3.4 BIOLOGICAL RESOURCES

This section of the 2024 PEIR describes biological resources in the SCAG region, sets forth the regulatory framework that affects biological resources, and analyzes the potential impacts of Connect SoCal 2024. In addition, this 2024 PEIR provides regional-scale mitigation measures as well as project-level mitigation measures that can and should be considered and implemented by lead agencies for subsequent, site-specific environmental reviews to reduce identified impacts as appropriate and feasible. Supporting documentation including records search results and corresponding data tables regarding biological resources is provided in **Appendix C** of this 2024 PEIR.

3.4.1 ENVIRONMENTAL SETTING

DEFINITIONS

Definitions of terms used in the regulatory framework, characterization of baseline conditions, and impact analysis for biological resources follow:

- *Critical Habitat*. A designated area defined by the U.S. Fish and Wildlife Service (USFWS) as being important for the survival of species listed pursuant to the federal Endangered Species Act (FESA). The USFWS evaluates the collection of the environmental conditions (i.e., plant communities, range, elevation, food source, etc.) essential to the continued conservation and preservation of each species listed as federally threatened and endangered.
- *Federally Designated Sensitive Species*. Species that are not listed by the federal government as endangered, threatened, or candidate species but are categorized by the federal government as a federal species of concern. Federal species of concern is a term-of-art that describes a taxon (organism or group of organisms) whose conservation status may be of concern to the USFWS but does not have official status. In addition, federally designated sensitive species include those that are designated as such by the Bureau of Land Management (BLM) and U.S. Forest Service (USFS) on lands that fall under their jurisdiction.
- *Federally Listed Species*. Species provided with special legal protection under FESA. A federally listed endangered species is a species that is in danger of extinction throughout all or a significant portion of its range. A federally threatened species is one likely to become endangered in the absence of special protection or management efforts provided by the listing. A candidate species is one that is proposed by the federal government for listing as endangered or threatened.
- *Federal Wetlands*. Defined by the U.S. Army Corps of Engineers (USACE) and the U.S. Environmental Protection Agency (USEPA) as: "Those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas (USACE 1987)."
- *Greenfield*. Also known as "raw land," land that is privately owned, lacks urban services, has not been previously developed, and is located at the fringe of existing urban areas.
- *Habitat Conservation Plans (HCPs)*. Required by the USFWS as part of an application for an "incidental take" permit for species listed pursuant to FESA. HCPs describe the anticipated effects of the proposed taking, how the impacts will be minimized and mitigated, and how the HCP is to be funded.

- *Locally Important Species*. Species that are not monitored by the resource agencies but monitored by private organizations or local municipal governments. For the purposes of this 2024 PEIR, locally important species include those plant species recognized by the California Native Plant Society (CNPS), a private organization dedicated to the conservation of native plants, as well as those recognized by the Audubon Society.
- *Natural Community Conservation Plan (NCCP)*. Defined by CDFW as a plan for the conservation of natural communities that identifies and provides for the regional or areawide protection and perpetuation of plants, animals, and their habitats (CDFW 2023a).
- *Nursery Site*. Considered habitat in which native wildlife may establish nests, maternity roosts, dens, or otherwise engage in breeding and/or the rearing of offspring.
- *Sensitive Natural Community*. A native plant community listed on CDFW Natural Communities List as being rare within California or threatened by human actions.
- *Special Status Species*. Species that have been afforded special recognition by federal, state, and/or local resource agencies or jurisdictions, or recognized resource conservation organizations. Special status wildlife species include (1) species listed as a candidate, threatened, or endangered under the federal or state Endangered Species Act; (2) species considered rare or endangered under the California Environmental Quality Act (CEQA); (3) plants considered "Rare, Threatened, or Endangered in California" by the California Native Plant Society (Lists 1B and 2); (4) animal listed as "species of special concern" by the state; and (5) animals fully protected in California by the Fish and Game Code.
- *Species of Special Concern (SSC)*. Species, subspecies, or distinct population of an animal (bird, mammal, fish, reptile, and amphibian) native to California that currently satisfies one or more of the following criteria: (a) is extirpated from the state or, in the case of birds, in its primary seasonal or breeding role; (b) is listed as federally, but not state-, threatened or endangered; (c) meets the state definition of threatened or endangered but has not formally been listed; (d) is experiencing, or formerly experienced, serious (noncyclical) population declines or range retractions (not reversed) that, if continued or resumed, could qualify it for state threatened or endangered status; (e) has naturally small populations exhibiting high susceptibility to risk from any factor(s), that if realized, could lead to declines that would qualify it for state threatened or endangered status.
- *State-Designated Sensitive Species*. Species that are not listed by the state government as endangered, threatened, or candidate species but are categorized by the state as a species of special concern or fully protected species. A California species of special concern is defined by the California Department of Fish and Wildlife (CDFW) as being a wildlife species that has declining population levels, a limited range, and/or continuing threats that have made it vulnerable to extinction.
- *State-Listed Species*. Species provided special legal protection under CESA. A state-listed endangered species is a species that is in danger of extinction throughout all or a significant portion of its range. A state-listed threatened species is one likely to become endangered in the absence of special protection or management efforts provided by the listing. A candidate species is one that is proposed by the federal or state government for listing as endangered or threatened.
- *State Wetlands*. Defined by the State Water Resources Control Board (SWRCB), state wetlands are areas that, under normal circumstances, (1) have continuous or recurrent saturation of the upper substrate caused by groundwater, or shallow surface water, or both; (2) the duration of such saturation is sufficient to cause anaerobic conditions in the upper substrate; and (3) the areas' vegetation is dominated by hydrophytes or the areas lack vegetation.

- *Waters of the United States*. Surface waters such as navigable waters and their tributaries, all interstate waters and their tributaries, natural lakes, all wetlands adjacent to other waters, and all impoundments of these waters. On December 30, 2022, USEPA and the Department of the Army announced a final rule founded upon the pre-2015 definition of "waters of the United States," updated to reflect consideration of Supreme Court decisions, the science, and the agencies' technical expertise. The new rule was published in the Federal Register January 18, 2023, and became effective March 2023 (USEPA 2023e). On August 29, 2023, the agencies issued a final rule amending the Code of Federal Regulations to conform the January 2023 Rule's definition of "waters of the United States" to the Supreme Court decision in *Sackett v. Environmental Protection Agency*. The conforming rule amends the provisions of the agencies' definition of "waters of the United States" in the January 2023 Rule that are invalid under the Supreme Court's interpretation of the Clean Water Act in the *Sackett* decision. Specifically, the decision found that wetlands separated from traditional navigable waters are not considered "waters of the United States" under federal Clean Water Act over which protections of the CWA extend; rather, wetlands subject to CWA regulation are limited to those directly adjacent to navigable lakes, rivers, streams and ocean waters, and which have a continuous surface connection with those waters. The conforming rule, "Revised Definition of 'Waters of the United States'; Conforming," became effective on September 8, 2023 (USEPA 2023e).
- *Wildlife Movement Corridors*. Characterized as areas of habitat that are used by wildlife for the purpose of moving between locations.

EXISTING CONDITIONS

The SCAG region encompasses an area of varied topography and diverse ecosystems.[1] The region covers over 38,000 square miles across six counties, encompassing two mountain ranges, two deserts, and approximately 150 miles of coastline, with elevations ranging from 234 below to 10,000 feet above mean seal level (msl). Due to the remarkable variation in the region's topography, climate, and landforms, the biological communities within the area are exceptionally diverse and call for a broad approach to their description.

The SCAG region primarily encompasses the following five United States Department of Agriculture (USDA) regionally defined Ecological Sections (USDA 2007):

- **Southern California Coast Section.** This ecological region is bound to the west by the Pacific Ocean. This section has coastal terraces and low elevation ranges with alluvial lowlands. Plant communities are generally comprised of coastal sagebrush, sagebrush, chaparral, and western hardwood communities. This ecological region occurs in Ventura, Los Angeles and Orange Counties and a small portion of extreme southwestern Riverside County.
- **Southern California Mountain and Valley Section.** Located generally east of the Southern California Coast Section, this region has a landscape of moderate elevation and narrow ranges primarily vegetated with chaparral, chaparral-mountain scrub, western hardwoods, pine, and fir-spruce communities. This ecological section is present in every SCAG county.
- **Mojave Desert Section.** Located primarily within the northeast portion of the SCAG region, this ecological section consists of short mountain ranges, basins, playas, and dunes. Much of this ecological region is vegetated with creosote bush scrub and desert scrub, with pinyon-juniper and other communities within the

[1] An ecosystem is the dynamic complex of plant and animal communities and their associated non-living environment.

large array of elevations within this wide section. The Mojave Desert comprises a large portion of San Bernardino County, and smaller portions of Los Angeles and Riverside Counties.

- **Colorado Desert Section.** This area is largely a plain comprised of alluvial deposits associated with the Salton Sea in Imperial and Riverside Counties. Native vegetation is sparse creosote bush scrub and desert scrub communities, with a high concentration of agricultural lands.
- **Sonoran Desert Section.** This area consists of desert plain interspersed with small low elevation mountain ranges primarily vegetated with creosote bush scrub and desert scrub plant communities. This section covers a large portion of eastern Imperial and Riverside Counties and the southeastern portion of San Bernardino County.

SPECIAL-STATUS SPECIES AND CRITICAL HABITAT

Listed species are generally defined as (1) species listed as a candidate, threatened, or endangered under the federal or state Endangered Species Act; (2) species considered rare or endangered under CEQA; (3) plants considered "Rare, Threatened, or Endangered in California" by the California Native Plant Society (Lists 1B and 2); (4) animal listed as "species of special concern" by the state; and (5) animals fully protected in California by the Fish and Game Code.

Critical habitat is a specific geographic area that is essential for the conservation of a threatened or endangered species and that may require special management and protection. Critical habitat is designated by the USFWS under FESA and cannot be disturbed without permission from the USFWS and other federal agencies, depending on land ownership. The listing process for individual species may include designation of critical habitat. Critical habitat may include an area that is not currently occupied by the species but that will be needed for its recovery (USFWS 2023).

The following discussion is based on a background search of special-status species that are documented in the CNDDB (CDFW 2023b), the CNPS Inventory of Rare and Endangered Plants (CNPS 2023), and the USFWS Endangered and Threatened species list (USFWS 2023a). The background search was regional in scope and focused on the documented occurrences within the boundaries of the SCAG region.

As described in **Table 3.4-1, Summary of Special-Status Species and Designated Critical Habitat in the SCAG Region**, there are 186 federally and/or state-listed wildlife species and 112 listed plant species with historical records located within the six counties of the SCAG region as well as nearly 5.5 million acres of designated critical habitat. Table 3.4-1 provides further detail on the state- and federally listed plant and animal species, as well as their affiliated critical habitat, within the SCAG region.

TABLE 3.4-1 **Summary of Special-Status Species and Designated Critical Habitat in the SCAG Region**

COUNTY	NUMBER FEDERALLY AND STATE-LISTED WILDLIFE SPECIES	NUMBER FEDERALLY AND STATE-LISTED PLANT SPECIES	ACRES OF CRITICAL HABITAT
Imperial	20	5	406,258
Los Angeles	40	31	108,746
Orange	24	11	27,234
Riverside	35	21	919,762
San Bernardino	35	25	3,667,694
Ventura	32	19	358,699
Entire SCAG Region	***186***	***112***	***5,488,393***

Source: CDFW 2023b, USFWS 2022a

Every county within the SCAG region contains USFWS-designated critical habitat for listed species (see detailed list of critical habitats by county in Table 1, Critical Habitat in the SCAG Region, in Appendix C, which are shown in **Map 3.4-1, Designated Critical Habitat in the SCAG Region**, below). Critical habitat for 45 of these federally listed species has been established within the SCAG region (see Appendix C). San Bernardino, the largest county in the country, contains nearly 3,700,000 acres of designated critical habitat, or over 66 percent of the lands designated in the SCAG region. Both San Bernardino and Riverside each have designated habitat for 21 federally listed species, the most of any SCAG counties. More than 85 percent (4,685,727 acres) of all the critical habitat in the region is for desert tortoise (*Gopherus agassizii*) and this species represents the largest designated critical habitat in the four of the six SCAG counties in which it is present (San Bernardino, Riverside, Los Angeles, and Imperial Counties). The largest critical habitat in Orange County is coastal California gnatcatcher (*Polioptila californica californica*) with 18,743 acres, or nearly 69 percent, of the designated lands in the County. California Condor (*Gymnogyps californianus*) has nearly 180,000 acres designated in Ventura County, or 50 percent of all critical habitat designated in the County. Each county has designated critical habitat for a wide variety of species (including plants, amphibians, fish, reptiles, insects, crustaceans, birds, and mammals) and each county has a wide diversity of natural communities to support these species.

STATE AND FEDERALLY LISTED SPECIES

A search of relevant literature and databases for the six counties of the SCAG region was performed to develop a list of 298 listed species and biological resources that could potentially occur in the SCAG region, as shown in **Map 3.4-2**, **Federally and/or State-Listed Species Reported in the SCAG Region**, below, and listed in Table 2, Federally and State-Listed Species Reported in the SCAG Region, (included in Appendix C). These included federally listed threatened and endangered and state-listed threatened, endangered, or rare species. Although only the third largest county in the region, Los Angeles had the greatest number of listed species with 71. Imperial County had the fewest species listed with 25. See Appendix C for full details.

The Coastal/Southern California distinct population segment (DPS) of California spotted owl was recently granted candidacy under FESA warranting further discussion about the species, below. Additionally, the Southern California/Central Coast evolutionarily significant unit (ESU) of mountain lion and western Joshua tree are two species that were recently granted candidacy under CESA warranting further discussion about the species, below.

California Spotted Owl – Coastal/Southern California Distinct Population Segment

On February 23, 2023, the USFWS proposed listing of the Coastal/Southern California DPS of the California spotted owl under FESA. The Coastal/Southern California DPS lacks the ability to withstand normal variations in environmental conditions, persist through catastrophic events, or adapt to new environmental conditions throughout its range", which led the USFWS to propose listing the DPS as endangered (USFWS 2023b). The ongoing threats to the long-term survival of California spotted owl in the Coastal/Southern California DPS includes habitat loss resulting from large-scale high-severity wildfires, competition and hybridization with non-native barred owls, tree mortality due to drought and beetle infestations, and temperature and precipitation changes related to climate change (USFWS 2023b).

Mountain Lion – Southern California/Central Coast Evolutionarily Significant Unit

On April 16, 2020, the California Fish and Game Commission (CFGC) voted unanimously to advance the Southern California/Central Coast ESU of mountain lion to candidacy under CESA. Mountain lion populations in Southern and Central Coast California are imperiled due to human activities. Continued habitat loss and fragmentation has led to 10 genetically isolated populations within California. There are six identified imperiled mountain lion populations in the ESU; four populations occur within the SCAG region, and they include the Santa Monica Mountains lions, the Santa Ana Mountains lions, the San Gabriel/San Bernardino Mountains lions, and the Eastern Peninsular Range lions. At least two of the populations (Santa Monica Mountains and Santa Ana Mountains) are severely constrained and facing an extinction vortex due to high levels of inbreeding, low genetic diversity, and high human-caused mortality rates from car strikes on roads, depredation kills, rodenticide poisoning, poaching, disease, and increased human-caused wildfires (Ernest et al. 2003, 2014; Riley et al. 2014; Vickers 2015; Benson et al. 2016).

The effective population sizes of the four populations within the SCAG region range from four to about 32 mountain lions. An effective population size of 50 is assumed to be sufficient to prevent inbreeding depression over five generations, while an effective population size of 500 is considered sufficient to retain evolutionary potential in perpetuity. All mountain lion populations in the SCAG region are well below that minimum threshold of 50, which indicates that these populations are at serious risk of becoming extirpated. Furthermore, mountain lions in the Santa Monica and Santa Ana mountains have been found to have dangerously low genetic diversity and effective population size, and they are likely to become extinct within 50 years if nothing is done to improve gene flow with other mountain lion populations (Benson et al. 2016; Gustafson et al. 2018; Benson et al. 2019).

The primary threat to the long-term survival of mountain lions in the Southern California/Central Coast ESU is genetic isolation due to lack of connectivity caused by continuous development in mountain lion habitat with little consideration to their movement needs. Mountain lions are wide ranging species that have home ranges of 75 to 200 mi^2. Thus, the persistence of the four populations with the SCAG region relies heavily on being connected with mountain lions throughout the ESU as well as statewide.

Negative edge effects from human activity, traffic, lighting, noise, domestic pets, pollutants, invasive weeds, and increased fire frequency have been found to be biologically significant up to 300 meters (~1,000 feet) away from anthropogenic features in terrestrial systems. Human development and associated noise can degrade adjacent wildlife habitat and behavior. One study concluded that even "nonconsumptive forms of human disturbance may alter the ecological role of large carnivores by affecting the link between these top predators and their prey" (Smith et al. 2017). In addition, mountain lions have been found to respond fearfully upon hearing human vocalizations, avoiding the area and moving more cautiously when hearing humans.

WESTERN JOSHUA TREE

As of September 2020, the western Joshua tree is being considered for listing under CESA. As a candidate species, western Joshua tree is granted temporary protections under CESA including heightened review and analysis of projects that have the potential to impact the species directly and indirectly. The species is found only within a specific range of temperature and precipitation, restricting the species' distribution. Increased temperatures, reduction in precipitation, development, wildfires, invasive species, and other threats endanger the continued viability of the species. Effective July 1, 2023, the Western Joshua Tree Conservation Act (see discussion below) prohibits unpermitted killing or removal of the trees, tasks state wildlife authorities with developing and implementing a conservation plan for the species by 2024 and creates a fund to acquire and manage suitable habitat.

QUINO CHECKERSPOT BUTTERFLY

The Quino checkerspot butterfly was listed on the Federal Endangered Species Act in 1997. The CBD released a petition to list the Quino checkerspot butterfly as endangered under CESA on June 29, 2020. Quino checkerspot (*Euphydryas editha quino*) was a common spring butterfly of the open forblands, grasslands, and sparse shrublands of Southern California where it typically laid its eggs on the small native forb, *Plantago erecta* (Mattoni et al. 1997). As these landscapes were lost to urban development throughout Los Angeles and Orange counties, the remaining populations in Riverside and San Diego counties are threatened by the continued invasion of non-native grasses, spread through the ranching era, and accelerated by deposition of nitrogen (see discussion below). In addition, the species is threatened by sprawl development, habitat fragmentation, agriculture, grazing, and climate change, including increased drought and fire frequency.

CROTCH BUMBLE BEE

As of June 2019, the Crotch bumble bee (*Bombus crotchii*), along with three other bumble bee species, is a candidate species for listing under CESA, under a 2018 petition by the Xerces Society. Similar in status as western Joshua tree, Crotch bumble bee is granted temporary protections under CESA as a candidate species, including increased review and analysis of projects that have the potential to impact the species. The species occurs primarily in California, including the Mediterranean region, Pacific Coast, western deserts, and adjacent foothills through much of southwestern California, in habiting open grassland and scrub habitats. The species used to be more common in the Central Valley but urbanization and intensive agricultural has restricted the species' distribution in this region. The species is a generalist forager and has been reported visiting a wide variety of flowering plants, including members of the Fabaceae, Apocynaceae, Asteraceae, Lamiaceae, and Boraginaceae plant families. Factors influencing the reduction in bumble bee populations are principally loss of habitat, especially from agricultural intensification, livestock grazing and urbanization, which restricts access to nectar and pollen sources, nesting sites, and overwintering site for hibernation. Bumble bees are particularly sensitive to habitat fragmentation and populations of bumble bees existing in fragmented habitats can face problems with inbreeding depression. A final decision on the listing of the four bumble bee species is still pending before the California Fish and Game Commission.

SENSITIVE WILDLIFE SPECIES

In addition to federally and state-listed wildlife species, other sensitive wildlife species include (1) species considered rare or endangered under the California Environmental Quality Act; (2) animal listed as "species of special concern" by the state; (3) animals fully protected in California by the Fish and Game Code; (4) species on

CDFW's Special Animals List that have a CNDDB state rarity rank of S1-S3) and/or a Watch List species; and (5) species considered by local jurisdictions or organizations to be locally important (i.e., Ventura County Locally Important Animal List (Ventura County 2022a).

In addition to the federally and State-listed wildlife species described above, there are 253 other sensitive wildlife species with historic records located within the SCAG region as shown in **Map 3.4-3**, **Other Sensitive Species Reported in the SCAG Region**,[2] below. See the full list in Table 3, Other Sensitive Wildlife Species Reported in the SCAG Region, in Appendix C.

Of these 253 sensitive wildlife species, Riverside and San Bernardino Counties had the highest diversity of species observed (both with approximately 21 percent of the total recorded for the SCAG region), followed closely by Los Angeles County (with approximately 20 percent of the wildlife recorded), and then Imperial, Orange, and Ventura Counties (with a range of 10–13 percent of the recorded observations).

RARE AND LOCALLY IMPORTANT PLANTS

Rare and locally important plant species are generally defined as (1) species considered rare or endangered under the California Environmental Quality Act (CEQA); (2) plants designated "Rare, Threatened, or Endangered in California" by the CDFW and California Native Plant Society (CNPS; California Rare Plant Ranks 1B, 2B, 3, and 4) species considered by local jurisdictions or organizations to be locally important.

Rare plants and plants of local importance are recorded by the CNDDB and the CNPS Rare Plan Inventory, and Ventura County locally important plant list. In addition to the federally and state-listed plant species described above, there are 925 locally important plant species with historic records located within the SCAG region as shown in Table 4, Rare and Locally Important Plants Reported in the SCAG Region, included in Appendix C. Plant species recorded by the CNDDB within the SCAG region are shown in Map 3.4-3.[3] As described below, the greatest number, representing more than 28 percent of 925 species recorded, were found in San Bernardino County and Ventura County, with 17 percent in Los Angeles County, 15 percent in Riverside County, and less than 10 percent in Orange and Imperial Counties.

