tributaries and lakes, ponds, or pools within the Valley Region may also be jurisdictional waters. Implementation of the proposed CWP may result in actions that could adversely affect jurisdictional waters, including federal wetlands. Compliance with regulatory requirements would reduce potential impacts to jurisdictional waters. Compliance with RR-BIO-1, Jurisdictional Waters Permitting, would result in avoidance, minimization, and/or mitigation for jurisdictional waters in accordance with regulations governing jurisdictional waters. Through implementation of CWP policies and regulatory requirements, potential impacts to jurisdictional waters, including federal wetlands, would be less than significant.

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Mountain Region

As discussed in Section 5.4.1.2, the Mountain Region has numerous creeks, lakes and tributaries that comprise wetland and non-wetland waters of the United States and State and streambeds under the jurisdiction of the Corps, RWQCB, and/or CDFW. Implementation of the proposed CWP may result in actions that could adversely affect jurisdictional waters. As discussed under the Valley Region, implementation of the proposed CWP policies and compliance with regulatory requirements would avoid, minimize and/or mitigate impacts to jurisdictional waters by requiring the protection and preservation of such resources. Through implementation of CWP policies and regulatory requirements, potential impacts to jurisdictional waters would be less than significant.

Desert Region

As discussed in Section 5.4.1.2, the Mojave River is the primary waterway in Desert Region which together with other named and unnamed tributaries comprise wetland and non-wetland waters of the United States and State and streambeds under the jurisdiction of the Corps, RWQCB, and/or CDFW. Other unnamed tributaries and lakes, ponds, or pools within the Desert Region may also be jurisdictional waters. Implementation of the proposed CWP may result in actions that could adversely affect jurisdictional waters. As discussed under the Valley Region, implementation of the proposed CWP policies and compliance with regulatory requirements would avoid, minimize and/or mitigate impacts to jurisdictional waters by requiring the protection and preservation of such resources. Through implementation of CWP policies and regulatory requirements, potential impacts to jurisdictional waters would be less than significant.

Level of Significance before Mitigation: Impact 5.4-3 would be less than significant.

Impact 5.4-4: The proposed Project would affect wildlife movement corridors. [Threshold B-4]

Substantial interference with the movement of any native resident or migratory wildlife species or with resident or migratory wildlife corridors would occur if changes in land use within the proposed CWP would prevent or hinder wildlife movement through established native resident or migratory wildlife corridors or habitat linkages. Impacts to these kinds of resources, if used by special-status species, are addressed under Impact 5.4-1.

The proposed CWP includes policies that would avoid or minimize impacts to wildlife movement. Policy NR-3.1, Open Space Preservation, would benefit wildlife corridors by preserving such resources. Policy NR-5.1, Coordinated Habitat Planning, would conserve wildlife corridors through coordination with landscape-scale habitat conservation planning. Policy NR-5.2, Capacity for Resource Protection and Management, would benefit wildlife corridors by increasing funding and other resources to protect, restore, and maintain wildlife corridors.

The CWP includes policies that may result in indirect impacts to wildlife movement corridors. The County maintains and improves a regional trail system as described in Policy NR-3.8 and supports local and community parks, trails, and recreation facilities as described in Policy NR-3.9. Policy NR-3.10, Joint Use Facilities, promotes the creation of joint use facilities for local parks and recreation programs. Regional trails, such as the Santa Ana River trail in the Valley Region, are often situated along existing wildlife movement corridors, such

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as the Santa Ana River. Maintenance and improvement of these facilities, described in Policy NR-3.8 and NR-3.9, would result in indirect impacts to adjacent wildlife movement corridors through construction and operation noise and emissions, light pollution from night time activities, and increased pedestrian traffic from users. Similarly, multi-use facilities would facilitate construction and operation of recreation facilities alongside existing wildlife movement corridors such as flood control facilities. Although maintenance and improvement of recreation facilities typically results in less than significant impacts to wildlife movement corridors, impacts would be significant if a facility resulted in an obstruction to wildlife movement or significant increased noise or light pollution.

In addition to potential impacts from CWP policies, future development in undeveloped areas allowed under the proposed CWP could result in direct or indirect impacts to the movement of wildlife through impacts to habitat or fragmentation of open space. Discussions of these potential impacts are provided below by bioregion.