RIPARIAN AND STATE SENSITIVE NATURAL COMMUNITIES

The six counties within the SCAG region contain nearly 23 million acres of "open space" combined. These undeveloped lands include the region's national forests, state parks, military installations, other public lands, and various private holdings. Much of the open space in the region has been left in its natural state, however many non-native species have transformed what was once native habitat.

The CNDDB identifies approximately 322,000 acres as containing state-sensitive natural communities, those identified as critically imperiled, or vulnerable to extirpation. Riparian, marsh, and scrub habitats in the SCAG region and associated with drainages or streams may fall under the jurisdiction of the CDFW. Improvements within or in the vicinity of these regulatory habitats would require compliance with Section 1600 of the California Fish and

[2] Ventura County locally important animal species are not shown on Map 3.4-3 unless the species is also being tracked in the CNDDB (CDFW 2023b).

[3] Ventura County locally important plant species and CNPS rare plant species are not shown on Map 3.4-3 unless recorded by the CNDDB.

Game Code under which a Lake or Streambed Alteration Agreement would need to be obtained prior to the alteration of a state jurisdictional area.

As shown in **Map 3.4-4**, **CDFW Sensitive Natural Communities Reported in the SCAG Region**, below, and listed in Table 5, CDFW Sensitive Natural Communities Reported in the SCAG Region, included in Appendix C, 45 riparian and sensitive natural communities have been recorded by the CNDDB. This CNDDB information was last recorded in 1993, as the Natural Heritage Division of the CDFW is currently in the process of classifying and mapping vegetation in the state. Although there is no current comprehensive picture of CDFW sensitive natural communities and riparian habitat, it is highly likely that such communities exist within the SCAG region. Therefore, it is important that individual projects consider sensitive communities and carefully examine project sites on a case-by-case basis.

Since the mid-1990s, CDFW and their partners, including CNPS, have been classifying vegetation types using the state standards outlined in the Manual of California Vegetation, updated in the second edition of the Manual (Sawyer et al. 2009). These state standards are being used in the classification of Sensitive Natural Communities throughout California that are currently being evaluated using NatureServe's Heritage Methodology, the same system used to assign state rarity ranks for sensitive plant communities in the CNDDB (CDFW 2023c). Natural Communities with state ranks of S1-S3 are considered Sensitive Natural Communities that should be addressed during the CEQA process.

As of 2018, about half of California has been mapped and classified according to this state standard. Table 6, Sensitive Natural Communities within the SCAG Region, included in Appendix C, provides the Vegetation Classification and Mapping Program's (VegCAMP) current list of vegetation Alliances with State Rarity Ranks of S1-S3 that occur within the USDA Ecological Sections (Southern California Coast, Southern California Mountains and Valleys, Mojave Desert, Colorado Desert, Sonoran Desert) found in the SCAG region. Some of these sections overlap portions of counties outside of the SCAG region (primarily portions of San Diego and Santa Barbara Counties). Although this data is incomplete, it is highly likely that these or additional Sensitive Natural Communities may occur in the footprint of future projects in the SCAG region. Therefore, it is important that individual projects evaluate potential impacts to these Sensitive Natural Communities, in addition to the riparian and CDFW sensitive natural communities listed in Table 6.

FEDERALLY PROTECTED WETLANDS AND WATERWAYS

Current National Wetlands Inventory maps (USFWS 2023c) and USGS National Hydrography Dataset of surface waters (rivers, streams, ephemeral streams, canals, lakes, ponds, and other hydrologic features) for the SCAG region were reviewed to identify the extent of potential federally and/or state protected wetlands and waterways (USFWS 2023c; USGS 2022a). These aquatic resources could potentially be subject to the jurisdiction of the USACE, CDFW, and/or RWQCBs, and have been mapped within each of the six counties in the SCAG region (**Table 3.4-2**, **Wetlands and Waterways Reported in the SCAG Region**, and **Table 3.4-3**, **Federally Protected Surface Water Features Reported in the SCAG Region**). These wetlands and waterways are shown in **Map 3.4-5**, **Wetlands and Waterways Reported in the SCAG Region**, below.

TABLE 3.4-2 **Wetlands and Waterways Reported in the SCAG Region**

WETLAND TYPE	NATIONAL WETLANDS INVENTORY (ACRES)
Imperial County	
Freshwater Emergent Wetland	6,255
Freshwater Forested/Shrub Wetland	21,427
Freshwater Pond	7,063
Lake	199,953
Riverine	46,920
Total	***281,618***
LOS ANGELES COUNTY	
Estuarine and Marine Deepwater	902
Estuarine and Marine Wetland	1,240
Freshwater Emergent Wetland	2,500
Freshwater Forested/Shrub Wetland	11,870
Freshwater Pond	7,625
Lake	21,507
Riverine	28,925
Total	***74,569***
Orange County	
Estuarine and Marine Deepwater	565
Estuarine and Marine Wetland	1,648
Freshwater Emergent Wetland	989
Freshwater Forested/Shrub Wetland	4,119
Freshwater Pond	1,421
Lake	2,323
Riverine	5,797
Total	***16,862***
Riverside County	
Freshwater Emergent Wetland	8,550
Freshwater Forested/Shrub Wetland	16,873
Freshwater Pond	4,241
Lake	68,712
Riverine	74,412
Total	***172,788***

WETLAND TYPE	NATIONAL WETLANDS INVENTORY (ACRES)
San Bernardino County	
Freshwater Emergent Wetland	4,744
Freshwater Forested/Shrub Wetland	14,614
Freshwater Pond	8,502
Lake	255,738
Riverine	203,757
Total	***487,355***
Ventura County	
Estuarine and Marine Deepwater	860
Estuarine and Marine Wetland	2,720
Freshwater Emergent Wetland	2,713
Freshwater Forested/Shrub Wetland	10,740
Freshwater Pond	2,175
Lake	4,132
Riverine	12,551
Total	***35,891***

Source: USFWS 2022a.

TABLE 3.4-3 **Federally Protected Surface Water Features Reported in the SCAG Region**

MAJOR RIVER OR LAKE	ACRES	LINEAR MILES
Imperial		
Salton Sea	190,440	—
Total	***190,440***	**—**
Los Angeles		
Bouquet Canyon Reservoir	628	—
Castaic Lake	2,008	—
Lake Palmdale	260	—
Las Virgenes Reservoir	140	—
Morris Reservoir	283	—
Puddingstone Reservoir	248	—
Pyramid Lake	1,177	—
San Gabriel Reservoir	525	—
Quail Lake	250	—
Los Angeles River	—	51

MAJOR RIVER OR LAKE	ACRES	LINEAR MILES
San Gabriel River	—	59
Santa Clara River	—	44
Total	***5,519***	***154***
Orange		
Irvine Lake	327	—
San Gabriel River	—	1
Santa Ana River	—	27
Total	***327***	***28***
Riverside		
Diamond Valley Lake	4,914	—
Lake Elsinore	2,648	—
Lake Matthews	2,552	—
Perris Reservoir	1,548	—
Salton Sea	42,540	—
Skinner Reservoir	1,037	—
Vail Lake	470	—
Santa Ana River	—	26
Santa Margarita River	—	5
Whitewater River	—	70
Total	***55,709***	***101***
San Bernardino		
Big Bear Lake	2,818	—
Lake Arrowhead	736	—
Silverwood Lake	905	—
Mojave River	—	110
Santa Ana River	—	44
Total	***4,459***	***154***
Ventura		
Lake Casitas	1,540	—
Lake Piru	1,066	—
Santa Clara River	—	39
Ventura River	—	16
Total	***2,606***	***55***

Source: USGS 2022

WILDLIFE MOVEMENT CORRIDORS

Wildlife movement corridors, or habitat linkages, are generally defined as connections between habitat patches that allow for physical and genetic exchange between otherwise isolated animal populations. Such linkages may serve a local purpose, such as providing a linkage between foraging and denning areas, or they may be regional in nature. Some habitat linkages may serve as migration corridors, wherein animals periodically move away from an area and then subsequently return. Others may be important as dispersal corridors for young animals. A group of habitat linkages in an area can form a wildlife corridor network.

The presence of viable and sustainable wildlife corridor networks may also be critical to the survival of some species as habitat conditions and landscapes are altered due to climate change. Across the SCAG region's diverse habitat types, many native plant species are at risk because of from climate change effects (CDFW 2022). These effects include rising sea levels, increased temperatures, decreased water availability and/or altered precipitation patterns, and invasive species infestations. Special status species are most susceptible to climate change due to their small population sizes and, often, specific suitable habitat conditions required for survival. These impacts on plants change ecosystems and the wildlife they support. Maintaining existing connected habitat linkages and establishing new wildlife crossings is essential to the survival of California's diverse native species and unique ecosystems in the face of a changing climate. As habitat conditions change in response to altered climate conditions, wildlife require an increased diversity of opportunities for movement and migration to a wide variety of landscapes (CDFW 2022).

The California Department of Transportation (Caltrans) and CDFW commissioned the California Essential Habitat Connectivity Project (CEHC) to assess essential habitat connectivity across the state (Spencer et al. 2010). As shown in **Map 3.4-6, Essential Habitat Connectivity and Natural Landscape Blocks within the SCAG Region**, a large portion of the SCAG region includes many natural landscape blocks, accounting for nearly 12 million acres that support high native wildlife biodiversity with a significant wildlife connectivity network (Map 3.4-6; **Table 3.4-4, Natural Landscape Blocks by County in the SCAG Region**) (CDFW 2017). Habitat connectivity for these blocks is identified by Class, with Class 1 providing the lowest permeability for wildlife movement and Class 5 having the highest permeability. These large and intact blocks are connected by over 4.5 million acres of corridors that are highly (Class 4 and 5) permeable (i.e., beneficial) to wildlife movement (**Table 3.4-5, Essential Connectivity Areas by County in the SCAG Region [acres]**). A large portion of these landscape blocks and essential connectivity areas are spread through eastern Imperial, Riverside, and San Bernardino Counties. Ventura County has the relatively largest proportion of landscape blocks and essential connectivity areas by county acreage. Large portions of the mountainous parts of Los Angeles County provide a critical linkage between habitat blocks from Riverside and Imperial County to the east and Ventura County to the west. Orange County has limited essential connectivity habitat and habitat blocks, located mostly in the eastern end of the county, but these provide connectivity to San Diego County to the south.

TABLE 3.4-4 **Natural Landscape Blocks by County in the SCAG Region**

COUNTY	AREA (ACRES)
Imperial	971,568
Los Angeles	797,304
Orange	134,443
Riverside	2,512,738
San Bernardino	6,803,617
Ventura	701,255
Grand Total	***11,920,925***

Source: CDFW 2017

TABLE 3.4-5 **Essential Connectivity Areas by County in the SCAG Region (acres)**

CLASS	IMPERIAL	LOS ANGELES	ORANGE	RIVERSIDE	SAN BERNARDINO	VENTURA	TOTAL
Class 5 – Most Permeable	394,558	110,885	—	558,072	1,242,727	212,488	***2,518,730***
Class 4	273,193	97,541	—	415,974	1,032,287	193,203	***2,012,198***
Class 3	240,350	90,926	—	359,190	836,791	165,127	***1,692,384***
Class 2	235,162	99,915	—	371,235	873,323	98,393	***1,678,028***
Class 1 – Least Permeable	187,232	103,589	1,306	351,780	880,475	73,171	***1,597,553***
Total	***1,330,495***	***502,856***	***1,306***	***2,056,251***	***4,865,603***	***742,382***	***9,498,893***

Source: CDFW 2022

Barriers to wildlife movement exist throughout the SCAG region, including large areas of urban development and multilane freeways that cut off regional movement for migratory and resident species alike. These barriers can affect all species from large mammals to small insects and can lead to significant degradation of ecosystem function and plant community composition. Conservation, protection, and enhancement of these intact Natural Landscape Blocks and Essential Connectivity Areas should be considered in project development to maintain or improve the viability of wildlife movement networks and natural community stability.

A notable example of wildlife corridor enhancement is the wildlife crossing being constructed over the State Route 101 Freeway at Liberty Canyon Road in Agoura Hills. The development of the Wallis Annenberg Wildlife Crossing will help facilitate mountain lion and other terrestrial wildlife movement over a major regional freeway, opening a corridor and reducing the risk of motor vehicle collisions with wildlife. Managed by Caltrans, the Wallis Annenberg Wildlife Crossing is a regional partnership with many public and private entities, including the Annenberg Foundation, City of Agoura Hills, City of Thousand Oaks, Mountains Recreation and Conservation Authority, the Santa Monica Mountains Conservancy, the National Park Service, and the Resource Conservation District of the Santa Monica Mountains. Construction began on the wildlife crossing in the summer of 2022 and is planned to be completed in fall 2024 (National Wildlife Federation/SaveLACougars 2019). The crossing will cross ten lanes of US Highway 101 and an access road, with an estimated 210-foot-long by 175-foot-wide structure that will rank as the

largest wildlife crossing in the world. This crossing will reconnect currently fragmented ecosystems for the benefit of mountain lions and other wildlife.

In addition to these essential corridors, major rivers, creeks, and streams often serve as nursery sites for fish, amphibian, and invertebrate species. These important features can facilitate movement between landscape blocks. Over 182,000 acres of these riparian wildlife connections have been mapped as part of the California Essential Habitat Connectivity Project in the SCAG region (see **Table 3.4-6, Potential Riparian Connections in the SCAG Region**, and Map 3.4-6).

TABLE 3.4-6 **Potential Riparian Connections in the SCAG Region**

County	Riparian Connections (Acres)
Imperial	33,584
Los Angeles	34,065
Orange	5,861
Riverside	21,564
San Bernardino	56,141
Ventura	31,370
Total	***182,585***

Source: CDFW 2016

HABITAT CONSERVATION PLANS AND NATURAL COMMUNITY CONSERVATION PLANS

A habitat conservation plan (HCP) is a planning document required as part of an application for an incidental take permit. HCPs describe the anticipated effects of the proposed taking, how the impacts will be minimized and mitigated, and how the HCP is to be funded. An NCCP is defined by CDFW as a plan for the conservation of natural communities that identifies and provides for the regional or area-wide protection and perpetuation of plants, animals, and their habitats. As described by **Table 3.4-7, HCPs and NCCPs in the SCAG Region**, more than 20 million acres of open space within the SCAG region are currently protected under an HCP or NCCP or will be protected by a future HCP or NCCP that is currently in its planning stages. Data from CDFW and USFWS show 31 plans with durations of 16–80 years, providing conservation efforts for nearly three million acres in the SCAG region. As a group, these plans provide protection for multiple species by conserving habitats, identifying locations for future mitigation efforts, providing conservation guidance and practices, and preserving important wildlife linkages.

REGIONAL CONSERVATION INVESTMENT STRATEGIES

The Regional Conservation Investment Strategies (RCIS) Program is a non-regulatory, voluntary, non-binding assessment conducted by public agencies to encourage development of regional conservation planning documents (CDFW 2023h). The assessments focus on gathering and analyzing information related to the conservation of native species, associated habitats, and the conservation status of lands present within the RCIS planning area to ultimately conserve these natural resources and provide the development of mitigation credits to reach regional conservation goals.

TABLE 3.4-7 **HCPs and NCCPs in the SCAG Region**

HCP/NCCP	IMPERIAL	LOS ANGELES	ORANGE	RIVERSIDE	SAN BERNARDINO	VENTURA
Aera SW San Joaquin Valley NCCP/HCP						X
AgCon Oro Grande North Mine Pit					X	
Angelus Block					X	
Assessment District 161				X		
California Department of Corrections Statewide Electrified Fence Project	X	X		X	X	
City of Rancho Palos Verdes NCCP		X				
Coachella Valley Fringe-Toed Lizard				X		
Coachella Valley MSHCP				X		
Copper Mountain College HCP[a]				X		
Cushenbury San & Gravel					X	
El Sobrante Landfill HCP				X		
High Desert Solar Project					X	
Imperial Irrigation District NCCP/HCP	X					
Joshua Tree Campground					X	
Lake Mathews HCP				X		
Lower Colorado River Multiple Species Habitat Conservation Plan (MSHCP)	X			X		
Newhall Farms Seasonal Crossings HCP		X				
North Peak Development Project				X		
Orange County Central/Coastal NCCP/HCP			X			
Orange County Southern Subregion HCP			X			
Orange County Transportation Authority NCCP/HCP			X			
Rancho Bella Vista (Pacific Bay Properties)				X		
Riverside County, Stephens' Kangaroo Rat (Long-Term) HCP				X		
San Diego County Water Authority NCCP/HCP				X		
San Diego Gas and Electric – Quino Checkerspot Butterfly Low-Effect HCP			X	X		
Shell Oil Company/Metropolitan Water District of Southern California HCP			X			
Sunland Communities Inc. HCP					X	
Town of Apple Valley MSHCP					X	
Upper Santa Ana River Wash					X	
West Valley HCP					X	
Western Riverside County MSHCP				X		

Source: CDFW 2022j; USFWS 2022d

Table Notes:

a. Copper Mountain College HCP expired on July 31, 2023.

Two RCIS's are located within the SCAG Region: Antelope Valley RCIS in northeastern Los Angeles County and the San Bernardino County RCIS in western San Bernardino County. The Antelope Valley RCIS was completed in January 2020 and the San Bernardino County RCIS is in development. The Antelope Valley RCIS proponent is the Desert and Mountain Conservation Authority and the San Bernardino County RCIS proponent is the San Bernardino County Transportation Authority.

NITROGEN DEPOSITION

Nitrogen deposition from use of fossil fuels and agricultural chemical applications has the potential to impact sensitive habitats and species. An increase in nitrogen inputs can lead to soil and water acidification, plant nutrient imbalances, declines in plant health, changes in species composition, increases in invasive species, increased susceptibility to secondary stresses (e.g., freezing, drought, and insect outbreaks).

As discussed in Section 3.3, *Air Quality*, nitrogen oxides (NOx) are released in the air through the burning of fossil fuels (including vehicles fueled by fossil fuels), agricultural fertilizer application, and livestock waste (Science News 2016). NOx emissions react with dust or dissolve into rainwater and fall onto ecosystems as reactive nitrogen (Nr) deposition (NPS 2023a). An increase in nitrogen inputs can lead to soil and water acidification, plant nutrient imbalances, declines in plant health, changes in species composition, increases in invasive species, increased susceptibility to secondary stresses (i.e., freezing, drought, and insect outbreaks). Nitrogen saturation occurs in areas where nitrogen exceeds the plant and microbial demand (Pardo, L.H. 2010). In areas with nitrogen deficiencies, nitrogen deposition can be beneficial. Specifically, areas can see increases in forest growth, carbon sequestration, and stand health in general (NPS 2023b).

Total nitrogen deposition includes wet and dry oxidized and reduced nitrogen. Wet deposition is when rain, snow, or fog carries gases and particles to the earth's surface. Dry deposition is when gases and particles are carried to the surface in the absence of rain, snow, or fog. Oxidized nitrogen is produced from the burning of fossil fuels as well as natural sources such as lightning, forest fires and bacterial decay (USEPA 2023b). Oxidized nitrogen includes nitric acid (HNO_3), nitric oxide (NO), nitrogen dioxide (NO_2), ammonia (NH_3), and particulate nitrate (NO_3) (USEPA 2023c). Reduced nitrogen is primarily emitted from agricultural systems but also from automobiles. Reduced nitrogen includes ammonia and particulate ammonium (NH_4) (USEPA 2023d). In March 2020, USEPA released regional trends in nitrogen deposition. The annual average total deposition rate of nitrogen in the Pacific region of the United States decreased by approximately 11 percent from 3.7 kg-N/ha to 3.3 kg-N/ha between the periods 2000–2002 and 2016–2018. The total deposition of oxidized nitrogen decreased by approximately 37 percent from an annual average 2.7 kg-N/ha to 1.7 kg-N/ha over the same period. The total deposition of reduced nitrogen increased approximately 36 percent from an annual average of 1.1 kg-N/ha in 2000–2002 to 1.5 kg-N/ha over the same time period (USEPA 2023d, 2023g).

Studies have shown that automobile NH_3 emissions within the South Coast Air Basin come primarily from light-duty gasoline vehicles (depending on the age and mode of driving) and dairy facilities (National Atmospheric Deposition Program 2023a). NH_3 can cause short-term and long-term health impacts including eye/lung irritation and impacts to the cardiovascular system. There are no state or national-scale measurements to establish a baseline for ammonia concentrations. However, the National Atmospheric Deposition Program has established the ammonia monitoring network to measure ambient ammonia gas in 100 sites across the U.S. The SCAG region only includes one of these monitoring stations located at Joshua Tree National Park. Monitoring began in 2010 and the highest concentration of ammonia reported was 3.87 $\mu g/m^2$ in September 2012 (National Atmospheric Deposition Program 2023b).

The recent York Fire that occurred within the Mojave National Preserve of San Bernardino County, burned more than 90,000 acres, including Joshua tree woodland habitat. The fire may have been exacerbated, in part, by the proliferation of exotic grasses due to increased nitrogen deposition associated with "nitrogen-laden smog" (Los Angeles Times 2023).

As indicated in Section 3.3, *Air Quality*, of this 2024 PEIR, vehicular NOx emissions are regulated by CARB. In general, vehicular NOx emissions are controlled effectively by catalytic converters. A side effect of catalytic converters is the production of NH_3. As a result, although total NOx is going down in response to regulation, NH_3 has continued to be produced by catalytic converters. NH_3 is an important driver of nitrogen deposition in urban-affected areas and near roadways (Fenn et al. 2018).

As stated above, there are no state or federal standards for measuring NH_3 (ammonia gas), and there is only one monitoring station in the SCAG region that measures ammonia gas. As such, measurement and quantification of NH_3 emissions is unreliable. Further, with no national or state standards, there is no threshold for comparison for CEQA purposes.