Valley Region

As described in Section 5.4.1.2 of this chapter, the foothill areas of the San Gabriel and San Bernardino Mountains and associated washes are considered habitat linkage and wildlife corridors in the Valley Region. Proposed development areas occur within the San-Gabriel-San Bernardino Connection and could result in significant impacts to wildlife movement corridors.

Mountain Region

As described in Section 5.4.1.2 of this chapter, the California Essential Habitat Connectivity Project identifies habitat connections between the San Gabriel Mountains, San Bernardino Mountains, and the Little San Bernardino Mountains including the San Gabriel-San Bernardino Connection, San Bernardino-Granite Connection, San Bernardino-Little San Bernardino Connection, and the San Bernardino-San Jacinto Connection. In addition, there are a multitude of corridors that link existing blocks of habitat, including the San Bernardino Mountains to habitat blocks in the Desert Region. Both proposed development and proposed conservation areas occur within the San Gabriel-San Bernardino Connection in the western portion of the Mountain Region. Proposed development areas could result in significant impacts to wildlife movement corridors.

Desert Region

As described in Section 5.4.1.2 of this chapter, the Desert Region includes the following wildlife corridors and wildlife linkages: San Gabriel-San Bernardino Connection, San Bernardino-Little San Bernardino Connection, San Bernardino-San Jacinto Connection, and Joshua Tree-Twenty-nine Palms Connection. Several other corridors in the Desert Region link together existing blocks of habitat, including the China Lake North and South Ranges, Edwards Air Force Base, Kingston Mesquite Mountains, Mojave National Preserve, Stepladder and Turtle Mountains, Whipple Mountains, Twenty-nine Palms and Newberry-Rodman, and Joshua Tree National Park. Desert tortoise linkages between conservation areas also exist between the following tortoise conservation areas: Chemehuevi, Joshua Tree National Park, Pinto Mountains, Ord-Rodman, Fremont Kramer, Mojave National Preserve, Superior Cronese, Death Valley, Ivanpah, and Greenwater Valley (outside the County).

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Buildout of the proposed CWP land uses would result in development in the southwestern portion of the West Desert within the South Coast Wildlands Desert Linkage Network, the San Gabriel – San Bernardino Connection and the San Bernardino – Granite Connection. In the central portion of the West Desert, development would occur within the Desert Tortoise Conservation Areas/Least Cost Corridor as well as South Coast Wildlands Desert Linkage Network. In the East Desert, buildout of the proposed CWP land uses would result in development within the South Coast Wildlands Joshua Tree/Twenty-Nine Palms Wildlife Corridor. Proposed development areas could result in significant impacts to wildlife movement corridors.

Level of Significance before Mitigation: Impact 5.1-4 would be significant.

Impact 5.4-5: Implementation of the Countywide Plan would require compliance with local conservation plans. [Thresholds B-5 and B-6]

A substantial adverse effect would occur if the CWP was in conflict with an adopted HCP, NCCP, or other approved local, regional, or state HCP that the project's proponent was party to; or impacted a permittee's ability to implement an adopted HCP; NCCP; or other approved local, regional, or state HCP.

The CWP includes Policy NR-5.1, Coordinated Habitat Planning, which states that the County participates in landscape-scale habitat conservation planning and coordinates with existing or proposed Habitat Conservation and Natural Resource Management Plans. This policy would result in positive impacts to local HCPs.

There are no CWP policies that would result in a negative impact to HCPs, NCCPs, or local ordinances.

As discussed in Section 5.4.1 of this chapter, several HCPs have been completed or are being planned in the County. Some of these are limited to municipal limits or federal lands and do not overlap County jurisdiction. HCPs that overlap County jurisdiction may limit development or pose additional requirements or analysis when completing a project that overlaps an HCP area. This are discussed further by bioregion below.

Valley Region

Within the Valley Region, the only conservation plan overlapping proposed development areas is the Upper Santa Ana River HCP. This HCP is currently being prepared and has not been approved; therefore, the CWP is not in conflict with any HCPs or NCCPs. Furthermore, any development projects implemented in accordance with the CWP would have to be in compliance with approved HCPs at the time of their entitlement. As described under CWP Policy NR-5.7, Development Review, Entitlement, and Mitigation, projects would comply with state and federal regulations regarding protected species of animals and vegetation through the development review, entitlement, and environmental clearance processes. Implementation of Policy NR-5.7 would include compliance with HCPs and/or NCCPs; absent implementation of this CWP Policy, impacts would be significant.

Mountain Region

Within the Mountain Region, the only conservation plan overlapping proposed development areas is the Upper Santa Ana River HCP. This HCP is currently being prepared and has not been approved; therefore, the CWP is not in conflict with any HCPs or NCCPs. Furthermore, any development projects implemented in accordance

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with the CWP would have to be in compliance with approved HCPs at the time of their entitlement. As described under CWP Policy NR-5.7, Development Review, Entitlement, and Mitigation, projects would comply with state and federal regulations regarding protected species of animals and vegetation through the development review, entitlement, and environmental clearance processes. Implementation of Policy NR-5.7 would include compliance with HCPs and/or NCCPs; absent implementation of this CWP Policy, impacts would be significant.

Desert Region

Within the Desert Region, buildout of the proposed CWP land uses would result in development within the Lower Colorado River HCP plan area as well as the following site-specific single species HCPs: Copper Mountain Community College Expansion Site HCP, Cushenbury Sand & Gravel Quarry, AgCon Oro Grande North Mine Pit Expansion, Joshua Tree Campground. Additionally, although not yet approved, the CWP land uses would also result in development within the proposed Town of Apple Valley Multi-Species Habitat Conservation Plan/ Natural Community Conservation Plan.

Any development projects implemented in accordance with the CWP would have to be in compliance with approved HCPs at the time of their entitlement. As described under CWP Policy NR-5.7, Development Review, Entitlement, and Mitigation, projects would comply with state and federal regulations regarding protected species of animals and vegetation through the development review, entitlement, and environmental clearance processes. Implementation of Policy NR-5.7 would include compliance with HCPs and/or NCCPs; absent implementation of this CWP Policy, impacts would be significant.

Level of Significance before Mitigation: Impact 5.4-5 would be significant.

5.4.5 Cumulative Impacts

The analysis presented in this chapter by the nature of the CWP provides a cumulative assessment of projects within County jurisdiction. Other projects which would contribute to cumulative impacts to biological resources are those within the County boundary but outside County jurisdiction, including those within Town, City, state or federal lands.

CWP policies would contribute to minimizing potential cumulative impacts to biological resources. There are a number of CWP policies that involve coordination with other agencies to manage natural resources. This type of coordination and collaboration would reduce potential cumulative impacts to biological resources by prioritizing areas for conservation and maintaining communication among jurisdictions. These policies include the following:

- Policy NR-3.1** Open Space Preservation, under which the County would coordinate with public and nongovernmental agencies to preserve open space areas that protect natural resources;
- Policy NR-3.3** Management of Designated Areas, under which the County would coordinate with public and nongovernmental agencies to sustainably manage and conserve land within or

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adjacent to locally-, state-, or federally-designated open space or resource conservation areas;

- Policy NR-3.4** Land Exchange, under which the County would coordinate with state and federal agencies to exchange publicly owned lands in order to provide additional areas for open space, recreation, and resource protection.
- Policy NR-3.5** Private Conservation Efforts, which states the County supports nongovernmental organizations and private entities who purchase, own, maintain, and expand areas for conservation and preservation as well as the voluntary transition of privately held lands within a larger boundary designated by the state or federal government for open space and resource conservation to public ownership;
- Policy NR-4.2** Coordination with Agencies, under which the County would coordinate with adjacent federal, state, local, and tribal agencies to protect scenic resources that extend beyond the County's land use authority and are important to countywide residents, businesses, and tourists;
- Policy NR-5.1** Coordinated Habitat Planning, under which the County would participate in landscape-scale habitat conservation planning and coordinate with existing or proposed Habitat Conservation and Natural Resource Management Plans for private and public lands to increase certainty for both the conservation of species, habitats, wildlife corridors, and other important biological resources and functions and for land development and infrastructure permitting;
- Policy NR-5.2** Capacity for Resource Protection and Management, under which the County would coordinate with public and nongovernmental agencies to increase funding and other resources to protect, restore, and maintain open space, habitat, and wildlife corridors for threatened, endangered, and other sensitive species;
- Policy NR-5.4** Off-base Recovery Efforts, under which the County would coordinate with military installations to facilitate off-base recovery of threatened and endangered species and landscape-scale conservation.