3.4.2 REGULATORY FRAMEWORK

FEDERAL

FEDERAL ENDANGERED SPECIES ACT

The USFWS, under the auspices of FESA, manages and protects species listed as Endangered or Threatened. The USFWS can issue a permit for incidental "take" of listed species that can result from otherwise lawful activities. Take, under the federal definition, means to harass, harm (including habitat modification), pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to engage in any such conduct. The permitting process is used to determine if a project would jeopardize the continued existence of listed species and the mitigation measures that would be required to avoid or minimize impacts to listed species. Procedures for obtaining a permit for incidental take are set forth in Section 7 (for federal properties or where federal actions are involved) and Section 10 (for non-federal actions) of FESA (USFWS 1973). Candidate species do not have the full protection of FESA; however, the USFWS advises applicants that candidate species could be elevated to listed species at any time.

USFWS administers FESA, which designates critical habitat for endangered species. This enables USFWS to carry out its mission to conserve, protect, and enhance the nation's fish and wildlife and their habitats for the continuing benefit of people. Critical habitat areas cannot be disturbed without permission from the USFWS and other federal agencies, depending on land ownership. The USFWS also manages a system of land and waters for the conservation of wildlife and associated ecosystems. These National Wildlife Refuges are primarily managed for the preservation and protection of unique or important resources and ecosystems.

SECTION 10 OF RIVERS AND HARBORS APPROPRIATION ACT OF 1899

Authorization from USACE must be obtained for construction of a structure in or over any navigable water of the U.S., pursuant to Section 10 of the Rivers and Harbors Appropriation Act of 1899 (33 United States Code [USC] Sections 401, 403, 407). Authorization is also needed for structures built near navigable water if they would affect the course, location, condition, or capacity of the water body, as through re-channelization, disposal of fill, and so forth (USEPA 2023e).

MIGRATORY BIRD TREATY ACT OF 1918

The Migratory Bird Treaty Act of 1918 (MBTA) (16 USC Sections 703–712) makes it unlawful to pursue, capture, kill, or possess any migratory bird or part, nest, or egg of any such bird listed in wildlife protection treaties between the United States, Great Britain, Mexico, Japan, and the countries of the former Soviet Union. Similar to FESA, the MBTA authorizes the Secretary of the Interior to issue permits for incidental take (USFWS 2022b).

FISH AND WILDLIFE COORDINATION ACT

The objective of the Fish and Wildlife Coordination Act (FWCA) (16 USC Sections 661–666c) (as amended by P.L. 116–188 (2020)) is to protect fish and wildlife when federal actions result in the control or modification of a natural stream or body of water, including impoundment, diversion and channel deepening. Under the FWCA, Federal agencies shall consider the effect that water-related projects would have on fish and wildlife resources, prevent loss of or damage to such resources, and develop and improve fish and wildlife resources. The FWCA requires consultation with USFWS and state fish and wildlife agencies to develop measures to protect, develop and improve fish and wildlife resources (USFWS 1934).

SECTION 401 OF THE FEDERAL CLEAN WATER ACT (1972)

Federal Clean Water Act (CWA) Section 401 (33 USC Section 1251) is administered by the State Water Resources Control Board and the Regional Water Quality Control Boards (RWQCB). Section 401 requires that prior to any federal permit or license, any activity, including river or stream crossings during road, pipeline, or transmission line construction, which may result in discharges into waters of the United States, must be certified by the applicable RWQCB. This certification ensures that the proposed activity does not violate federal water quality standards (USEPA 2023a). The SCAG region lies within the jurisdiction of five RWQCBs:

- Colorado River Basin
- Lahontan
- Los Angeles
- Santa Ana
- San Diego

FEDERAL CWA SECTION 404

Federal CWA Section 404 (33 USC Section 1251), which is administered by the USACE, regulates the discharge of dredged and fill material into waters of the United States. USACE has established a series of nationwide permits that authorize certain activities in waters of the United States, provided that a proposed activity can demonstrate compliance with standard conditions. In general, USACE requires an individual permit for an activity that will affect an area equal to or in excess of 0.3 acres of waters of the United States. Projects that result in impacts to less than 0.3 acres of waters of the United States can normally be conducted pursuant to one of the nationwide permits, if consistent with the standard permit conditions. USACE also has discretionary authority to require an Environmental Impact Statement for projects that result in impacts to an area between 0.1 and 0.3 acres. Use of any nationwide permit is contingent on the activities having no impacts to endangered species (USEPA 2023f).

MARINE MAMMAL PROTECTION ACT OF 1972

The Marine Mammal Protection Act of 1972 (MMPA) (16 USC Section 31) protects all marine mammals, including cetaceans (whales, dolphins, and porpoises), pinnipeds (seals and sea lions), sirenians (manatees and dugongs), sea otters, and polar bears within the waters of the United States. The MMPA prohibits the "take" of marine mammals without a permit, with certain exceptions. The definition of "take" under the MMPA is consistent with that of FESA. The MMPA is managed by the federal government. The National Marine Fisheries Service is responsible for managing cetaceans, otariids, and phocids. The USFWS is responsible for managing odobenids, sirenians, otters, and polar bears (USFWS 2022c).

MARINE PROTECTION, RESEARCH, AND SANCTUARIES ACT OF 1972

The Marine Protection, Research, and Sanctuaries Act of 1972 (MPRSA) (Public Law 92-532), also known as the Ocean Dumping Act, prohibits the dumping of material into the ocean that would unreasonably degrade or endanger human health or the marine environment. Ocean dumping cannot occur unless a permit is issued under the MPRSA. In the case of dredged material, the decision to issue a permit is made by the USACE, using USEPA's environmental criteria and subject to USEPA's concurrence (USEPA 2022b).

EMERGENCY WETLANDS RESOURCES ACT OF 1986

The objective of the Emergency Wetlands Resources Act of 1986 (EWRA) (16 USC Sections 3901–3932), dated November 10, 1986, is to promote the conservation of wetlands and help fulfill obligations contained in various migratory bird treaties. Under the EWRA, the USFWS must provide leadership and take action to:

- Intensify cooperative efforts to manage and conserve wetlands
- Intensify efforts to protect wetlands

BALD AND GOLDEN EAGLE PROTECTION ACT

The purpose of the federal Bald and Golden Eagle Protection Act (BGEPA) (16 USC Sections 668–668c, as amended) that is administered by the USFWS protects bald and golden eagles, their nests, eggs, and parts (USFWS 2007). The BGEPA states that no person shall take, possess, sell, purchase, barter, offer for sale, purchase or barter, transport, export, or import any bald or golden eagle alive or dead, or any part, nest, or egg without a valid permit to do so. The BGEPA prohibits the "take" of bald and golden eagles unless pursuant to regulations. Take is defined by the BGEPA as an action "to pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest, or disturb."

In addition to immediate impacts, this definition covers impacts that result from human-caused alterations initiated around a previously used nest site during a time when eagles were not present. Permits are issued to Native Americans to possess eagle feathers for religious purposes, and salvaged eagle carcasses can be sent to the National Eagle Repository in Colorado, where they are redistributed to Native Americans. Although the bald eagle was removed from the Endangered Species List in June 2007, it is still federally protected under the BGEPA and MBTA described above. In addition, the National Bald Eagle Management Guidelines were published in conjunction with delisting by the USFWS in May 2007 to provide provisions to continue to protect bald eagles from harmful actions and impacts.

Under the BGEPA, a final rule was published in May 2008 in the Federal Register that proposed authorization for take of bald eagles for those with existing authorization under FESA where the bald eagle is covered in an HCP or

the golden eagle is covered as a non-listed species (Federal Register 2008). The final rule also established a new permit category to provide expedited permits to entities authorized to take bald eagles through Section 7 Incidental Take Permits.

WETLANDS – EXECUTIVE ORDER NUMBER 11990

Executive Order (EO) 11990 was issued in May 1977, as a furtherance of the National Environmental Policy Act (NEPA) providing protection of wetlands. Pursuant to the EO, all new construction should be designed to the greatest extent possible to avoid long- and short-term adverse impacts that would lead to the destruction or the modification of wetlands, in order to preserve and enhance the natural and beneficial values of wetlands. Federal agencies, such as the Federal Highway Administration (FHWA), cannot undertake or provide assistance for new construction located in wetlands unless the head of the agency finds that: (1) there is no practicable alternative to the construction and (2) the proposed project includes all practicable measures to minimize harm (USEPA 1977).

INVASIVE SPECIES – EXECUTIVE ORDER NUMBER 13112

This EO was signed by President Clinton on February 3, 1999. It serves to prevent activities that may promote the introduction and spread of invasive species. The order states that federal agencies whose actions "may affect the status of invasive species shall … use relevant programs and authorities to … prevent the introduction of invasive species … detect and respond rapidly to and control populations of such species in a cost-effective and environmentally sound manner…monitor invasive species populations accurately and reliably … provide for restoration of native species and habitat conditions in ecosystems that have been invaded." In order to implement EO 13112, the FHWA has established guidance to prevent the introduction and spread, and promote the control, of invasive plant species on highway rights-of-way. Under EO 13112, federal agencies are prohibited from authorizing, funding, or carrying out actions that are likely to promote or result in the introduction or spread of invasive species unless all feasible measures to minimize the impacts have been analyzed and considered (Federal Register 1999).

NATIONAL ENVIRONMENTAL POLICY ACT

NEPA is implemented by regulations included in the Code of Federal Regulations (40 CFR Section 1500 et seq.), which require careful consideration of the harmful effects of federal actions or plans, including projects that receive federal funds, if they may have a significant adverse effect on the environment. NEPA mandates that all federal agencies carry out their regulations, policies, and programs in accordance with NEPA's policies of environmental protection. NEPA encourages the protection of all aspects of the environment and requires federal agencies to utilize a systematic, interdisciplinary approach to agency decision-making that will ensure the integrated use of natural sciences such as geology. While NEPA compliance is not required for the Plan, NEPA compliance will be required for transportation improvement projects that will be financed using federal funds. Some development projects (such as low-income housing) also use federal funds and are subject to NEPA. The regulations also require projects requiring NEPA review to seek to avoid or minimize adverse effects of proposed actions and restore and enhance environmental quality as much as possible.

The Council on Environmental Quality (CEQ) oversees NEPA, and USEPA carries out administrative aspects of the NEPA process. NEPA mandates that the federal government shall give appropriate consideration to potential adverse environmental impacts of their major actions, including impacts to biological resources (USEPA 2019a).

STATE

CALIFORNIA FISH AND GAME CODE

SECTION 1600, LAKE OR STREAMBED ALTERATION

All diversions, obstructions, or changes to the natural flow or bed, channel, or bank of any river, stream, or lake in California are subject to the regulatory authority of the CDFW pursuant to Sections 1600 through 1603 of the Code and require preparation of a Streambed Alteration Agreement. Pursuant to the Code, a stream is defined as a body of water that flows at least periodically, or intermittently, through a bed or channel having banks and supporting fish or other aquatic life. Based on this definition, a watercourse with surface or subsurface flows that support or have supported riparian vegetation is a stream and is subject to CDFW jurisdiction. Altered or artificial waterways valuable to fish and wildlife are subject to CDFW jurisdiction. CDFW also has jurisdiction over dry washes that carry water ephemerally during storm events (CDFW 2023d).

SECTION 2080, CALIFORNIA ENDANGERED SPECIES ACT

CESA prohibits the take of listed species except as otherwise provided in state law. Unlike FESA, CESA applies the take prohibitions to species petitioned for listing (state candidates). State lead agencies are required to consult with the CDFW to ensure that any actions undertaken by the lead agency are not likely to jeopardize the continued existence of any state-listed species or result in destruction or degradation of required habitat. CDFW is authorized to enter into Memoranda of Understanding (MOU) with individuals, public agencies, universities, zoological gardens, and scientific or educational institutions to import, export, take, or possess listed species for scientific, educational, or management purposes (CDFW 2023e).

Pursuant to Section 2081 of the California Fish and Game Code, the CDFW may authorize individuals or public agencies to import, export, take, or possess, any state-listed endangered, threatened, or candidate species. These otherwise prohibited acts may be authorized through permits or MOUs if:

- The take is incidental to an otherwise lawful activity.
- The impacts of the authorized take are minimized and fully mitigated.
- The permit is consistent with any regulations adopted pursuant to any recovery plan for the species.
- The applicant ensures adequate funding to implement the measures required by CDFW.

CDFW shall make this determination based on available scientific information and shall include consideration of the ability of the species to survive and reproduce.

SECTIONS 2800 THROUGH 2840, NATURAL COMMUNITY CONSERVATION PLANNING ACT

Section 2800 through 2840 of the California Fish and Game Code provides a mechanism to conserve natural communities on an ecosystem level while accommodating compatible land use. Specifically, it is used to provide comprehensive management and conservation of multiple wildlife species and the natural communities in which they occur.

The Natural Community Conservation Planning Act of 1991, as amended in 2003, established the Natural Community Conservation Planning program for the protection and perpetuation of the state's biological diversity. The CDFW established the program in order to conserve natural communities at the ecosystem level while

accommodating compatible land use. An NCCP identifies and provides for the regional or area-wide protection of plants, animals, and their habitats, while allowing compatible and appropriate economic activity. The CDFW provides support, direction, and guidance to participants in order to ensure that NCCPs are consistent with CESA.

SECTIONS 3503 AND 3503.5, RESIDENT AND MIGRATORY BIRDS

California Fish and Game Code Sections 3503 and 3503.5 provide regulatory protection to resident and migratory birds and all birds of prey within the State of California, including the regulation of the taking of nests and eggs, unless otherwise provided for by the California Fish and Game Code. Specifically, it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, or destroy the nest or eggs of any bird of prey, except as otherwise provided.

SECTIONS 3511, 4700, 5050, AND 5515, FULLY PROTECTED SPECIES

The classification of Fully Protected was the state's initial effort to identify and provide additional protection to those animals that were rare or faced possible extinction. Lists were created for fish, amphibians and reptiles, birds, and mammals. Most of the species on these lists have subsequently been listed under the state and/or federal Endangered Species Acts. California Fish and Game Code Sections 3511, 4700, 5050, and 5515 state that Fully Protected species (birds, mammals, fish, reptiles, amphibians) or parts thereof may not be taken or possessed at any time and no licenses or permits may be issued for their take except for collecting these species for necessary scientific research and relocation of the bird species for the protection of livestock.

CALIFORNIA CODE OF REGULATIONS, TITLE 14, SECTION 460

The regulations of take of furbearing mammals are established within California Code of Regulations (CCR) Title 14, Division 1 (Subdivision 2), Chapter 5. Take is prohibited for several furbearing mammals under 14 CCR Section 460, including, but not limited to, desert kit fox (*Vulpes macrotis arsipus*) and red fox (*Vulpes vulpes*). Title 14 Section 460 is supported by Sections 200, 202, 203, and 4009.5 of the California Fish and Game Code.

CALIFORNIA PORTER-COLOGNE WATER QUALITY CONTROL ACT

Pursuant to the California Porter-Cologne Water Quality Control Act (California Water Code, Division 7), the State Water Resources Control Board is granted ultimate authority over water quality policy for the state of California. The nine regional boards, the RWQCBs, oversee water quality at the local and regional levels, and regulate pollutant and nuisance discharges into waters of the state. Waters of the state are defined as any surface water or groundwater, including saline waters, within the boundaries of the state. Before allowing discharges that may affect the quality of waters of the state, a Report of Waste Discharge must be filed with the RWQCB (SWRCB 2023).

CALIFORNIA WILD AND SCENIC RIVERS ACT

The objective of the California Wild and Scenic Rivers Act of 1972 (Public Resources Code [PRC] Section 5093.50) is the preservation of certain rivers which possess extraordinary scenic, reaction, fishery, or wildlife values. The Act provides permanent protection for some of the state's most outstanding free flowing rivers and prohibits actions such as the construction of dams or other harmful instream activities, except to serve local needs (Water Education Foundation_2023).

CALIFORNIA COASTAL ACT

Through the California Coastal Act (CCA) (PRC Division 20), the California Coastal Commission has unusually broad authority to regulate development in the Coastal Zone. A permit is required for any project that might change the intensity of land use in the Coastal Zone including projects that would require a building or grading permit from the city or county, major vegetation clearing, or subdividing. The coastal zone generally extends three miles seaward and about 1,000 yards inland. In particularly important and generally undeveloped areas where there can be considerable impact on the coastline from inland development, the coastal zone extends to a maximum of five miles inland from mean high tide line. In developed urban areas, the coastal zone extends substantially less than 1,000 yards inland (PRC 2023).

CALIFORNIA NATIVE PLANT PROTECTION ACT

The Native Plant Protection Act (California Fish and Game Code Section 1900–1913) includes measures to preserve, protect, and enhance rare and endangered native plants. The list of native plants afforded protection pursuant to the Native Plant Protection Act includes those listed as rare and endangered under CESA. The Native Plant Protection Act provides limitations by stating "no person will import into this State, or take, possess, or sell within this State" any rare or endangered native plant, except in compliance with provisions of the act. Individual landowners are required to notify the CDFW at least 10 days in advance of changing land uses to allow the CDFW to salvage any rare or endangered native plant material (California Legislative Information 2023j).

CALIFORNIA DESERT NATIVE PLANT ACT

The main purpose of the Desert Native Plant Act (Food and Agriculture Code Division 23) is to preserve and enhance desert native plants by protecting certain species from unlawful harvesting on both public and privately owned lands. The list of desert native plants afforded protection pursuant to the Desert Native Plant Act includes species within the Mojave Desert portions of Los Angeles, San Bernardino, and Riverside Counties. The Desert Native Plant Act provides limitations that no person will harvest, transport, or possession of certain native desert plants without authorization (i.e., valid permit or wood receipt). Authorization for take of native desert plants can be obtained through the sheriff or commissioner of the county where harvesting will occur and subject to county designated fees (CDFW 2023).

NATURAL COMMUNITY CONSERVATION PLANNING ACT, AS AMENDED

The Natural Community Conservation Planning Act of 1991, as amended in 2003 (California Fish and Game Code Sections 2800–2835) established the Natural Community Conservation Planning program for the protection and perpetuation of the state's biological diversity. The CDFW established the program in order to conserve natural communities at the ecosystem level while accommodating compatible land use. An NCCP identifies and provides for the regional or area-wide protection of plants, animals, and their habitats, while allowing compatible and appropriate economic activity. The CDFW provides support, direction, and guidance to participants in order to ensure that NCCPs are consistent with CESA (CDFW 2023f).

WESTERN JOSHUA TREE CONSERVATION ACT

The Western Joshua Tree Conservation Act (WJTCA) was passed in July 2023 to conserve western Joshua tree and its habitat while supporting the state's renewable energy and housing priorities (CDFW 2023g). The WJTCA creates a streamlined permitting framework for certain development activities and collects mitigation fees for the

acquisition and conservation of western Joshua tree habitat and other actions to conserve western Joshua Tree. This will offset the impacts of permitted projects that negatively impact western Joshua trees and help to conserve the species on a landscape scale. In addition to authorizing the CDFW to issue permits for the take of western Joshua trees, the WJTCA directs CDFW to develop a conservation plan for western Joshua tree by the end of 2024.

STATE SENATE CONCURRENT RESOLUTION NO. 17 – RELATIVE TO OAK WOODLANDS

The State Senate Concurrent Resolution No. 17, filed with the Secretary of State on September 1, 1989, states that any state agencies having land use planning duties and responsibilities shall assess the effects of their land use decisions or actions within any oak woodlands containing blue oak (*Quercus douglasii*), Engelmann oak (*Q. engelmannii*), valley oak (*Q. lobata*), or coast live oak (*Q. agrifolia*). The State Senate defines "oak woodland" as a five-acre circular area containing five or more oak trees per acre. This resolution requires that state agencies must preserve and protect native oak woodlands to the maximum extent feasible or provide for replacement plantings where blue, Engelmann, valley, or coast live oak are removed from oak woodlands.

STATE WETLAND DEFINITION AND PROCEDURES FOR DISCHARGES OF DREDGED OR FILL MATERIAL TO WATERS OF THE STATE

The State Wetlands Procedures, as prepared by the State Water Resources Control Board, was implemented on May 28, 2020 (revised April 6, 2021; SWRCB 2019). The State Wetlands Procedures include a definition for wetland waters of the State that include (1) all wetland waters of the U.S.; and (2) aquatic resources that meet both the soils and hydrology criteria for wetland waters of the U.S. but lack vegetation.

STATE WILDLIFE ACTION PLAN

Congress created the State and Tribal Wildlife Grants (SWG) program in 2000, recognizing the need to fund programs for the conversation of wildlife diversity (USFWS 2023d). Congress mandated each state and territory to develop a state wildlife action plan (SWAP) by 2005 that provided a comprehensive wildlife conservation strategy to continue receiving federal funds through the SWG program. California's first SWAP was completed by the California Department of Fish and Game (now the CDFW) and approved by USFWS in 2005. California's SWAP 2005 identified and targeted Species of Greatest Conservation Need (SGCN) and the critical habitats on which they depend. The SWG program requires SWAP updates at least every 10 years. CDFW prepared SWAP 2015, which is the first comprehensive update of SWAP 2005 (CDFW 2015). Currently under USFWS review for approval, the SWAP 2015 focuses on conservation of the wildlife resources of the nation's most biologically diverse state using an approach that is in harmony with a growing human population and the need for resilience in the face of a changing climate. Employing an ecosystem approach to conserve and manage diverse habitats and species, SWAP 2015 provides a blueprint for actions necessary to address the highest priorities for conserving California's aquatic, marine, and terrestrial resources.

REGIONAL CONSERVATION INVESTMENT STRATEGIES, ASSEMBLY BILL 2087

This bill establishes a pilot project for the Regional Conservation Investment Strategy (RCIS) program that encourages public agencies to develop regional conservation planning documents to help local native species populations by protecting, restoring, creating, and reconnecting their habitats. No more than eight regional strategies could be approved prior to January 1, 2020, the date the program sunsets.

SENATE BILL 103

This bill changes Assembly Bill 2087 by (1) removing the January 1, 2020 "sunset" provision and (2) allowing a RCIS to be exempt from the "cap" (i.e., the limit of eight RCISs that may be approved by CDFW) if a state water or transportation infrastructure agency requests approval of the RCIS.

SENATE BILL 147

This bill was approved by the California Governor on July 10, 2023, and amends Sections 395, 3511, 4700, 5050, and 5515 of, and adds Section 2081.15 to, the California Fish and Game Code, relating to fully protected species. The bill authorizes the CDFW, until December 31, 2033, to issue a permit under CESA that would authorize the take of a fully protected species resulting from impacts attributable to the implementation of specified projects, including wind and solar projects, if certain conditions are satisfied, including, among others, the conditions required for the issuance of an incidental take permit.

LOCAL

In addition to federal, state, and county regulations described above, general plans and municipal codes of local jurisdictions in the SCAG region may include conservation elements that identify biological resources, including mature trees and locally important species that are afforded special consideration.

COUNTY GENERAL PLANS AND ORDINANCES

Per state general plan guidelines, county's general plan is required to contain a conservation element as well as an open space element. These elements are generally where discussions regarding biological resources can be found. Each county's general plan varies in level of detail and necessary measures to preserve biological resources. The counties within the SCAG area may each have individual codes or ordinances protecting biological resources. A commonly occurring ordinance is a native tree protection or oak tree protection ordinance. These codes and ordinances generally have a limited scope, in this case the removal of specific tree species, which are afforded some level of protection.

The SCAG region encompasses six counties and 191 cities. Each city within the SCAG region has a General Plan with policies related to biological resources as required by the State of California General Plan Guidelines. Each county within the SCAG region has ordinances regulating the removal of native trees and plants, with the exception of Orange County whose tree ordinance has yet to be codified (see **Table 3.4-8, County Biological Resources Policies and Ordinances Relevant to the SCAG Region**).

TABLE 3.4-8 **County Biological Resources Policies and Ordinances Relevant to the SCAG Region**

COUNTY	COUNTY POLICIES AND ORDINANCES
Imperial[1]	Imperial County Code of Ordinances Chapter 12.44 – Wildlife Protection
	Imperial County Code of Ordinances Chapter 12.48 – Wild Flowers and Trees
Los Angeles[2]	Los Angeles County Code of Ordinances Chapter 22.102 – Significant Ecological Areas
	Los Angeles County Code of Ordinances Chapter 22.102.070 – Protected Tree Permit
	Los Angeles County Code of Ordinances Chapter 22.174 – Oak Tree Permits
	Los Angeles County Code of Ordinances Chapter 12.28 – Brush and Vegetation
Orange[3]	Orange County Zoning Code Update Section 7-9-69 – Tree Preservation Ordinance
Riverside[4]	Riverside County Ordinance No. 559 – Regulating the Removal of Trees
San Bernardino[5]	San Bernardino County Code of Ordinances Chapter 82.11 – Biotic Resources (BR) Overlay
	San Bernardino County Code of Ordinances Chapter 88.01 – Plant Protection and Management
Ventura[6]	Ventura County Non-Coastal Zoning Ordinance Section 8107-25 – Tree Protection Regulations

Sources: 1. *Imperial County 2016*
2. *Los Angeles County 2015*
3. *Orange County 2018*
4. *Riverside County 1997*
5. *San Bernardino County 2022*
6. *Ventura County 2020*

IMPERIAL COUNTY

The Imperial County Code of Ordinances has established two codes related to biological resources (Chapter 12.44, Wildlife Protection, and Chapter 12.48, Wild Flowers and Trees). The Conservation and Open Space Element of the Imperial County General Plan has established one goal and two policies related to biological resources (Imperial County Planning and Development Services 2016). The County's two codes, one goal and two supporting policies relevant to the SCAG projects provide protection to wildlife, wild flowers and trees as well as preservation of native plant communities and best restoration practices.

LOS ANGELES COUNTY

The Conservation and Natural Resources Element of the Los Angeles County General Plan 2035 Update has established two goals and 12 policies related to biological resources. Ten of the 12 policies are relevant to the SCAG projects (Los Angeles County Department of Regional Planning 2022). The two goals and ten supporting policies that apply to SCAG activities provide protection to natural habitats, special status species, sensitive plant communities, wildlife corridors, watersheds and other sensitive biological resources. They also act to discourage development in natural or biologically sensitive areas. In addition, the Los Angeles County Code of Ordinances has established an ordinance to protect native oak trees.

Los Angeles County has designated several areas containing sensitive biological resources as Significant Ecological Areas (SEA). SEAs are areas that warrant special management because they contain biotic resources that are considered to be rare or unique; are critical to the maintenance of wildlife; represent relatively undisturbed areas of Los Angeles County Habitat Types; or serve as linkages. Any development within SEAs is subject to the discretion and policies of the Significant Ecological Areas Technical Advisory Committee (SEATAC).

ORANGE COUNTY

The Resources Element of the Orange County General Plan has established one goal and one policy related to biological resources (Orange County Land Use Planning and Subdivision Services 2013). The one goal and one supporting policy relevant to SCAG projects provide protection to wildlife, plants, and vegetation communities.

RIVERSIDE COUNTY

The Riverside County Code of Ordinances has established one ordinance related to biological resources (No. 559, Section 1). The Multipurpose Open Space Element of the Riverside County General Plan has established four policies related to environmentally sensitive lands. The one ordinance and four supporting policies relevant to the SCAG projects provide protection to sensitive species and habitats and wildlife corridors. They also ensure continued participation and compliance with the County's Multi-Species HCP Program, Coachella Valley MSHCP Program, and the San Bernardino kangaroo rat HCP.

SAN BERNARDINO COUNTY

The San Bernardino County Development Code has established one code related to biological resources (Chapter 88.01.010(c)). The Natural Resources Element of the San Bernardino County Countywide Plan has established one goal and eight policies related to biological resources. The one code, one goal, and six supporting policies relevant to SCAG projects provide protection to sensitive species and habitats and wildlife corridors. They also warrant coordination with the appropriate resource management agencies and interested groups to maintain the County's biological resources.

VENTURA COUNTY

The Ventura County Code of Ordinances has established one ordinance related to biological resources. The Conservation and Open Space Element of the Ventura County 2040 General Plan has established one goal and 15 policies related to biological resources (Ventura County 2020). The one code, one goal and 14 supporting policies relevant to SCAG projects provide protection to native trees, sensitive species and habitats, wildlife corridors, and locally important species/communities. They also warrant coordination with the appropriate resource management agencies and interested groups to maintain the County's biological resources.

CITY GENERAL PLAN AND ORDINANCES

In accordance with Sections 6530(c) and (d) of the California Government Code, like the six counties in the SCAG region, all cities are required to have a conservation element and an open space element, as mandatory elements of their general plans. The conservation element provides goals and polices related to conservation, development, and utilization of natural resources including water and its hydraulic force, forests, soils, rivers and other waters, harbors, fisheries, wildlife, minerals, and other natural resources. One of the six required aspects of the open space element is for planning, conservation, and management of open space for the preservation of natural resources, including habitat for fish and wildlife species; areas required for ecologic and other scientific study purposes; rivers, streams, bays and estuaries; and coastal beaches, lakeshores, banks of rivers and streams, and watershed lands. In addition, many of the cities have ordinances related to protection, conservation and management of natural habitats, and associated plant and animal resources. For example, Los Angeles City Planning drafted a Wildlife District Ordinance, recommended for City Council adoption by the city's Planning and Land Use Management Committee in June 2023, that outlines development standards to reduce impacts on plants, animals, and natural resources located on or adjacent to development projects within a pilot area of the city, the eastern Santa Monica

Mountains (Los Angeles City Planning 2022). The ordinance regulations intend to help to limit the environmental impact of new development and protect and preserve the City's natural resources, ecosystems, and wildlife connectivity. The City of Los Angeles also enacted in April 2006, a Protected Tree ordinance (Ordinance No. 177404) that provides for the protection of native tree species, including species of oak (*Quercus* sp., except scrub oak [*Q. dumosa*]), Southern California black walnut (*Juglans californica*), California bay laurel (*Umbellularia californica*) and western sycamore (*Platanus racemosa*). Ordinance No. 186,873 was enacted in December 2020, to extend protection status to two native shrub species, the Mexican Elderberry (*Sambucus mexicana*) and toyon (*Heteromeles arbutifolia*).

3.4.3 ENVIRONMENTAL IMPACTS

THRESHOLDS OF SIGNIFICANCE

For the purposes of this 2024 PEIR, SCAG has determined that implementation of Connect SoCal 2024 could result in significant impacts related to biological resources if the Plan would exceed the following significance criteria, in accordance with California Environmental Quality Act (CEQA) Guidelines Appendix G:

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

METHODOLOGY

Chapter 2, *Project Description*, describes the Plan's vision, goals, forecasted regional development pattern, policies and strategies, and individual transportation projects and investments. The Plan aims to increase mobility, promote sustainability, and improve the regional economy. Although land use development is anticipated to occur within the region even without the Plan, the Plan could influence growth, including distribution patterns. To address this, the 2024 PEIR includes an analysis on the implementation of policies and strategies as well as potential projects and evaluates how conditions in 2050 under the Plan would differ from existing conditions. The analysis of biological resources considered public comments received on the NOP and feedback and discussions at the various public and stakeholder outreach meetings.

Impacts to biological resources were evaluated in accordance with Appendix G of the 2023 CEQA Guidelines. Biological resources within the SCAG region were evaluated at a programmatic level of detail, in relation to the General Plans of the six counties and the 191 cities within the SCAG region; and a review of related literature germane to the SCAG region.

The impact assessment for biological resources focuses on the potentially significant direct effects of the Plan on biological resources within the SCAG region. The analysis considers the 2050 Plan conditions compared to existing conditions (using 2019 as the baseline). This qualitative analysis considers highway, rail, and transit projects that have the potential to result in significant direct impact to special status species or their habitats; have the potential to result in conversion of state-designated sensitive habitats, including those habitats afforded protection pursuant to Sections 401 and 404 of the federal CWA, and/or Section 1600 of the California Fish and Game Code; or have the potential to disrupt migratory corridors, nursery sites, or lands designated for long-term regional conservation of species.

As noted in Section 3.3, *Air Quality*, of this 2024 PEIR, there is no technical guidance on how to analyze nitrogen deposition impacts under CEQA, and there is no national or state standard for comparison. An air dispersion modeling was used to examine potential nitrogen deposition impacts on near-freeway sensitive biological resources to provide a good faith effort at full disclosure and to inform the discussion of human health effects and potential biological resources impacts from nitrogen deposition. See Section 3.3, *Air Quality*, and Table 3.3-21, *Maximum Annual Nitrogen Deposition at Near-Freeway Sensitive Receptors*, of this 2024 PEIR for additional discussion.

The analysis also includes a review of adopted HCPs NCCPs and RCIPs to identify potential conflicts with their provisions. The methodology for determining the significance of these impacts qualitatively compares future Plan conditions to baseline conditions.

As discussed in Chapter 2, *Project Description*, and Section 3.0, *Introduction to the Analysis*, Connect SoCal 2024 includes Regional Planning Policies and Implementation Strategies some of which will effectively reduce impacts in the various resource areas. Furthermore, compliance with all applicable laws and regulations (as set forth in the Regulatory Framework) would be reasonably expected to reduce impacts of the Plan (see CEQA Guidelines Section 15126.4(a)(1)(B)). As discussed in Section 3.0, *Introduction to the Analysis*, where remaining potentially significant impacts are identified, SCAG mitigation measures are incorporated to reduce these impacts. If SCAG cannot mitigate impacts of the Plan to less than significant, project-level mitigation measures are identified which can and should be considered and implemented by lead agencies as applicable and feasible.

IMPACTS AND MITIGATION MEASURES

IMPACT BIO-1 **Have a substantial adverse effect, either directly or through habitat modification, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or US Fish and Wildlife Service.**

Significant and Unavoidable Impact – Mitigation Required

Implementation of the Plan would affect biological resources, including sensitive and special status species. Plan implementation could impact desert tortoise, coastal California gnatcatcher, California condor, California spotted

owl Coastal/Southern California DPS, mountain lion Southern California/Central Coast ESU, western Joshua tree, Quino checkerspot butterfly, Crotch bumble bee as well as 253 non-listed sensitive wildlife species. Direct impacts that could occur during construction of some projects include direct loss of sensitive plant and/or wildlife species resulting from injury, death, or disturbance of these species. Direct impacts may also occur through direct habitat loss and fragmentation during construction, displacement of sensitive species due to construction noise or during operation, accidental introduction of non-native plants by construction equipment or during maintenance and general operation, introduction of new lighting sources, and dust and noise during construction and operation.

Construction activities in or adjacent to natural habitats would also increase the risk and frequency of fires that could degrade the function and value of habitats supporting sensitive species (impacts from wildfires are further discussed in Section 3.20, *Wildfire*, of this 2024 PEIR). Further, indirect impacts could result from implementation of the Plan if suitable habitat was encroached upon to the extent that it could no longer support sensitive species. Indirect impacts may include edge effects resulting from habitat fragmentation which can alter habitat structure and composition as well as negatively impact predator-prey dynamics.

Expected significant impacts include direct loss of natural resource lands; disturbance and removal of natural vegetation used by sensitive species; barriers to wildlife movement, habitat fragmentation, and the associated decrease in habitat quality; litter, trampling, light pollution and road noise in previously undisturbed natural areas; increased noise levels related to construction and/or increased traffic volumes; temporal loss of habitat during construction; expansion of public access into previously remote lands; displacement of riparian and wetland habitat; incursion of invasive plants and animals spreading from new transportation corridors; siltation of streams and other water bodies during construction; and the loss of open space that provides habitat for native species.

Impacts to sensitive species may be further exacerbated by the effects of climate change (CDFW 2022). Special-status species are most susceptible to climate change due to their small population sizes and, often, specific suitable habitat conditions required for their survival. The combination of development-related impacts under the Plan and climate change can further reduce available habitat, reduce movement opportunities for wildlife, provide new corridors for invasive species infestations, and increase the risk of fires in open space to the detriment of special status species.

The Plan also aims to preserve, enhance, and restore regional wildlife connectivity through strategies that encourage compact urban development. The Plan focuses new growth in PDAs, existing suburban town centers, and more walkable, mixed-use communities. The Plan recognizes that as population continues to grow, there is increasing pressure on natural lands. Several of the Plan's policies (see Chapter 2, *Project Description*) promote conservation of natural and agricultural lands and restoration of natural habitats and wildlife corridors. SCAG's Sustainable Communities Program supports planning in local jurisdiction to advance the regional growth vision.

The Plan also includes urban greening strategies. Urban greening is a multi–benefit land use strategy that improves the relationship between the built and natural environment. Greening can support reduction in greenhouse gas emissions by sequestering carbon and reduce vehicle miles traveled by making the environment more appealing for people who are bicycling and walking. Benefits within urban, suburban, and rural settings include:

- Improved traffic calming and safety;
- Increased active transportation
- Cooler street surfaces and communities
- Increased trail and greenway connectivity

- Improved water quality, groundwater recharge and watershed health
- Reduced urban runoff
- Reduced energy consumption and costs
- Expanded urban forest
- Provision of wildlife habitat and increased biodiversity
- Expanded recreation opportunities and beautification.

Overall, these strategies support redirecting growth away from high value habitat areas to existing urbanized areas. However, the Plan does not preclude development from occurring in these areas.

As described in Existing Setting, above, there are records of and/or habitat for 186 federally or state-listed wildlife species and 112 federally or state-listed plant species, 253 sensitive wildlife species, 925 locally important plant species, and over 5.5 million acres of designated critical habitat for 45 federally listed species in the region. The development of potential projects under the Plan, particularly projects involving large-scale ground disturbance during construction such as grade separation projects, mixed flow lane projects, and rail projects, may result in significant impacts to these species and their habitats. For example, transportation improvement projects in San Bernardino County are anticipated to cross known habitat for the federally threatened desert tortoise, and transportation improvement projects in Los Angeles, Orange, Riverside, and Ventura counties are anticipated to cross critical habitat for the coastal California gnatcatcher.

While the Plan may encourage development toward areas that are already disturbed through the emphasis on compact development and the strategies listed above, some growth and planned transportation projects are still anticipated in areas where sensitive species are located. As discussed in the Connect SoCal 2024 Land Use and Communities Technical Report, implementation of the Plan may lead to increased degraded habitat (including sensitive species) in some areas of the region, while other areas may see improved habitat (including sensitive species). See Table 3 in the Connect SoCal 2024 Land Use and Communities Technical Report for additional details. The level of impact to threatened and/or endangered species, fully protected and sensitive species, locally important species, or associated critical habitat will vary on a project-by-project basis. For example, grade separation projects or rail projects located in areas containing natural, previously undisturbed vegetation are anticipated to have a greater impact on threatened and/or endangered species, fully protected and sensitive species, locally important species, or associated critical habitat than a traffic signal synchronization or lane-restriping project located in an urban environment.

Implementation of the Plan is anticipated to result in direct impacts to various habitat types throughout the region through 2050, including amphibians, birds, mammals, reptiles, and threatened and endangered species. Such impacts would result in associated impacts on sensitive species.

NITROGEN DEPOSITION

As shown in Section 3.3, *Air Quality*, of this PEIR, all air quality management districts within the SCAG region are in attainment for NO_2. However, the Mojave Desert Air Basin, Salton Sea Air Basin, South Central Coast Air Basin, and South Coast Air Basin are all in non-attainment for ozone. ROG and NOx emissions are precursors to ozone; therefore, the air basins are reducing NOx emissions to reduce ozone and meet attainment. As a result, NOx emissions must continue to be reduced in the SCAG region to meet NAAQS attainment standards for ozone. As noted above, one of the technologies used to reduce NOx emissions from mobile sources (catalytic converters)

results in the production of NH_3 (ammonia gas), which in turn drives nitrogen deposition in urban areas near roadways. Therefore, while NOx may decrease in the region, NH_3 emissions are still produced by catalytic converters used by vehicles. NH_3 emissions, however, are expected to be reduced both with newer model cars and through the introduction of non-combustion engines. As total VMT increases, NH_3 emissions could continue to rise depending on the composition of the vehicle fleet. As stated above, currently, there are no state or national standards for NH_3 emissions. However, the SCAQMD regulates ammonia emissions through permit limits for stationary sources that install, replace, or modify their air pollution control equipment or combustion equipment to the extent that such equipment is subject to an ammonia emission limit as determined by source testing. Further, ammonia Continuous Emissions Monitoring Systems (CEMS) may be required to demonstrate compliance with an applicable SCAQMD ammonia emission permit limit.

Within the SCAG region, the increase in total VMT and construction of projects under the Plan could lead to an increase in nitrogen deposition that would be harmful to sensitive species and beneficial to some invasive plant species. As discussed in Section 3.17, *Transportation*, total daily VMT in 2050 would increase when compared to total daily VMT for existing conditions (2019). Unlike NOx, which is shown to decrease despite increasing total VMT, it is unclear whether NH_3 emissions and total deposited nitrogen have the potential to increase with total VMT due to variables such as engine type and age of car.

Nitrogen deposition impacts were quantified for Existing (2019), 2050 No Plan and 2050 Plan using air dispersion modeling tools and NOx and NH_3 emission factors from the California Air Resources Board's Emission Factor Model (EMFAC).[4] As there is no national or state standard for comparison and no state or local technical guidance on how to analyze nitrogen deposition impacts on biological resources and impacts on air quality under CEQA, nitrogen deposition results in Table 3.3-21, *Maximum Annual Nitrogen Deposition at Near-Freeway Sensitive Receptors*, in Section 3.3, *Air Quality*, are presented to demonstrate good faith efforts at full disclosure and to inform this discussion as well as the discussion of health effects. As shown on Table 3.3-21, the amount of nitrogen deposition is significantly reduced when compared to existing conditions.

The modeling predicts that NOx and NH_3 emissions will decrease over time and are proportional to VMT. However, vehicles with catalytic converters control and reduce NOx emissions but also produce NH_3 as a result. As more combustion engines are removed from the road and newer models with cleaner fuel technologies increase, including zero-emissions cars and trucks, it is expected that NH_3 emissions could decrease over the lifetime of the Plan. The Plan supports fleet changes through the inclusion of transportation strategies aimed at electric fleets and other emerging technologies. For example, LA Metro, the largest bus fleet in the region, is in the process of phasing out all combustion (gasoline and natural gas) buses from its fleet.

Emerging technologies vary when it comes to their effect on VMT and the removal of combustion engines, and the effect on NH_3 emissions. Some of these technologies, such as alternative fuel vehicles, micro-mobility, bikesharing and microtransit, have a mitigating influence on VMT and encourage fleet changes. Others, such as ride-hailing and automated vehicles, are expected to increase VMT if their business models do not adapt, but also have the potential to reduce NH_3 emissions, if not powered by combustion engines. Emerging technologies and transportation strategies are further complicated by new work-at-home and travel patterns as a result of COVID-19 pandemic. An increase in NH_3 emissions may occur due to increasing NOx-control-equipped vehicles; however,

[4] It was assumed that NOx emissions could produce additional NH_3 formation or other compounds that could directly result in nitrogen deposition.

the increasing percentage of ZEV vehicles and reduction of combustion engines on the road will likely result in a decrease in overall nitrogen deposition, but the overall effect is currently uncertain and speculative.

PLAN APPROACH TO HABITAT PROTECTION

There are numerous protected species in the SCAG region (see Tables 1 and 2 in Appendix C of this 2024 PEIR); it is not possible to determine which of these species may be impacted by specific projects. Rather, Connect SoCal 2024 policies and strategies take a multi-species benefit approach to conservation, intended to protect and enhance the SCAG region's high-level of biodiversity. Connect SoCal includes key conservation approaches for the species' survival, including habitat preservation, restoration, and connectivity.