Build-out in accordance with the CWP also has the potential to result in cumulative impacts to biological resources when combined with build-out of other jurisdictions. Build-out under the CWP, with implementation of CWP policies and compliance with regulatory requirements, would result in potentially significant impacts to special-status species, special-status vegetation communities, wildlife movement corridors, and local conservation plans. In the Valley Region, a substantial acreage of San Bernardino kangaroo rat Critical Habitat, chaparral communities and Riversidean alluvial fan sage scrub are within CWP proposed development areas. Should projects outside of County jurisdiction impact these same resources, impacts could be cumulatively considerable.

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In the Mountain Region, a substantial area of forest and woodlands are within proposed development areas. The U.S. Forest Service is a significant land use in the Mountain Region and allows uses that also impact forest and woodlands communities which could contribute to a cumulatively considerable impact.

In the Desert Region, Sonoran and Mojavean Desert Scrub and non-native grassland occur in large quantities within proposed development areas. These communities occur throughout the desert and would be impacted by development in other jurisdictions resulting in a potentially cumulatively significant impact to biological resources within those communities. Projects within other local, state or federal jurisdiction would be required to evaluate the potential impacts to biological resources under CEQA, NEPA and other applicable regulatory requirements. Nonetheless, impacts to biological resources throughout the County could be cumulatively considerable.

5.4.6 Level of Significance Without Mitigation

Impact 5.4.3 would be less than significant:

Without mitigation, these impacts would be **potentially significant**:

- **Impact 5.4-1:** Implementation of the Countywide Plan would impact several special-status species.
- **Impact 5.4-2:** Implementation of the Countywide Plan would result in the loss of several special-status vegetation communities.
- **Impact 5.4-4:** The proposed project would affect wildlife movement corridors.
- **Impact 5.4-5:** Absent implementation of the Countywide Plan policies relating to Habitat Conservation Plans and Natural Community Conservation Plans, would result in significant impacts.

5.4.7 Mitigation Measures

Impact 5.4-1, Special-Status Species

BIO-1: For each development project that would disturb special status vegetation on vacant land, or that might impact a wildlife movement corridor or jurisdictional waters pursuant to the Countywide Plan and subject to CEQA, a qualified biologist shall determine the potential for a significant biological resource impact and determine whether a field survey of the project site is warranted. If warranted, a qualified biologist shall prepare a biological resources technical report meeting current requirements of CEQA, and addressing applicable County goals and policies, applicable Habitat Conservation Plans and Natural Community Conservation Plans, and applicable federal, state, and local regulatory requirements. The report shall include documentation of biological resources present or potentially present (including special-status species, special-status vegetation communities, jurisdictional waters, and wildlife movement corridors), an impacts analysis, avoidance measures, and mitigation measures to reduce significant impacts to less than significant if applicable and feasible.

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Impact 5.4-2, Special-Status Vegetation Communities

Mitigation measure BIO-1 also applies to Impact 5.4-2

Impact 5.4-4, Wildlife Movement Corridors

Mitigation measure BIO-1 also applies to Impact 5.4-4

Impact 5.4-5, Local Conservation Plans

Mitigation measure BIO-1 also applies to Impact 5.4-5

5.4.8 Level of Significance After Mitigation

Upon implementation of mitigation measures, impacts wildlife corridors (Impact 5.4.4) and HCPs (Impact 5.4.5) would be less than significant.

A substantial area of special-status species habitat and special-status vegetation communities occur within proposed development areas. It is unknown at this time the total area of habitat that would be impacted and whether impacts on a project-level could be mitigated to below a level of significance; therefore, after implementation of mitigation measure BIO-1, the potential remains for unavoidable impacts to special-status species (Impact 5.4-1) and special-status vegetation communities (Impact 5.4-2).

5.4.9 References

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