Jurisdictions within the SCAG region are aiming to reduce habitat loss and increase connectivity. For example, Ventura County adopted the Habitat Connectivity and Wildlife Corridor project in March 2019. The project included the development of regulations and revisions to zoning ordinances (see Ventura County Ordinance Nos. 4537 and 4539) and general plan policies to address habitat loss and fragmentation resulting from urban growth. As discussed above, the Wallis Annenberg Wildlife Crossing over the 101 Freeway in the City of Agoura Hills is currently under construction with completion anticipated in 2024.

Furthermore, Connect SoCal 2024 includes the regional advance mitigation programs (RAMP) implementation strategy, as one of the strategies that support natural and agricultural lands preservation. California state law allows agencies to establish voluntary advanced mitigation programs in selected areas, providing an opportunity for infrastructure project lead agencies (such as County Transportation Commissions) to identify potential impacts early in the planning stages and work with regulatory agencies to reduce permitting costs, improve certainty and expedite project delivery. The RAMP enables SCAG to work with implementation agencies to support, establish, or supplement regional advanced mitigation programs for regionally significant transportation projects to help mitigate environmental impacts and reduce per-capita VMT. This allows state and federal agencies to consider the environmental impacts and mitigation needs of multiple planned infrastructure projects and urban development all at once—and satisfy those mitigation requirements early in the project-planning and environmental-review process.[5] See Connect SoCal 2024 Land Use and Communities Technical Report for more information.

CONCLUSION

This analysis of the Plan's impacts to sensitive plant and wildlife species and their habitats and designated critical habitat is at the programmatic level, and conservatively assumes that species with critical habitat and/or CNDDB records in a given area may be present in that area. However, the CNDDB record is also incomplete and may not show all sensitive species present in a given area and project-specific surveys may be required. The level of impact of subsequent projects would be subject to verification at the project-level of environmental review pursuant to CEQA. All projects within the SCAG region would be subject to the provisions of FESA and CESA, as well as Sections 1900–1913, 3511, 4150, 4700, 5050, 5515 of the California Fish and Game Code and Sections 80071–80075 of the State Food and Agriculture Code.

[5] Note that the RAMP was previously a mitigation measure in the Connect SoCal 2020 PEIR (SMM BIO-2). In this cycle, the RAMP has been elevated to a plan feature which reduces impacts. CEQA permits the incorporation of environmental considerations into the project design, thereby reducing environmental impacts and associated mitigation. See e.g., CEQA Guidelines 15070(b)(1) and CEQA Guidelines Appendix F: Energy Conservation. In the case of the adoption of a plan, policy, regulation or other public project, mitigation measures can be incorporated into the plan, policy, regulation, or project design (CEQA Guidelines 15126.4(a)(2)).

While the Plan would generally encourages new growth within PDAs it does not preclude growth in GRRAs. Given the scale of the region, plant species and wildlife in the region will continue to be affected. Therefore, the impact to threatened and/or endangered species, fully protected and sensitive species, locally important species, and/or associated critical habitat is considered significant and mitigation measures are required.

MITIGATION MEASURES

SCAG MITIGATION MEASURES

See **SMM-GEN-1**.

SMM-BIO-1 SCAG shall support research, programs, and policies that identify, protect, and restore natural habitat corridors and continue support for preserving wildlife corridors and wildlife crossings through information sharing, such as showcasing best practices and regional collaboration forums like SCAG's Natural and Farm Lands Conservation Working Group.

PROJECT-LEVEL MITIGATION MEASURES

PMM-BIO-1 In accordance with provisions of Sections 15091(a)(2) and 15126.4(a)(1)(B) of the CEQA Guidelines, a lead agency for a project can and should consider mitigation measures to reduce substantial adverse effects related to threatened and endangered species, and species that meet the definition of "rare" as defined in CEQA Guidelines Section 15380(b)(2). Such measures may include the following or other comparable measures identified by the lead agency:

a) Avoid occupied habitat and potentially suitable habitat for threatened, endangered, or rare species, as well as designated critical habitat in project design, wherever practicable and feasible.

   Where projects are determined to contain suitable habitat and may impact listed or sensitive species that have specific field survey protocols or guidelines outlined by the USFWS, CDFW, or other local agency, prior to construction, conduct preconstruction focused species surveys that follow applicable protocols and guidelines and are conducted by qualified and/or certified personnel. If sensitive plants or wildlife are present, identify and implement species-specific measures to avoid, minimize, and mitigate for potential impacts in consultation with USFWS or CDFW.

b) Where avoidance is determined to be infeasible for species protected under FESA, CESA, or local/regional species habitat conservation plan, provide conservation measures to result in no net loss of sensitive habitats and open space and fulfill the requirements of the applicable authorization for incidental take pursuant to Section 7 or 10(a) of the federal ESA, Section 2081 of the California ESA to support issuance of an incidental take permit, and/or as identified in local or regional plans. Conservation strategies to protect the survival and recovery of federally and state-listed endangered and local special-status species may include:

   i. Impact minimization strategies

   ii. Contribution of in-lieu fees for in-kind conservation and mitigation efforts

   iii. Use of in-kind mitigation bank credits

   iv. Funding of research and recovery efforts

   v. Habitat restoration

vi. Establishment of conservation easements

vii. Permanent dedication of in-kind habitat

c) Design projects to avoid desert native plants protected under the California Desert Native Plants Act, salvage and relocate desert native plants, and/or pay in lieu fees to support off-site long-term conservation strategies.

d) Temporary access roads and staging areas will not be located within areas containing sensitive plants, wildlife species or native habitat wherever feasible, so as to avoid or minimize impacts to these species

e) Develop and implement a Worker Environmental Awareness Program (environmental education) to inform project workers of their responsibilities to avoid and minimize impacts on sensitive biological resources.

f) Retain a qualified botanist to document the presence or absence of special status plants before project implementation.

g) Appoint a qualified biologist to monitor construction activities that may occur in or adjacent to occupied sensitive species' habitat to facilitate avoidance of resources not permitted for impact.

h) Appoint a qualified biologist to monitor implementation of mitigation measures.

i) Schedule construction activities to avoid sensitive times for biological resources (e.g., steelhead spawning periods during the winter and spring, nesting bird season) and to avoid the rainy season when erosion and sediment transport is increased.

j) Develop an invasive species control plan associated with project construction

k) If construction occurs during breeding seasons in or adjacent to suitable habitat, include appropriate sound attenuation measures required for sensitive avian species and other best management practices appropriate for potential local sensitive wildlife

l) Conduct pre-construction surveys to delineate occupied sensitive species' habitat to facilitate avoidance.

m) Project design should address the protection of habitat on both sides of a freeway to improve effectiveness of the crossings and may use alternatives to hydrocarbon-based asphalt paving to mitigate for potential hydrocarbon and heavy metal contamination.

LEVEL OF SIGNIFICANCE AFTER MITIGATION

As previously discussed, the Plan's Regional Planning Policies and Implementation Strategies (see Chapter 2, *Project Description*, and Section 3.0, *Introduction to the Analysis*) and compliance with existing laws and regulations would reduce impacts, but given the regional scale of the analysis in this 2024 PEIR, it is not possible or feasible to determine if all impacts would be fully mitigated. Therefore, this 2024 PEIR identifies SCAG and project-level mitigation measures. At the project-level, lead agencies can and should consider the identified project-level mitigation measures during subsequent review of transportation and land use projects as appropriate and feasible. While the mitigation measures will reduce the impacts related to sensitive species, due to the regional nature of the analysis, unknown site conditions and project-specific details, and SCAG's lack of land use authority over individual projects, SCAG finds that the impact could be ***significant and unavoidable*** even with mitigation.

IMPACT BIO-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 Wildlife or U.S. Fish and Wildlife Service.**

Significant and Unavoidable Impact – Mitigation Required

Implementation of the Plan would have a substantial adverse effect on riparian habitats and other sensitive natural communities. Plan policies and strategies seek to minimize the conversion of natural landscapes that may contain sensitive plant communities or riparian habitats by focusing new growth in PDAs and more walkable, mixed-use communities and minimizing development in GRRAs. Some jurisdictions in the region have taken steps toward planning comprehensively for conserving natural lands and farmlands, while also accommodating growth. Proposed natural lands conservation strategies described in the Plan are built upon the conservation framework and complements an infill-based approach. While implementation of Plan policies and strategies may guide transportation and urban land use projects toward areas that are already developed, the Plan does not preclude development in GRRAs and projects could occur in areas where riparian habitats or other sensitive natural communities are located. However, it should be noted that all projects within the SCAG region would be subject to the provisions of Section 1600 of the California Fish and Game Code in which a Lake or Streambed Alteration Agreement would need to be obtained prior to the alteration of a state jurisdictional area.

The level of impacts to riparian habitats and sensitive natural communities as a result of the Plan will differ on a project-by-project basis. For example, projects that have the potential to cross waterways or require conversion of natural open space to infrastructure, such as transit or rail projects, highway segment projects, land use development in open space areas, or have the potential to convert state-designated habitats including riparian habitats, would have the potential to have significant impacts on sensitive plant communities and riparian habitats. As described above, the Plan encourages growth within PDAs and minimizes development within GRRAs to support land conservation and allow the built environment and natural resource areas to coexist. Transportation projects that are contained within the alignments of existing transportation corridors, such as bike lane projects and traffic demand management measures, as well as land use development within existing urbanized areas would generally not be expected to have significant impacts on sensitive plant communities and riparian habitats. However, the Plan does not preclude development from occurring in GRRAs.

Of the over 20 million acres of open space in the SCAG region, 322,000 acres are currently identified by the CNDDB as containing state-sensitive plant communities, including 45 riparian and sensitive natural communities. Riparian habitats in the SCAG region may fall under the jurisdiction of the CDFW. It is important to note that mapping of sensitive habitats and sensitive natural communities within the region is incomplete and the likelihood of additional state-sensitive plant communities and riparian habitat to exist within the six-county region is high. Therefore, due to large-scale ground disturbance, including grade separation projects, mixed flow lane projects, and rail projects, and large residential subdivisions within the SCAG region, the Plan may result in significant impacts to these riparian habitats and sensitive plant communities.

According to SCAG SPM data, it is estimated that implementation of the Plan would result in the loss of active river area, as well as result in an increase of degraded watersheds and important riparian buffer area, and fewer acres of natural watershed catchment areas. It is also estimated that the Plan will result in the direct consumption of additional greenfield and natural lands compared to 2019 conditions (see Table 3 in the Connect SoCal 2024 Land Use and Communities Technical Report for additional details). Natural open space areas have a high potential

to contain sensitive plant communities and riparian habitats, and projects constructed in these areas would require individual field analysis at the project-level to determine the level of impacts.

Impacts associated with the conversion of sensitive and riparian habitats would include direct loss and fragmentation of sensitive communities and riparian habitats as projects are developed, temporal loss of habitat in temporary work areas, alteration of hydrology supporting these habitats, and the possible introduction of non-native plants that would degrade existing communities during construction, operation, and maintenance. Further, indirect impacts resulting from the development of transportation projects could include growth induced development of associated infrastructure to support population growth within surrounding areas which may impact sensitive plant communities and riparian habitats through the disturbance and removal of vegetation, alterations to supporting watersheds or changes (addition or removal) of up-stream water sources.

This analysis of impacts of the Plan to sensitive plant communities and riparian habitats is at the programmatic level, and conservatively assumes that all natural open space areas have the potential to contain sensitive plant communities and all waterways have the potential to contain riparian habitat. However, the existing data record is also incomplete and much more sensitive habitat is likely present in the region and project specific surveys may be required. The level of impact of subsequent projects would be subject to verification at the project-level of environmental review pursuant to CEQA.

Given the size and complexity of the region, the impact of the Plan relative to state-designated riparian and other sensitive plant communities, including areas subject to Section 1600 of the California Fish and Game Code is considered significant and mitigation measures are required.

MITIGATION MEASURES

SCAG MITIGATION MEASURES

See **SMM-GEN-1** and **SMM-BIO-1**.

PROJECT-LEVEL MITIGATION MEASURES

See **PMM-BIO-1**.

PMM-BIO-2 In accordance with provisions of Sections 15091(a)(2) and 15126.4(a)(1)(B) of the CEQA Guidelines, a lead agency for a project can and should consider mitigation measures to reduce substantial adverse effects related to riparian habitats and other sensitive natural communities. Such measures may include the following or other comparable measures identified by the lead agency:

a) Consult with the USFWS and NMFS where such state-designated sensitive or riparian habitats provide potential or occupied habitat for federally listed rare, threatened, and endangered species afforded protection pursuant to the federal ESA.

b) Consult with the USFS where such state-designated sensitive or riparian habitats provide potential or occupied habitat for federally listed rare, threatened, and endangered species afforded protection pursuant to the federal ESA and any additional species afforded protection by an adopted Forest Land Management Plan or Resource Management Plan for the four national forests in the six-county area: Angeles, Cleveland, Los Padres, and San Bernardino.

c) Consult with the CDFW where such state-designated sensitive or riparian habitats provide potential or occupied habitat for state-listed rare, threatened, and endangered species afforded protection pursuant to the California ESA, or Fully Protected Species afforded protection pursuant to the State Fish and Game Code.

d) Consult with the CDFW pursuant to the provisions of Section 1600 of the State Fish and Game Code as they relate to Lakes and Streambeds.

e) Consult with the USFWS, USFS, CDFW, and counties and cities in the SCAG region, where state-designated sensitive or riparian habitats are occupied by birds afforded protection pursuant to the MBTA during the breeding season.

f) Consult with the CDFW for state-designated sensitive or riparian habitats where furbearing mammals, afforded protection pursuant to the provisions of the State Fish and Game Code for fur-beaming mammals, are actively using the areas in conjunction with breeding activities.

g) Require project design to avoid sensitive natural communities and riparian habitats, wherever practicable and feasible. Where practicable and feasible, require upland buffers that sufficiently minimize impacts to riparian corridors.

h) Where avoidance is determined to be infeasible, develop sufficient conservation measures through coordination with local agencies and the regulatory agency (i.e., USFWS or CDFW) to protect sensitive natural communities and riparian habitats and develop appropriate compensatory mitigation, where required.

i) Appoint a qualified biologist to monitor construction activities that may occur in or adjacent to sensitive communities.

j) Appoint a qualified biologist to monitor implementation of mitigation measures.

k) Schedule construction activities to avoid sensitive times for biological resources and to avoid the rainy season when erosion and sediment transport is increased.

l) When construction activities require stream crossings, schedule work during dry conditions and use rubber-wheeled vehicles, when feasible. Have a qualified wetland scientist or regulatory specialist determine if potential project impacts require a Notification of Lake or Streambed Alteration to CDFW during the planning phase of projects.

m) Consult with local agencies, jurisdictions, and landowners where such state-designated sensitive or riparian habitats are afforded protection pursuant to an adopted regional conservation plan.

n) Install temporary construction fencing and/or mark sensitive habitat to be avoided during construction activities.

o) Salvage and stockpile topsoil (the surface material from 6 to 12 inches deep) and perennial native plants, when recommended by the qualified ecologist/biologist, for use in restoring native vegetation to areas of temporary disturbance within the project area. Salvage of soils containing invasive species, seeds and/or rhizomes will be avoided as identified by the qualified ecologist/biologist.

p) Revegetate with appropriate indigenous native vegetation following the completion of construction activities. as identified by the qualified ecologist/biologist.

q) Complete habitat enhancement (e.g., through removal of non-native invasive wetland species and replacement with more ecologically valuable native species).

r) Use Best Management Practices (BMPs) at construction sites to minimize erosion and sediment transport from the area. BMPs include encouraging growth of native vegetation in disturbed areas, using straw bales or other silt-catching devices, and using settling basins to minimize soil transport.

LEVEL OF SIGNIFICANCE AFTER MITIGATION

As previously discussed, the Plan's Regional Planning Policies and Implementation Strategies (see Chapter 2, *Project Description*, and Section 3.0, *Introduction to the Analysis*) and compliance with existing laws and regulations would reduce impacts, but given the regional scale of the analysis in this 2024 PEIR, it is not possible or feasible to determine if all impacts would be fully mitigated. Therefore, this 2024 PEIR identifies SCAG and project-level mitigation measures. At the project-level, lead agencies can and should consider the identified project-level mitigation measures during subsequent review of transportation and land use projects as appropriate and feasible. While the mitigation measures will reduce the impacts related to riparian habitats, due to the regional nature of the analysis, unknown site conditions and project-specific details, and SCAG's lack of land use authority over individual projects, SCAG finds that the impact could be ***significant and unavoidable*** even with mitigation.

IMPACT BIO-3 **Have a substantial adverse effect on state or federally protected wetlands (including but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.**

Significant and Unavoidable Impact – Mitigation Required

Implementation of the Plan would have a substantial adverse effect on wetlands. Policies and strategies in the Plan (e.g., compact growth, TSM, etc.) seek to minimize impacts to federally protected wetlands and waters of the United States as defined by Section 404 of the Clean Water by focusing new growth in PDAs and more walkable, mixed-use communities, while discouraging development in GRRAs including wetlands. Impacts would occur where dredge or fill would be required within wetlands or other waters of the United States, particularly where projects need to cross drainages where a clear span to avoid impacts is infeasible. There is potential for comparable significant impacts in areas subject to Section 10 of the Rivers and Harbors Act. The level of impacts to federally protected wetlands and waters of the United States would vary on a project-by-project basis. For example, grade separation projects or transit/rail projects located in areas containing coastal habitats or close to the terminal locations of major rivers or stream systems, where the width of the stream is often largest would be anticipated to have a greater impact on federally protected wetlands and waters of the United States than those located in the upstream portion of the watershed, near the headwaters where drainages are typically more numerous and narrower.

More than 1,000,000 acres of federally protected wetlands and waterways potentially subject to the jurisdiction of the USACE were identified by the National Wetlands Inventory to be present in the SCAG region. In addition, the SCAG region includes more than 80,000 linear miles of USGS blueline drainages that may contain waters of the United States.

While the Plan encourages projects in areas that are already developed, it does not preclude development in GRRAs and some new projects are still anticipated in areas where wetlands are located. All projects within the

SCAG region would be subject to the provisions of Section 404 of the Federal CWA. Dredge or fill in waters of the United States is subject to the regulatory authority of the USACE pursuant to Section 404 of the Federal CWA.

Similarly, potential project impacts to State protected wetlands under jurisdiction of the California Fish and Game Code Section1600 are required to obtain a lake or streambed alteration agreement (SAA) from CDFW prior to initiation of project construction. SAA conditions often include provisions for no net loss of protected wetlands through mitigation of preservation, enhancement, restoration or purchase of mitigation credits.

Potential impacts include disruption of streams and wetlands as new projects are developed, and dredge and fill activities associated with development, operation, and maintenance. According to SCAG SPM data, the Plan is anticipated to result in an overall reduction of wetland acreage in the region compared to 2019 conditions. Therefore, the impact of the Plan relative to federally protected wetlands and Waters of the United States is considered significant and mitigation measures are required.

MITIGATION MEASURES

SCAG MITIGATION MEASURES

See **SMM-GEN-1** and **SMM-BIO-1**.

PROJECT-LEVEL MITIGATION MEASURES

See **PMM-BIO-1** and **PMM-BIO-2**.

PMM-BIO-3 In accordance with provisions of Sections 15091(a)(2) and 15126.4(a)(1)(B) of the CEQA Guidelines, a lead agency for a project can and should consider mitigation measures to reduce substantial adverse effects related to wetlands. Such measures may include the following or other comparable measures identified by the lead agency.

a) Conduct an aquatic resources delineation by a qualified biologist or regulatory specialist to identify and map the extent of state and federally protected aquatic resources. Avoid state and federally protected aquatic resources in project design, consistent with the provisions of Sections 404 and 401 of the CWA and Section 1600 of Fish and Game Code, wherever practicable and feasible.

b) Where the lead agency has identified that a project, or other regionally significant project, has the potential to impact other wetlands or waters, such as those considered waters of the state of California under the State Wetland Definition and Procedures for Dischargers of Dredged or Fill Material to Waters of the State, not protected under Section 404 or 401 of the CWA, seek comparable coverage for these wetlands and waters in consultation with the SWRCB, applicable RWQCB, and CDFW.

c) Where avoidance of wetlands is determined to be infeasible, develop sufficient conservation measures to fulfill the requirements of the applicable authorization for impacts to federal and state protected aquatic resource to support issuance of a permit under Section 404 of the CWA as administered by the USACE or SAA by the CDFW. The use of an authorized Nationwide Permit or issuance of an individual permit requires the project applicant to demonstrate compliance with USACE's Final Compensatory Mitigation Rule or the CDFW SAA conditions. The USACE reviews projects to ensure environmental impacts to aquatic resources are avoided or minimized as much as feasible. Consistent with the administration's

performance standard of "no net loss of wetlands" a USACE permit may require a project proponent to restore, establish, enhance, or preserve other aquatic resources in order to replace those affected by the proposed project. This compensatory mitigation process seeks to replace the loss of existing aquatic resource functions and area. Project proponents required to complete mitigation are encouraged to use a watershed approach and watershed planning information. The new rule establishes performance standards, sets timeframes for decision making, and to the maximum extent feasible, establishes equivalent requirements and standards for the three sources of compensatory mitigation:

- Permittee-responsible mitigation
- Contribution of in-kind in-lieu fees
- Use of in-kind mitigation bank credits

d) Where avoidance is determined to be infeasible and proposed projects' impacts exceed an existing Nationwide Permit (NWP) and/or California SWRCB-certified NWP, the lead agency should provide USACE and SWRCB (where applicable) an alternative analysis consistent with the Least Environmentally Damaging Practicable Alternatives in this order of priorities:

- Avoidance
- Impact Minimization
- On-site alternatives
- Off-site alternatives

e) Require review of construction drawings by a certified wetland delineator as part of each project-specific environmental analysis to determine whether aquatic resources will be affected and, if necessary, perform formal wetland delineation.

LEVEL OF SIGNIFICANCE AFTER MITIGATION

As previously discussed, the Plan's Regional Planning Policies and Implementation Strategies (see Chapter 2, *Project Description*, and Section 3.0, *Introduction to the Analysis*) and compliance with existing laws and regulations would reduce impacts, but given the regional scale of the analysis in this 2024 PEIR, it is not possible or feasible to determine if all impacts would be fully mitigated. Therefore, this 2024 PEIR identifies SCAG and project-level mitigation measures. At the project-level, lead agencies can and should consider the identified project-level mitigation measures during subsequent review of transportation and land use projects as appropriate and feasible. While the mitigation measures will reduce the impacts related to a substantial adverse effect on State or Federally Protected Wetlands, due to the regional nature of the analysis, unknown site conditions and project-specific details, and SCAG's lack of land use authority over individual projects, SCAG finds that the impact could be ***significant and unavoidable*** even with mitigation.

IMPACT BIO-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.**

Significant and Unavoidable Impact – Mitigation Required

Implementation of the Plan would interfere substantially with the movement of 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 directly, as a result of habitat conversion to accommodate transportation projects and growth under the Plan, or indirectly through interruption of movement or migratory corridors caused by construction and operation of infrastructure for transportation projects and adjacent projects that may result from improved transportation access. According to SCAG's SPM data, the Plan would result in the consumption of natural lands, and the degradation of bird habitat. Indicators of wildlife movement are present across the SCAG region.

More than 23 million acres of natural open space in the region can be characterized as having the potential to be suitable for, or aid in, wildlife movement. Furthermore, many bird species breed and are expected to nest within the entire SCAG region, including urban areas. Within that open space is nearly 9.4 million acres of habitat blocks that support native wildlife biodiversity and a significant wildlife connectivity network. These large, intact blocks are connected by more than 4.5 million acres of corridors that are classified as highly beneficial to wildlife movement (CDFW, 2017).

Projects, particularly projects involving large-scale ground disturbance during construction such as grade separation projects, mixed flow lane projects, and rail projects, as well as large-scale land use development could result in significant impacts to the wildlife movement corridors and native wildlife nursery sites. Some projects may also have the potential to cross areas that currently support medium to high permeability for wildlife movement in Imperial, Los Angeles, Riverside, San Bernardino, and Ventura Counties.

These impacts include habitat removal and fragmentation that would disrupt wildlife corridor functionality as new projects are developed, and introduction of lighting and noise during construction and operation that may interrupt wildlife movement and disturb nursery and nesting sites. Construction, operation and maintenance of transportation and development projects across or adjacent to existing wildlife corridors could introduce new barriers to wildlife movement or increase the impact of barriers to wildlife movement by widening the barriers and thus narrowing the corridor. The linear nature of transportation projects increases the potential extent and significance of this effect. Additionally, an increase in wildlife-roadway conflicts as a result of development could increase wildlife injury and fatalities.

One of the goals of the Plan is to preserve, enhance, and restore regional wildlife connectivity through strategies that encourage compact urban development. SCAG's Regional Data Platform (RDP), a strategic web-based system for data sharing and planning, is designed to help cities, counties and transportation agencies make better land use and transportation infrastructure decisions and to engage with stakeholders for individual projects, such as local and regional land use planning, active transportation planning, greenhouse gas reduction strategies, and development impact assessments. In addition, the Plan's natural lands strategies will improve natural corridor connectivity by encouraging and facilitating research, programs and policies that identify, protect and restore natural habitat corridors, especially where corridors cross county boundaries. See also discussion of Plan Approach to Habitat Protection under Impact BIO-1 above.

Plan policies and strategies encourage the preservation and creation of wildlife corridors, which is a key consideration in cases where transportation or other related projects may interrupt the flow of wildlife or otherwise cause habitat fragmentation. An example project in the SCAG region, scheduled for completion in 2024, is the Wallis Annenberg Wildlife Crossing proposed for the 101 Freeway in the City of Agoura Hills. This project is the first of its kind in California. The crossing will cross ten lanes of US Highway 101 and an access road, with an estimated 210-foot long by 175-foot-wide structure to facilitate mountain lion and other wildlife movement across currently fragmented habitat regions (National Wildlife Federation/SaveLACougars. 2019).

Indirect impacts to migratory corridors and nursery sites would occur when the functionality of a corridor is degraded after construction of a transportation project and occasionally a land use project. The development of projects through migratory corridors and/or construction on existing transportation facilities that serve as barriers through wildlife corridors would result in an increase in human disturbances locally including an increase in traffic, noise, and lighting. New projects through or adjacent to open space or natural areas could also increase the risk and frequency of wildland fires that would further degrade ecosystem functions that support diverse wildlife populations and corridor function. These projects may also impact pollinator populations or behavior that could further impact local plant community stability and function and degrade existing habitat or the permeability of corridors. Further, indirect impacts resulting from demographic growth associated with these projects may impact wildlife corridors and nursery sites.

Potential impacts from implementation of the Plan may be heightened due to climate change. The changing climate is altering local ecosystems, causing increased stress on wildlife from changes in plant communities and their structure, decreasing pollinator populations, altering precipitation patterns, and many other factors that increase the risk of extinction for wildlife (Xerces Society 2023; Warren et al. 2010). In addition, the changing climate often results in conditions favorable to invasive species that further reduces the ecosystem functions necessary to support wildlife populations. Transportation corridors can act as conduits for invasive species and their adjacency to vehicle traffic can increase wildfire risk, further degrading communities and reducing wildlife corridor value.

In summary, given the scale and complexity of the region, the impact of the Plan relative to conversion of existing native nursery habitat and potential wildlife movement areas is considered significant and mitigation measures are required.

MITIGATION MEASURES

SCAG MITIGATION MEASURES

See **SMM-GEN-1**, **SMM-AG-1** through **SMM-AG-3**, **SMM-GHG-1**, **SMM-LU-3**, **SMM-WF-1**.

PROJECT-LEVEL MITIGATION MEASURES

See **PMM-BIO-1** through **PMM-BIO-3**.

PMM-BIO-4 In accordance with provisions of Sections 15091(a)(2) and 15126.4(a)(1)(B) of the CEQA Guidelines, a lead agency for a project can and should consider mitigation measures to reduce substantial

adverse effects related to wildlife movement. Such measures may include the following or other comparable measures identified by the lead agency:

a) Consult with the USFS where impacts to migratory wildlife corridors may occur in an area afforded protection by an adopted Forest Land Management Plan or Resource Management Plan for the four national forests in the six-County area: Angeles, Cleveland, Los Padres, and San Bernardino.

b) Consult with counties, cities, and other local organizations when impacts may occur to open space areas that have been designated as important for wildlife movement related to local ordinances or conservation plans.

c) Prohibit construction activities within 500 feet of occupied breeding areas for wildlife afforded protection pursuant to Title 14 Section 460 of the California Code of Regulations protecting fur-bearing mammals, during the breeding season.

d) Conduct a survey to identify active raptor and other migratory nongame bird nests by a qualified biologist at least two weeks before the start of construction at project sites from February 1 through August 31.

e) Prohibit construction activities with 300 feet of occupied nest of birds afforded protection pursuant to the Migratory Bird Treaty Act, during the breeding season.

f) Ensure that suitable nesting sites for migratory nongame native bird species protected under the Migratory Bird Treaty Act and/or trees with unoccupied raptor nests should only be removed prior to February 1, or following the nesting season.

g) When feasible and practicable, minimize impacts to wildlife movement and habitat connectivity and preserve existing and functional wildlife corridors in project design.

h) Conduct site-specific analyses of opportunities to preserve or improve habitat linkages with areas on- and off-site.

i) Long linear projects with the possibility of impacting wildlife movement should analyze habitat linkages/wildlife movement corridors on a broad scale to avoid critical narrow choke points that could reduce function of recognized movement corridor.

j) Review construction drawings and habitat connectivity mapping by a qualified biologist to determine the risk of habitat fragmentation.

k) Pursue mitigation banking to preserve habitat linkages and corridors (opportunities to purchase, maintain, and/or restore offsite habitat).

l) When practicable and feasible design projects to promote wildlife corridor redundancy by including multiple connections between habitat patches.

m) Evaluate the potential for installation of overpasses, underpasses, and culverts to create wildlife crossings in cases where a roadway or other transportation project may interrupt the flow of species through their habitat. Provide wildlife crossings in accordance with proven standards, such as FHWA's Critter Crossings or Ventura County Mitigation Guidelines and in consultation with wildlife corridor authorities.

n) Install directional wildlife fencing where appropriate to minimize the probability of wildlife injury due to direct interaction between wildlife and roads or construction.

o) Where avoidance is determined to be infeasible, design sufficient conservation measures through coordination with local agencies and the regulatory agency (i.e., USFWS or CDFW) and in accordance with the respective counties and cities general plans to establish plans to mitigate for the temporal or permanent loss of fish and wildlife movement corridors and/or wildlife nursery sites. The consideration of conservation measures may include the following measures, in addition to the measures outlined in PMM-BIO-1(b), where applicable:

- Wildlife movement buffer zones
- Corridor realignment
- Appropriately spaced breaks in center barriers
- Stream rerouting
- Culverts
- Creation of artificial movement corridors such as freeway under- or overpasses
- Acquire contiguous adjacent land parcels to be protected in perpetuity from encroachment and development
- Other comparable measures

p) Where the lead agency has identified that an RTP/SCS project, or other regionally significant project, has the potential to impact other open space or nursery site areas, seek comparable coverage for these areas in consultation with the USFWS, CDFW, NMFS, or other local jurisdictions.

q) Incorporate applicable and appropriate guidance (e.g., FHWA-HEP-16-059), as well as best management practices, to benefit pollinators with a focus on native plants.

r) Implement berms and sound/sight barriers at all wildlife crossings to encourage wildlife to utilize crossings. Sound and lighting should also be minimized in developed areas, particularly those that are adjacent to or go through natural habitats.

s) Reduce lighting impacts on sensitive species through implementation of mitigation measures such as but not limited to:

- Use high-pressure sodium and/or cut-off fixtures instead of typical mercury-vapor fixtures for outdoor lighting.
- Design exterior lighting to confine illumination to the project site.
- Provide structural and/or vegetative screening from light-sensitive uses.
- Use non-reflective glass or glass treated with a non-reflective coating for all exterior windows and glass used on building surfaces.
- Direct architectural lighting onto the building surfaces and have low reflectivity to minimize glare and limit light onto adjacent properties.

t) Reduce noise impacts to sensitive species through implementation of mitigation measures such as, but not limited to:

- Install temporary noise barriers during construction.

- Include permanent noise barriers and sound-attenuating features as part of the project design. Barriers could be in the form of outdoor barriers, sound walls, buildings, or earth berms to attenuate noise at adjacent sensitive uses.
- Provide structural and/or vegetative screening from light-sensitive uses.
- Ensure that construction equipment are properly maintained per manufacturers' specifications and fitted with the best available noise suppression devices (e.g., improved mufflers, equipment redesign, use of intake silencers, ducts, engine enclosures, and acoustically attenuating shields or shrouds silencers, wraps). All intake and exhaust ports on power equipment shall be muffled or shielded.
- Use hydraulically or electrically powered tools (e.g., jack hammers, pavement breakers, and rock drills) for project construction to avoid noise associated with compressed air exhaust from pneumatically powered tools. However, where use of pneumatic tools is unavoidable, an exhaust muffler on the compressed air exhaust should be used; this muffler can lower noise levels from the exhaust by up to about 10 dBA. External jackets on the tools themselves should be used, if such jackets are commercially available, and this could achieve a further reduction of 5 dBA. Quieter procedures should be used, such as drills rather than impact equipment, whenever such procedures are available and consistent with construction procedures.
- Using rubberized asphalt or "quiet pavement" to reduce road noise for new roadway segments, roadways in which widening or other modifications require re-pavement, or normal reconstruction of roadways where re-pavement is planned
- Use equipment and trucks with the best available noise control techniques (e.g., improved mufflers, equipment redesign, use of intake silencers, ducts, engine enclosures, and acoustically attenuating shields or shrouds, wherever feasible) for project construction.
- Use techniques such as grade separation, buffer zones, landscaped berms, dense plantings, sound walls, reduced-noise paving materials, and traffic calming measures.

u) Include large buffers between sensitive uses and freeways.

v) Create corridor redundancy to help retain functional connectivity and resilience.

w) To the extent practicable, avoid construction during dawn and dusk, when wildlife activity is highest.

y) If protected terrestrial wildlife enter work areas during construction, temporarily halt work to allow wildlife to move through the work area unharmed. A qualified biologist may relocate non-listed wildlife species out of the work area.

LEVEL OF SIGNIFICANCE AFTER MITIGATION

As previously discussed, the Plan's Regional Planning Policies and Implementation Strategies (see Chapter 2, *Project Description*, and Section 3.0, *Introduction to Analysis*) and compliance with existing laws and regulations would reduce impacts, but given the regional scale of the analysis in this 2024 PEIR, it is not possible or feasible to determine if all impacts would be fully mitigated. Therefore, this 2024 PEIR identifies SCAG and project-level mitigation measures. At the project-level, lead agencies can and should consider the identified project-level mitigation measures during subsequent review of transportation and land use projects as appropriate and feasible. While the mitigation measures will reduce the impacts related to wildlife movement, due to the regional nature of

the analysis, unknown site conditions and project-specific details, and SCAG's lack of land use authority over individual projects, SCAG finds that the impact could be ***significant and unavoidable*** even with mitigation.

IMPACT BIO-5 **Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.**

Significant and Unavoidable Impact – Mitigation Required

The Plan has the potential to conflict with local policies and ordinances related to biological resources. Conflicts may arise when projects included in the Plan, or growth that occurs as a result of the Plan, involve the disturbance or removal of trees or other vegetation protected under city or county ordinances. The following discussion relates to the potential for conflicts with various local policies or ordinances to result in physical impacts to sensitive species and other biological resources, including those applicable to tree preservation. It should be noted, however, that many local jurisdictions' tree preservation policies and ordinances are intended to address issues related to aesthetics and shading in urban areas rather than the protection of biological resources and associated impacts under CEQA.

The Plan encourages growth in PDAs and discourages growth in GRRAs, which supports a more compact development pattern and fewer conflicts with local policies or ordinances protecting biological resources. Nonetheless, impacts are expected to occur because many natural land areas near the edge of existing urbanized areas are vulnerable to development pressure, and transportation projects aimed to improve accessibility might require expansion in existing urbanized areas, or facilitate growth into urbanizing areas. Many urban areas have local ordinances to protect trees, as such the potential for conflicts with tree preservation policies exists not just in undeveloped area but can often occur in urban areas. As infill development increases, there may be pressure to develop on sites with protected trees. Similarly, as density increases, there may be pressure to develop more of a site, whereas previously a development project could have been planned around protected trees. Although many tree preservation ordinances require planting of new trees (i.e., at one to one or greater ratios) to replace the removed trees, smaller infill sites do not always have sufficient space to accommodate more or larger trees. As such, impacts could occur.

Except for Orange County, each county within the SCAG region has ordinances regulating the removal of native trees and plants. While Orange County does not have an adopted tree preservation ordinance in place, a draft tree preservation ordinance has been included as part of the County's "Orange is the New Green" Zoning Code Update that is currently underway (Orange County Department of Public Works 2018). Any conversion of land from open space or removal of protected trees or vegetation in these areas has the potential to conflict with local plans and ordinances. Applicable policies to protect biological resources are articulated in general plans for each county as well as the 191 cities. Many of the general plans in the SCAG region have additional provisions for protection of mature native and landscape trees and requirements for revegetation of landscaped areas using native plants. Each project would be subject to, and have the potential to conflict with, the policies and ordinances applicable to the local government with jurisdiction over the project location. As discussed in Section 3.2, *Agriculture and Forestry Resources*, transportation projects included in the Plan would occur within, and may result in impacts to, the Angeles National Forest and the San Bernardino National Forest and may conflict with the provisions of the Angeles Forest Plan and the San Bernardino National Forest Land Management Plan, respectively.

The level of impact related to conflicts with local policies and ordinances protecting biological resources will vary on a project-by-project basis. For example, grade separation projects, rail projects or land use development

located in areas with a high density of native trees protected by a local tree protection ordinance would be anticipated to have greater conflicts with local policies and ordinances protecting biological resources than a traffic signal synchronization or lane-restriping project located in an urban environment.

In summary, given the scale and complexity of the region, the impact of the Plan with respect to conflicts with local policies and ordinances protecting biological resources, is considered significant and mitigation measures are required.

MITIGATION MEASURES

SCAG MITIGATION MEASURES

See **SMM-GEN-1, SMM-BIO-1,** and **SMM-LU-3**.

PROJECT-LEVEL MITIGATION MEASURES

See **PMM-BIO-1** through **PMM-BIO-4**.

PMM-BIO-5 In accordance with provisions of Sections 15091(a)(2) and 15126.4(a)(1)(B) of the CEQA Guidelines, a lead agency for a project can and should consider mitigation measures to reduce conflicts with local policies and ordinances protecting biological resources. Such measures may include the following or other comparable measures identified by the lead agency.

a) Consult with the appropriate local agency responsible for the administration of the policy or ordinance protecting biological resources.

b) Prioritize retention of trees on-site consistent with local regulations. Provide adequate protection during the construction period for any trees that are to remain standing, as recommended by an International Society of Arboriculture (ISA) certified arborist.

c) If specific project area trees are designated as "Protected Trees," "Landmark Trees," or "Heritage Trees," obtain approval for encroachment or removals through the appropriate entity, and develop appropriate mitigation measures at that time, to ensure that the trees are replaced. Mitigation trees shall be locally sourced native species, as directed by a qualified biologist.

d) Appoint an ISA certified arborist to monitor construction activities that may occur in areas with trees designated as "Protected Trees," "Landmark Trees," or "Heritage Trees," to facilitate avoidance of resources not permitted for impact. Before the start of any clearing, excavation, construction or other work on the site, securely fence off every protected tree deemed to be potentially endangered by said site work. Keep such fences in place for duration of all such work. Clearly mark all trees to be removed.

e) Establish a scheme for the removal and disposal of logs, brush, earth, and other debris that will avoid injury to any protected tree. Where proposed development or other site work could encroach upon the protected perimeter of any protected tree, incorporate special measures to allow the roots to breathe and obtain water and nutrients. Minimize any excavation, cutting, filing, or compaction of the existing ground surface within the protected perimeter. Require that no change in existing ground level occur from the base of any protected tree at any time.

Require that no burning or use of equipment with an open flame occur near or within the protected perimeter of any protected tree.

f) No storage or dumping of oil, gas, chemicals, or other substances that may be harmful to trees to occur from the base of any protected trees, or any other location on the site from which such substances might enter the protected perimeter. No heavy construction equipment or construction materials to be operated or stored within a distance from the base of any protected trees. Wires, ropes, or other devices not to be attached to any protected tree, except as needed for support of the tree. Require that no sign, other than a tag showing the botanical classification, be attached to any protected tree.

g) Thoroughly spray the leaves of protected trees with water periodically during construction to prevent buildup of dust and other pollution that would inhibit leaf transpiration, as directed by the certified arborist.

h) If any damage to a protected tree should occur during or as a result of work on the site, the appropriate local agency will be immediately notified of such damage. If such tree cannot be preserved in a healthy state, as determined by the certified arborist, replace any tree removed with another tree or trees on the same site deemed adequate by the local agency to compensate for the loss of the tree that is removed. Remove all debris created as a result of any tree removal work from the property within two weeks of debris creation, and such debris shall be properly disposed of in accordance with all applicable laws, ordinances, and regulations. Design projects to avoid conflicts with local policies and ordinances protecting biological resources

i) Where avoidance is determined to be infeasible, develop sufficient conservation measures to fulfill the requirements of the applicable policy or ordinance, such as to support issuance of a tree removal permit. The consideration of conservation measures may include:

- Avoidance strategies
- Contribution of in-lieu fees
- Planting of replacement trees
- Re-landscaping areas with native vegetation post-construction
- Other comparable measures developed in consultation with local agency and certified arborist.

LEVEL OF SIGNIFICANCE AFTER MITIGATION

As previously discussed, the Plan's Regional Planning Policies and Implementation Strategies (see Chapter 2, *Project Description*, and Section 3.0, *Introduction to the Analysis*) and compliance with existing laws and regulations would reduce impacts, but given the regional scale of the analysis in this 2024 PEIR, it is not possible or feasible to determine if all impacts would be fully mitigated. Therefore, this 2024 PEIR identifies SCAG and project-level mitigation measures. At the project-level, lead agencies can and should consider the identified project-level mitigation measures during subsequent review of transportation and land use projects as appropriate and feasible. While the mitigation measures will reduce the impacts related to conflicts with local policies and ordinances protecting biological resources, due to the regional nature of the analysis, unknown site conditions and project-specific details, and SCAG's lack of land use authority over individual projects, SCAG finds that the impact could be ***significant and unavoidable*** even with mitigation.

IMPACT BIO-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.**

Significant and Unavoidable Impact – Mitigation Required

The Plan could conflict with the provisions of adopted HCPs and NCCPs in the region because construction or expansion of transportation facilities and urban land uses could occur within or adjacent to lands protected under these plans, constituting a significant impact. Plan policies and strategies seek to reduce conflicts with the provisions of adopted HCPs and NCCPs by focusing new growth in existing urban areas, suburban town centers, and urban areas which are conducive to more compact, densified, infill and mixed-used development. As noted in the Plan's Land Use and Communities Technical Report, Plan policies and strategies aim to de-emphasize growth in natural habitat areas and support redirecting growth away from GRRAs including high value habitat areas to these urbanized areas. Nevertheless, according to SCAG's SPM data, future 2050 conditions with the Plan are anticipated to result in an overall reduction in acres of SCAG Natural Lands Conservation Areas in the region compared to 2019 conditions.

Implementation of Plan projects within areas of adopted HCPs and NCCPs may result in significant impacts. Potential impacts include direct impacts to lands protected under these HCPs and NCCPs as well as potential direct and indirect impacts to plant and animal species and their habitats and connectivity of these habitats afforded protection under these HCPs and NCCPs through conversion of habitat, introduction of invasive species, habitat fragmentation, increased noise, introduction of lighting and noise during construction and operation. At least four HCPs and NCCPs located within the SCAG region contain known provisions for the construction of transportation projects as part of plan-covered activities. In this regard, these plans acknowledge that these types of projects normally result in significant impacts, and thus these plans specify the requirement for mitigation measures. These HCP/NCCPs (Coachella Valley MSHCP, Orange County Transportation Authority NCCP/HCP, West Mojave HCP, and Western Riverside County MSHCP) include considerations for the development of transportation projects as part of plan-covered activities and would be significantly impacted by transportation projects included in the Plan. Therefore, implementation of the Plan could result in impacts related to conflicts with the provisions of four adopted HCPs and NCCPs applicable to the SCAG region and may conflict with other plans. This impact is considered significant and mitigation measures are required.

MITIGATION MEASURES

SCAG MITIGATION MEASURES

See **SMM-GEN-1, SMM-BIO-1,** and **SMM-LU-3**.

PROJECT-LEVEL MITIGATION MEASURES

See **PMM-BIO-1** through **PMM-BIO-5**.

PMM-BIO-6 In accordance with provisions of Sections 15091(a)(2) and 15126.4(a)(1)(B) of the CEQA Guidelines, a lead agency for a project can and should consider mitigation measures to reduce substantial

adverse effects on HCPs and NCCPs. Such measures may include the following or other comparable measures identified by the lead agency:

a) Consult with the appropriate federal, state, and/or local agency responsible for the administration of HCPs or NCCPs.

b) Wherever practicable and feasible, the project shall be designed to avoid lands preserved under the conditions of an HCP or NCCP.

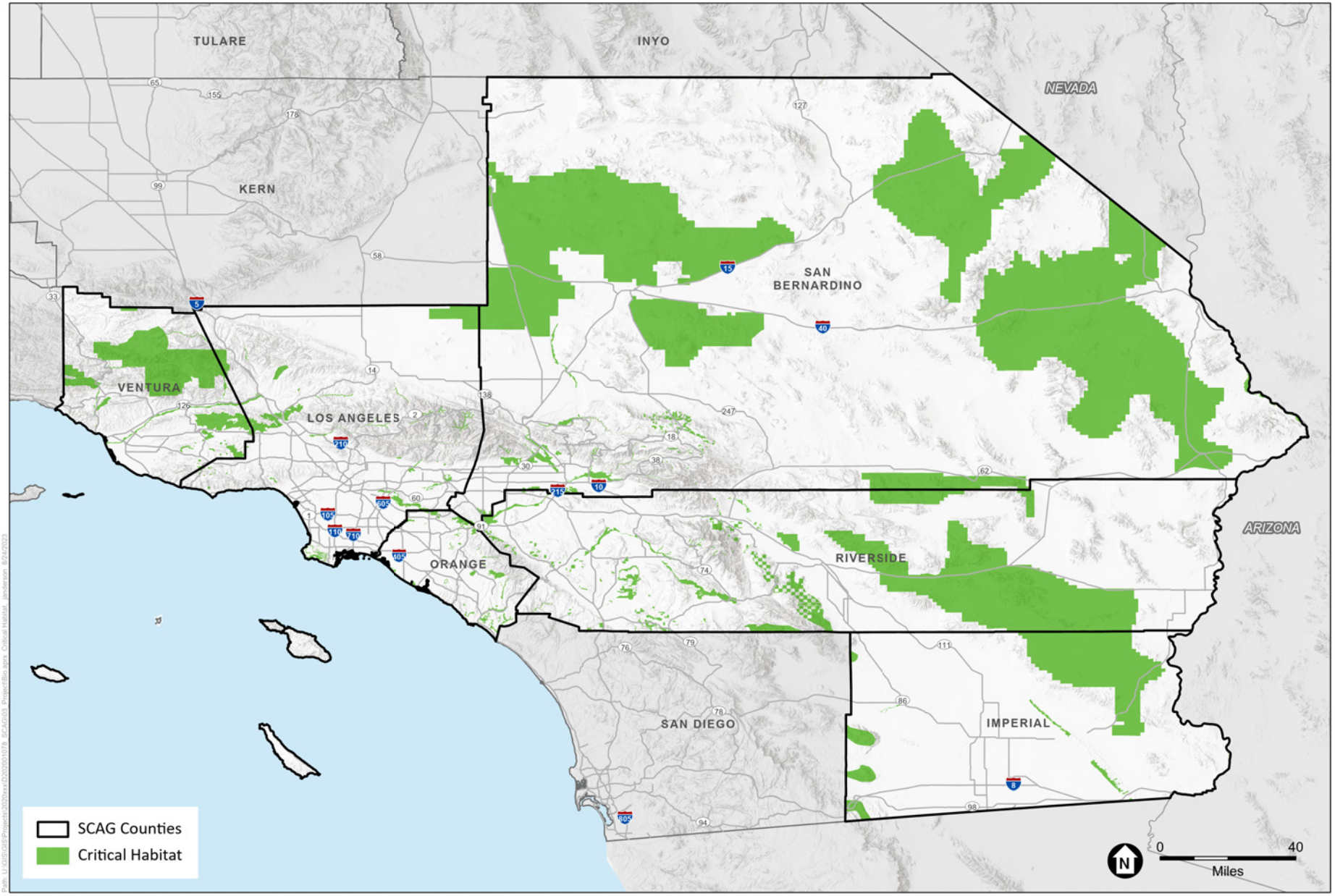
c) Where avoidance is determined to be infeasible, develop sufficient conservation measures to fulfill the requirements of the HCP and/or NCCP, which would include but not be limited to applicable authorization for incidental take pursuant to Section 7 or 10(a) of the federal Endangered Species Act and/or Section 2081(b) or 2080.1 of the California Fish and Game Code, to support issuance of an incidental take permit or any other permissions required for development within the HCP/NCCP boundaries. The consideration of additional conservation measures would include the measures outlined in SMM-BIO-2, where applicable.

LEVEL OF SIGNIFICANCE AFTER MITIGATION

As previously discussed, the Plan's Regional Planning Policies and Implementation Strategies (see Chapter 2, *Project Description*, and Section 3.0, *Introduction to the Analysis*) and compliance with existing laws and regulations would reduce impacts, but given the regional scale of the analysis in this 2024 PEIR, it is not possible or feasible to determine if all impacts would be fully mitigated. Therefore, this 2024 PEIR identifies SCAG and project-level mitigation measures. At the project-level, lead agencies can and should consider the identified project-level mitigation measures during subsequent review of transportation and land use projects as appropriate and feasible. While the mitigation measures will reduce the impacts related to HCPs and NCCPs, due to the regional nature of the analysis, unknown site conditions and project-specific details, and SCAG's lack of land use authority over individual projects, SCAG finds that the impact could be ***significant and unavoidable*** even with mitigation.

CUMULATIVE IMPACTS

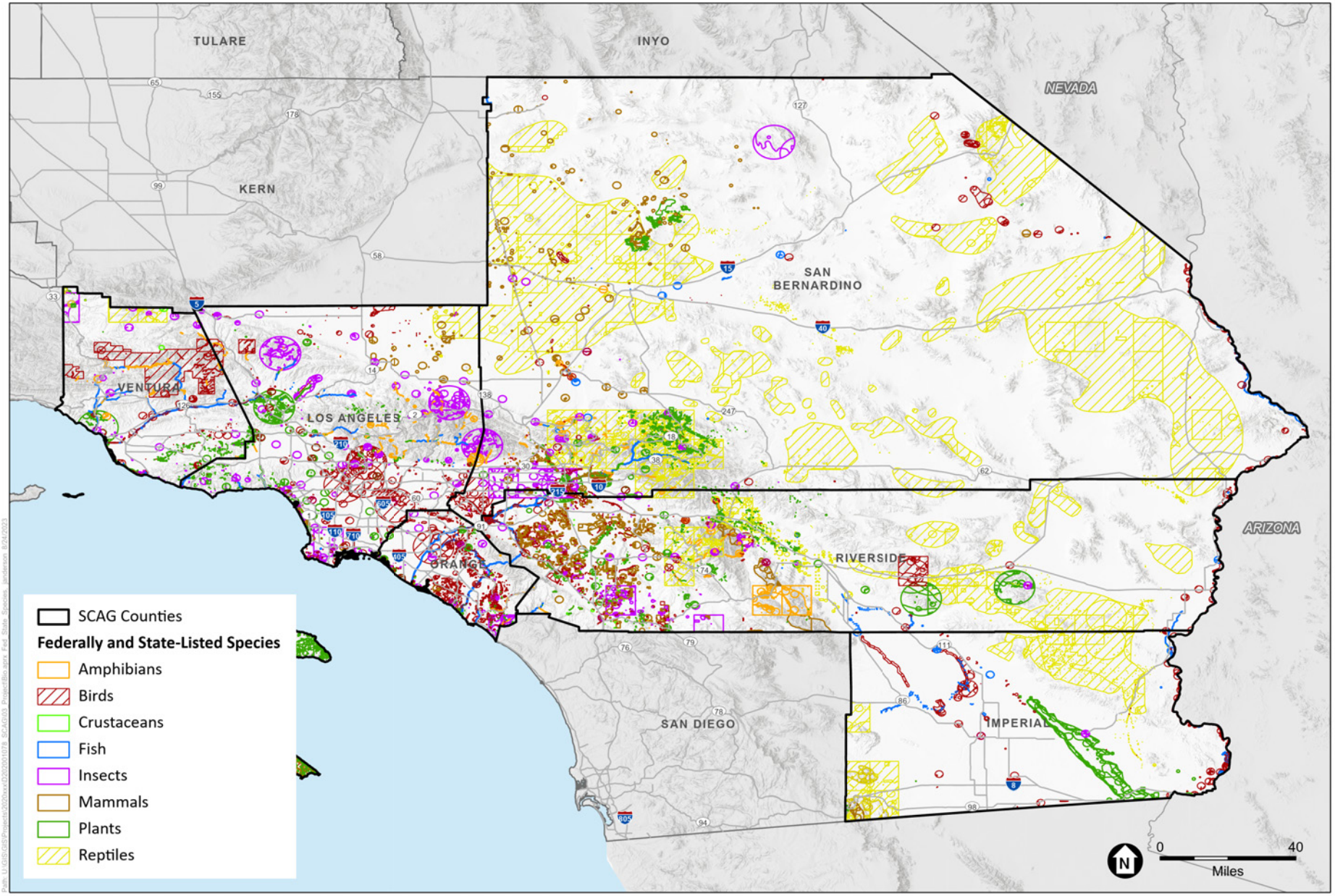
Connect SoCal 2024 is a regional-scale Plan comprised of a regional growth forecast and land use pattern, policies and strategies, and individual transportation projects and investments. At this regional-scale, a cumulative or related project to the Plan is another regional-scale plan (such as Air Quality Management Plans within the region) and similar regional plans for adjacent regions. Because the Plan, in and of itself, would result in significant adverse environmental impacts with respect to biological resources, including wildlife movement corridors, these impacts would add to the environmental impacts of other cumulative or related projects. Mitigation measures that reduce the Plan's impacts would similarly reduce the Plan's contribution to cumulative impacts.



SOURCE: ESA, 2022; USFWS, 2022

Connect SoCal 2024 PEIR

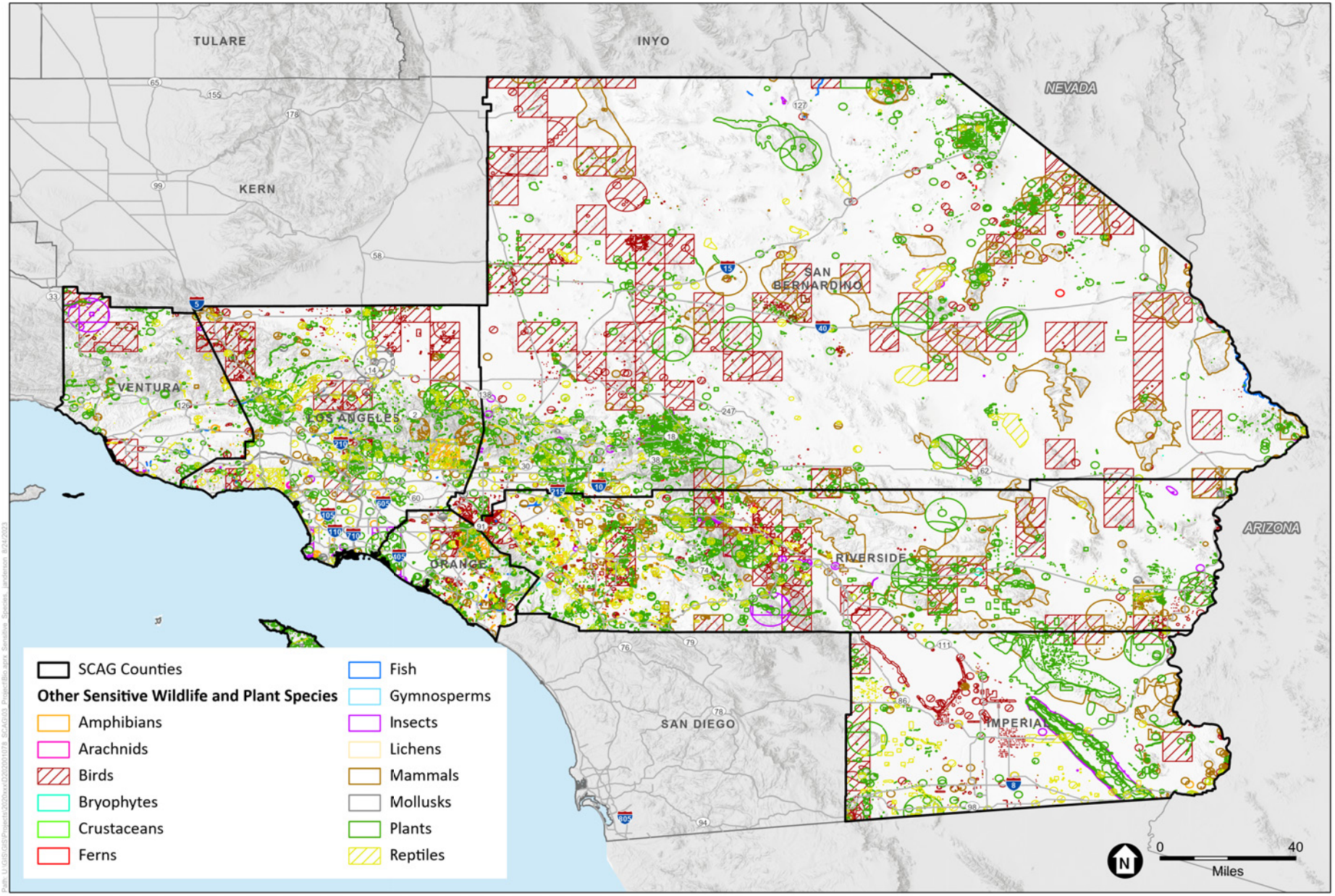
Map 3.4-1
Designated Critical Habitat in the SCAG Region



SOURCE: ESA, 2022; CDFW, 2022

Connect SoCal 2024 PEIR

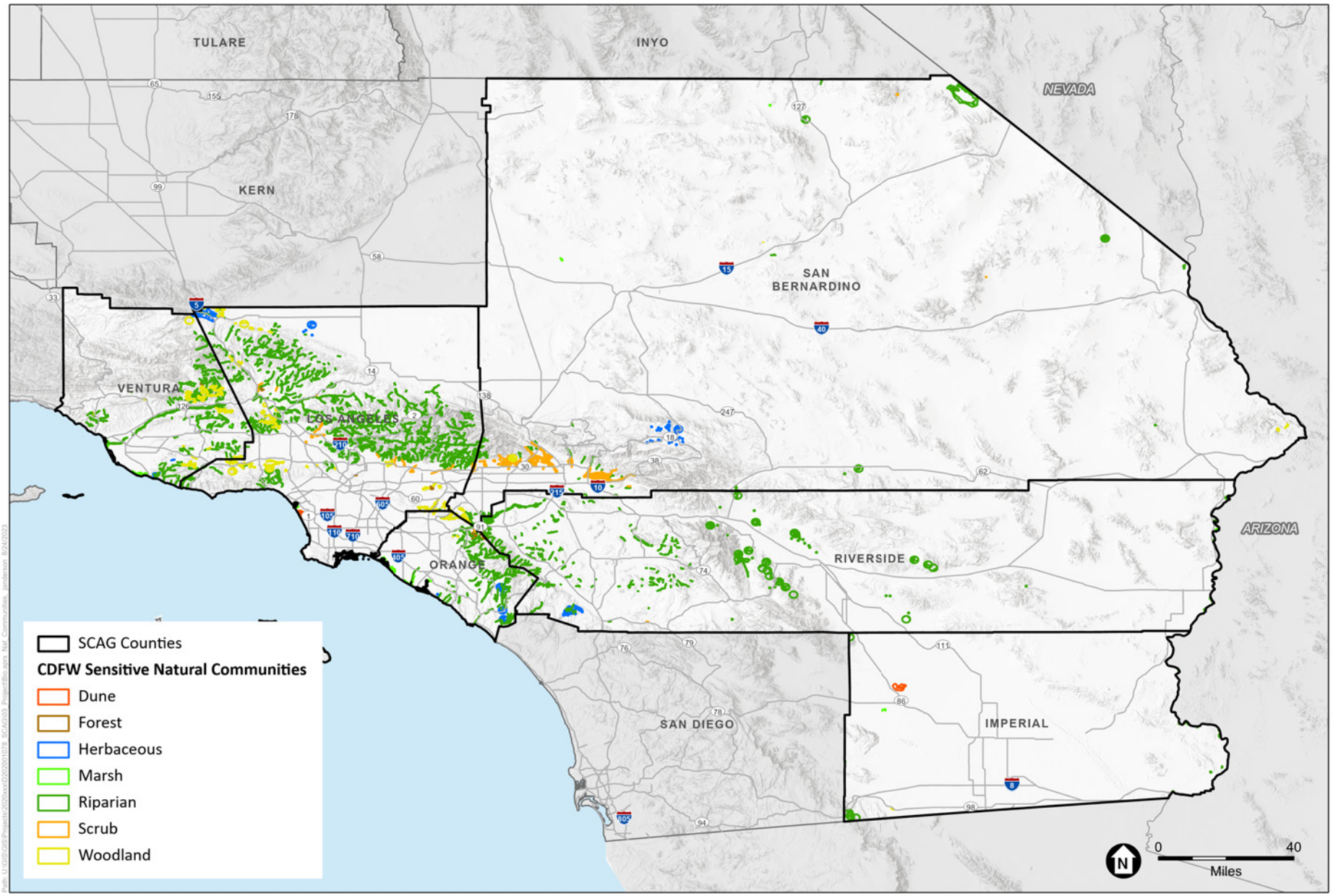
Map 3.4-2
Federally and/or State-Listed Species Reported in the SCAG Region



SOURCE: ESA, 2022, CDFW, 2022.

Connect SoCal 2024 PEIR

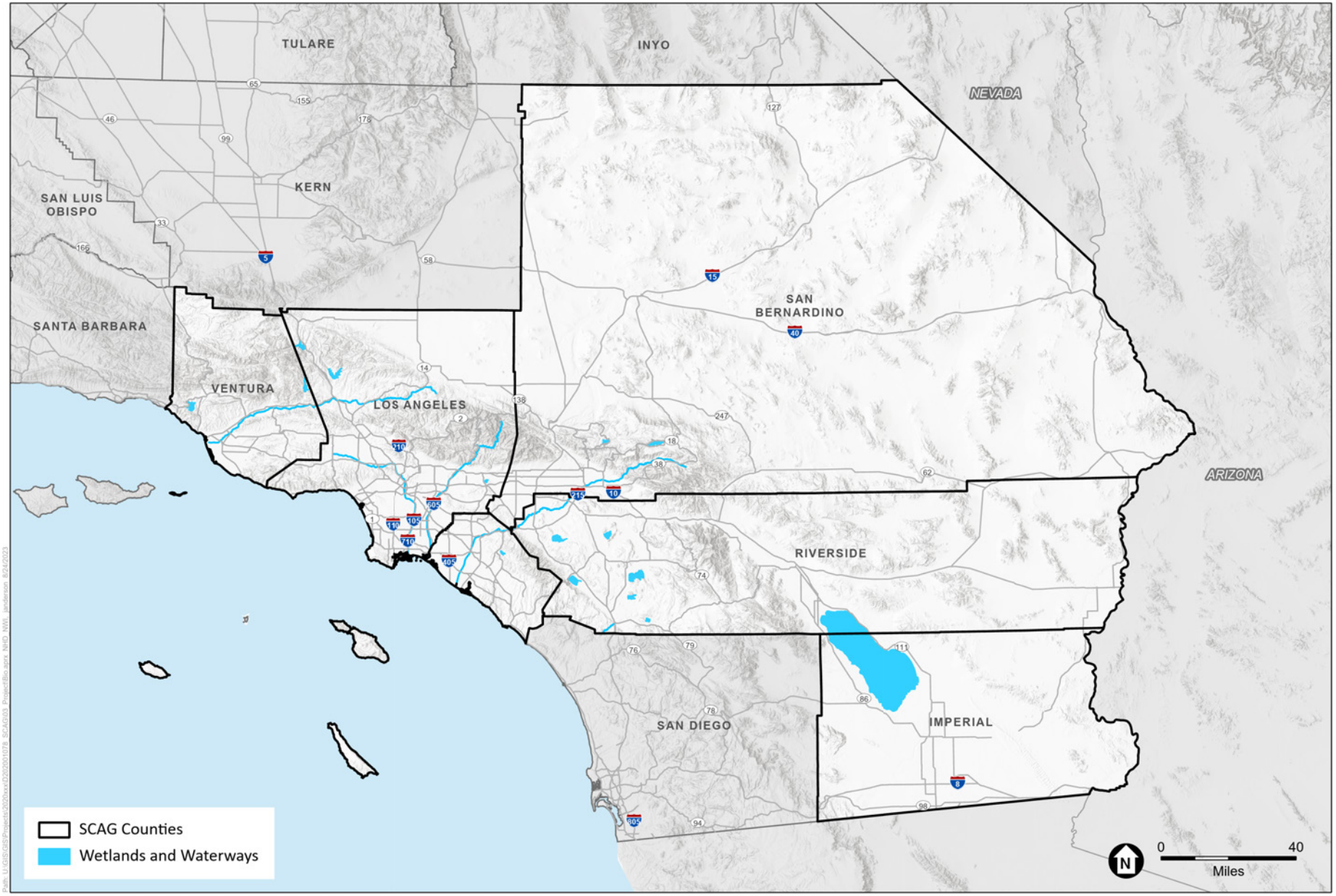
Map 3.4-3
Other Sensitive Species Reported in SCAG Region



SOURCE: ESA, 2022; CDFW, 2022

Connect SoCal 2024 PEIR

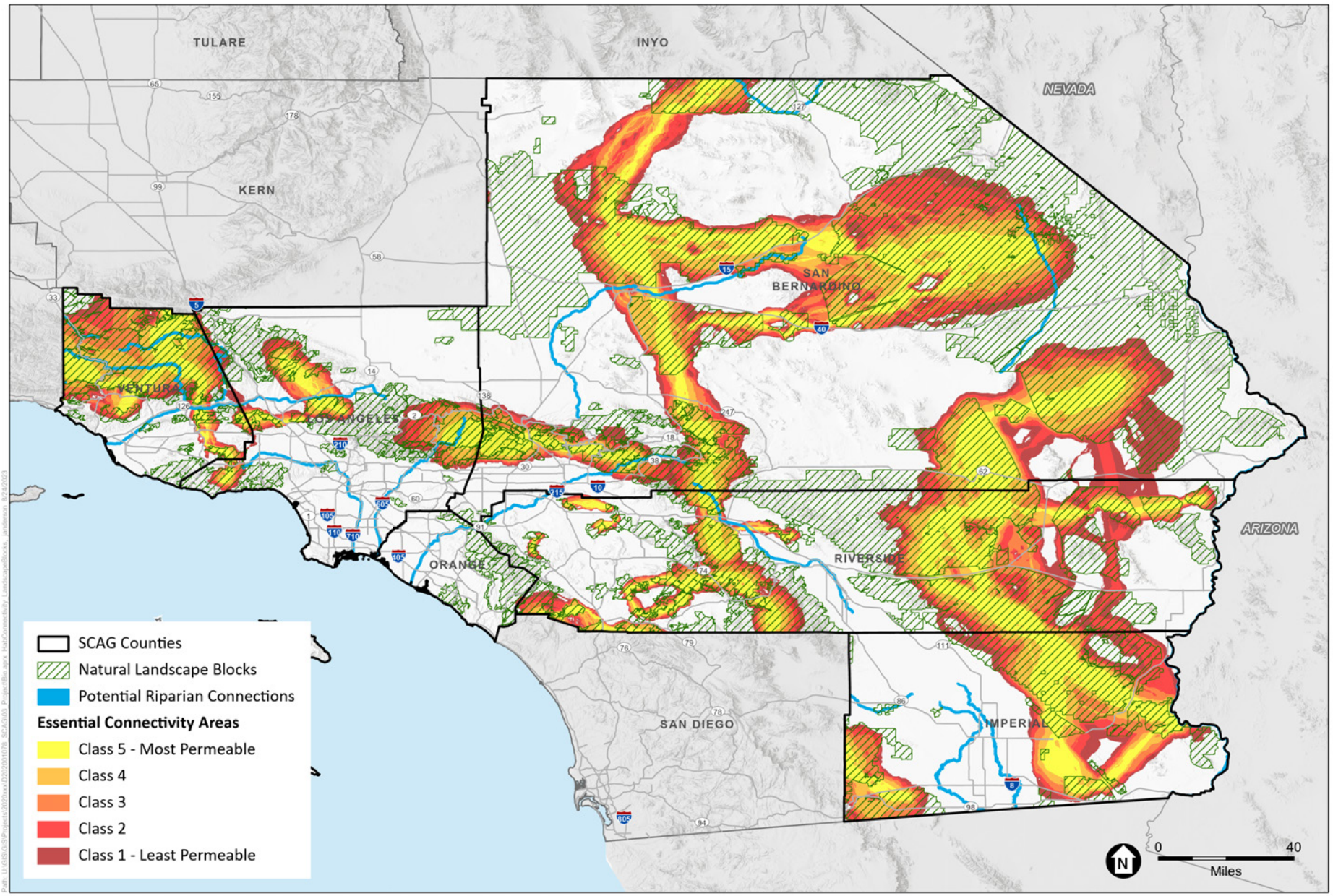
Map 3.4-4
CDFW Sensitive Natural Communities Reported in the SCAG Region



SOURCE: ESA, 2022; NHD, 2022; NWI, 2022

Connect SoCal 2024 PEIR

Map 3.4-5
Wetlands and Waterways Reported in SCAG Region



SOURCE: ESA, 2022; CDFW, 2003; CDFW, 2010; CDFW, 2022

Connect SoCal 2024 PEIR

Map 3.4-6

Essential Habitat Connectivity and Natural Landscape Blocks within the SCAG Region

3.4.4 SOURCES

Benson, J.F., P.J. Mahoney, J.A. Sikich, L.E.K. Serieys, J.P. Pollinger, H.B. Ernest, and S.P.D. Riley. 2016. Interactions between demography, genetics, and landscape connectivity increase extinction probability for a small population of large carnivores in a major metropolitan area. *Proceedings of the Royal Society B: Biological Science* 283(1837), 20160957.

Benson, J. F., P.J. Mahoney, T.W. Vickers, J.A. Sikich, P. Beier, S.P.D. Riley, and W. M. Boyce. 2019. Extinction vortex dynamics of top predators isolated by urbanization. *Ecological Applications* 0(0), e01868.

California Code of Regulations. Title 14, Division 1 (Subdivision 2), Chapter 5: Furbearing Mammals.

California Department of Fish and Wildlife (CDFW). 2003. Potential Riparian Connections dataset – California Essential Habitat Connectivity (CEHC), Sacramento, CA. https://map.dfg.ca.gov/metadata/ds0622.html?5.108.311. Accessed December 27, 2022.

CDFW. 2017. Natural Landscape Blocks dataset – California Essential Habitat Connectivity (CEHC), Sacramento, CA. https://map.dfg.ca.gov/metadata/ds0621.html?5.77.14. Accessed December 27, 2022.

CDFW. 2015. California State Wildlife Action Plan 2015 Update: A Conservation Legacy for Californians. https://www.wildlife.ca.gov/SWAP/Final. Accessed December 21, 2022.

CDFW. 2022. CNDDB QuickView Tool in BIOS. BIOS. https://apps.wildlife.ca.gov/bios/. Accessed December 14, 2022.

CDFW. 2023a. Natural Community Conservation Planning (NCCP). https://www.wildlife.ca.gov/Conservation/Planning/NCCP, accused July 5, 2023.

CDFW. 2023b. California Natural Diversity Database. https://www.wildlife.ca.gov/Data/CNDDB. Accessed July 12, 2023.

CDFW. 2023c. Natural Communities. Sacramento, CA. https://www.wildlife.ca.gov/Data/VegCAMP/Natural-Communities, accessed July 17, 2023.

CDFW. 2023d. Lake and Streambed Alteration Program. https://www.wildlife.ca.gov/Conservation/LSA. Accessed July 13, 2023.

CDFW. 2023e. Threatened and Endangered Species. https://wildlife.ca.gov/Conservation/CESA. Accessed July 13, 2023.

CDFW. 2023f. California Desert Native Plants Act. https://www.wildlife.ca.gov/Conservation/Plants/CA-Desert-Plant-Act. Accessed July 13, 2023.

CDFW. 2023g. Western Joshua Tree Conservation Efforts and Permitting. https://wildlife.ca.gov/Conservation/Environmental-Review/WJT#act-summary. Accessed August 8, 2023.

CDFW. 2023h. Regional Conservation Investment Strategies Program. https://wildlife.ca.gov/conservation/planning/regional-conservation. Accessed August 8, 2023.

California Fish and Game Code. Division 1, Chapter 2, Article 1. Authority [200–219].

California Fish and Game Code. Division 2, Chapter 10: Native Plant Protection [1900–1913].

California Fish and Game Code. Division 4, Chapter 1.5, Article 3: Taking, Importation, Exportation, or Sale [2080–2085].

California Fish and Game Code. Division 4, Part 2, Chapter 1: General Provisions [3500–3516].

California Fish and Game Code. Division 4, Part 3, Chapter 2, Article 1: Trapping Provisions [4000–4012].

California Fish and Game Code. Division 4, Part 3, Chapter 8: Fully Protected Mammals [4700–4700].

California Fish and Game Code. Division 5, Chapter 2: Fully Protected Reptiles and Amphibians [5050–5050.].

California Fish and Game Code. Division 6, Part 1, Chapter 1: Miscellaneous [5500–5523].

California Native Plant Society (CNPS). 2023. Welcome to the Inventory of Rare and Endangered Plants of California. http://www.rareplants.cnps.org/. Accessed July 12, 2023.

California Public Resources Code. 2023. Division 20. California Coastal Act, as amended.

Ernest, H.B., W.M. Boyce, V.C. Bleich, B. May, S.J. Stiver, S.G. Torres. 2003. Genetic structure of mountain lion (*Puma concolor*) populations in California. *Conservation Genetics* 353–366.

Ernest, H.B., T.W. Vickers, S.A. Morrison, M.R. Buchalski, W.M. Boyce. 2014. Fractured genetic connectivity threatens a Southern California puma (*Puma concolor*) population. *PLoS One* 9: https://doi.org/10.1371/journal.pone.0107985.

Federal Register. 1999. Executive Order 13112 of February 3, 1999. https://www.govinfo.gov/content/pkg/FR-1999-02-08/pdf/99-3184.pdf. Accessed July 12, 2023.

Federal Register. 2008. Notices. 73(98): 29075–84. May.

Fenn, M.E., Bytnerowicz, A., Schilling, S.L., Vallano. D.M., Zavaleta, E.S., Weiss, S.B., Morozumi, C., Geiser, L.H., Hanks, K., 2018. On-road emissions of ammonia: An underappreciated source of atmospheric nitrogen deposition. *Science of The Total Environment*, Volume 625, 1 June 2018, Pages 909-919. https://www.sciencedirect.com/science/article/abs/pii/S0048969717337464. Accessed August 10, 2023.

Ustafson, K.D., R.B. Gagne, T.W. Vickers, S.P.D. Riley, C.C. Wilmers, V.C. Bleich, and H.B. Ernest. 2018. Genetic source–sink dynamics among naturally structured and anthropogenically fragmented puma populations. *Conservation Genetics*, 20(2), 215–227.

Imperial County Planning and Development Services. 2016. Imperial County General Plan: Conservation and Open Space Element. March 8, 2016. https://www.icpds.com/assets/planning/conservation-open-space-element-2016.pdf#:~:text=The%20Conservation%20and%20Open%20Space%20Element%20applies%20to,and%20supportive%20of%20complementary%20plans%20of%20incorporated%20areas.

Los Angeles City Planning. 2022. Wildlife Pilot Study. https://planning.lacity.org/plans-policies/wildlife-pilot-study#draft-ordinance. Accessed January 11, 2023.

Los Angeles County Department of Regional Planning. 2022. Los Angeles County General Plan: Chapter 9: Conservation and Natural Resources Element. https://planning.lacounty.gov/wp-content/uploads/2022/11/9.0_gp_final-general-plan-ch9.pdf.

Los Angeles Times. 2023. The Mojave Desert is burning in California's biggest fire of year, torching Joshua trees. https://www.latimes.com/california/story/2023-07-31/york-fire-in-mojave-desert-grows-to-77000-acres. Accessed August 8, 2023.

Mattoni, R., G. F. Pratt, T. R. Longcore, J. F. Emmel, and J. N. George. 1997. The endangered quino checkerspot butterfly, *Euphydryas editha quino* (Lepidoptera: Nymphalidae). *Journal of Research on the Lepidoptera* 34:99–118.

National Atmospheric Deposition Program. 2023a. Ammonia Monitoring Network (AMoN). http://nadp.slh.wisc.edu/amon/.

National Atmospheric Deposition Program. 2023b. Ammonia Monitoring Network (AMoN). http://nadp.slh.wisc.edu/amon/.

National Park Service (NPS). 2023a. Studying Reactive Nitrogen Deposition. https://www.nps.gov/articles/cave_n_study.htm.

NPS. 2023b. Studying Reactive Nitrogen Deposition. https://www.nps.gov/articles/cave_n_study.htm.

National Wildlife Federation/SaveLACougars. 2019. https://savelacougars.org/. Accessed November 22, 2019.

Orange County Department of Public Works. 2018. Orange Is The New Green - Zoning Code Update, Draft "Tree Preservation Ordinance," Subarticle 4, Section 7-9-69. https://ocds.ocpublicworks.com/service-areas/oc-development-services/planning-development/current-projects/all-districts-3. Accessed August 11, 2023.

Orange County Land Use Planning and Subdivision Services. 2013. Orange County General Plan 2005: Chapter 6: Resources Element. p. VI-32. https://ocds.ocpublicworks.com/sites/ocpwocds/files/import/data/files/40235.pdf. Accessed July 13, 2023.

Pardo, L.H. 2010. USDA. *Assessment of Nitrogen Deposition Effects and Empirical Critical Loads of Nitrogen for Ecoregions of the United States*. https://www.nrs.fs.fed.us/pubs/gtr/gtr_nrs80.pdf.

Riley, S.P.D., L.E.K. Serieys, J.P. Pollinger, J.A. Sikich, L. Dalbeck, R.K. Wayne, and H.B. Ernest. 2014. Individual behaviors dominate the dynamics of an urban mountain lion population isolated by roads. *Current Biology* 24(17), 1989–1994.

Sawyer, J.O., T. Keeler-Wolf, and J. M. Evens. 2009. *A Manual of California Vegetation, Second Edition*. California Native Plant Society, Sacramento, CA.

Science News. 2016. Study finds wide-reaching impact of nitrogen deposition on plants. https://www.sciencedaily.com/releases/2016/03/160330174216.htm.

Smith, J.A., J.P. Suraci, M. Clinchy, A. Crawford, D. Roberts, L.Y. Zanette, and C.C. Wilmers. 2017. Fear of the human 'super predator' reduces feeding time in large carnivores. *Proceedings of the Royal Society B: Biological Science* 284: 20170433. http://dx.doi.org/10.1098/rspb.2017.0433.

Spencer, W.D., P. Beier, K. Penrod, K. Winters, C. Paulman, H. Rustigian-Romsos, J. Strittholt, M. Parisi, and A. Pettler. 2010. California Essential Habitat Connectivity Project: A Strategy for Conserving a Connected California. Prepared for California Department of Transportation, California Department of Fish and Game, and Federal Highways Administration.

State Water Resources Control Board (SWRCB). 2023. Porter-Cologne Water Quality Control Act. https://www.waterboards.ca.gov/laws_regulations/docs/portercologne.pdf.

U.S. Army Corps of Engineers (USACE). 1987. Corps of Engineers Wetland Delineation Manual. Vicksburg, MS. http://www.cpe.rutgers.edu/Wetlands/1987-Army-Corps-Wetlands-Delineation-Manual.pdf.

U.S. Department of Agriculture (USDA). 2007. General Technical Report WO- 76B. January 2007. United States Department of Agriculture, Forest Service. Washington, DC. https://www.fs.usda.gov/research/publications/misc/73327-wo-gtr-76b-mcnab2007.pdf.

U.S. Environmental Protection Agency (USEPA). 1977. Protection of Wetlands (Executive Order 11990). https://www.epa.gov/cwa-404/protection-wetlands-executive-order-11990. Accessed July 12, 2023.

USEPA. 2019a. Section 10 of the Rivers and Harbors Appropriation Act of 1899. https://www.epa.gov/cwa-404/section-10-rivers-and-harbors-appropriation-act-1899. Accessed July 12, 2023.

USEPA. 2019b. Summary of the National Environmental Policy Act. https://www.epa.gov/laws-regulations/summary-national-environmental-policy-act. Accessed July 12, 2023.

USEPA. 2022a. Revising the Definition of "Waters of the United States": Final Revised Definition of "Water of the United States." https://www.epa.gov/wotus/revising-definition-waters-united-states. Accessed January 4, 2023.

USEPA. 2022b. Summary of the Marine Protection, Research, and Sanctuaries Act. https://www.epa.gov/laws-regulations/summary-marine-protection-research-and-sanctuaries-act. Accessed December 21, 2022.

USEPA. 2023a. Clean Water Act Section 401: Overview of CWA Section 401 Certification. https://www.epa.gov/cwa-401/overview-cwa-section-401-certification. Accessed July 12, 2023.

USEPA. 2023b. *EnviroAtlas Fact Sheet: Total Annual Nitrogen Deposition*. https://enviroatlas.epa.gov/enviroatlas/DataFactSheets/pdf/ESN/TotalAnnualNitrogenDeposition.pdf.

USEPA. 2023c. *EnviroAtlas Fact Sheet: Total Annual Oxidized Nitrogen Deposition*. https://enviroatlas.epa.gov/enviroatlas/DataFactSheets/pdf/ESN/TotalAnnualOxidizedNitrogenDeposition.pdf.

USEPA. 2023d. *EnviroAtlas Fact Sheet: Total Annual Reduce Nitrogen Deposition*. https://enviroatlas.epa.gov/enviroatlas/DataFactSheets/pdf/ESN/TotalAnnualReducedNitrogenDeposition.pdf.

USEPA. 2023e. Final Rule: The Navigable Waters Protection Rule. https://www.epa.gov/wotus/final-rule-navigable-waters-protection-rule#:~:text=The%20final%20%22Revised%20Definition%20of,of%20the%20rule%20and%20litigation. Accessed August 9, 2023.

USEPA. 2023f. Overview of Clean Water Act Section 404. https://www.epa.gov/cwa-404/overview-clean-water-act-section-404. Accessed July 12, 2023.

USEPA. 2023g. Progress Report: Acid Deposition. https://www3.epa.gov/airmarkets/progress/reports/acid_deposition_figures.html#figure3.

U.S. Fish and Wildlife Service (USFWS). 1934. Fish and Wildlife Coordination Act. https://www.govinfo.gov/content/pkg/COMPS-3003/pdf/COMPS-3003.pdf.

USFWS. 1973. Endangered Species Act of 1973. https://www.epa.gov/laws-regulations/summary-endangered-species-act. Accessed July 17, 2023.

USFWS. 2007. National Bald Eagle Management Guidelines. May. https://fws.gov/media/national-bald-eagle-management-guidelines. Accessed July 12, 2023.

USFWS. 2022. Environmental Conservation Online System (ECOS): USFWS Threatened & Endangered Species Active Critical Habitat Report. https://ecos.fws.gov/ecp/report/table/critical-habitat.html. Accessed December 21, 2022.

USFWS. 2022c. Marine Mammal Protection Act. https://www.fws.gov/international/laws-treaties-agreements/us-conservation-laws/marine-mammal-protection-act.html. Accessed December 21, 2022.

USFWS. 2022b. Migratory Bird Treaty Act. https://www.fws.gov/law/migratory-bird-treaty-act-1918. Accessed December 21, 2022.

USFWS. 2023. Critical Habitat under the Endangered Species Act. https://www.fws.gov/southeast/endangered-species-act/critical-habitat/. Accessed July 12, 2023.

USFWS. 2023d. State Wildlife Grants. https://www.fws.gov/library/collections/state-wildlife-grants-swg#:~:text=Established%20in%202000%2C%20State%20Wildlife%20Grants%20provide%20money,conservation%20need%20identified%20in%20State%20Wildlife%20Action%20Plans. Accessed July 13, 2023.

USFWS. 2023c. National Wetlands Inventory Map. https://www.fws.gov/wetlands/data/Mapper.html. Accessed July 17, 2023.

USFWS. 2023a. Endangered Species. https://www.fws.gov/endangered/. Accessed July 12, 2023.

USFWS. 2023a. Press Release: Service seeks public comment on California spotted Owl Endangered Species Act listing proposal. https://www.fws.gov/press-release/2023-02/public-comment-sought-proposal-list-california-spotted-owl. Accessed July 19, 2023.

U.S. Geological Survey (USGS). 2022. National Hydrography Dataset (NHD). https://hydro.nationalmap.gov/arcgis/rest/services/nhd/MapServer. Accessed December 22, 2022.

Ventura County. 2022a. 2022 Ventura County Planning Division Locally Important Animal List. https://vcrma.org/docs/images/pdf/planning/conservation/Final_2022_Locally_Important_Animals.pdf.

Ventura County Planning and Development Services. 2016. Ventura County General Plan: Goals, Policies And Programs. P. 16. https://docs.vcrma.org/images/pdf/planning/plans/Goals-Policies-and-Programs.pdf.

Ventura County Resource Management Agency (VCRMA). 2018. Habitat Connectivity and Wildlife Movement Corridors. https://vcrma.org/habitat-connectivity-and-wildlife-movement-corridors. Accessed January 15, 2019.

Vickers, T. W., J. N. Sanchez, C. K. Johnson, S. A. Morrison, R. Botta, T. Smith, and W. M. Boyce. 2015. Survival and mortality of pumas (*Puma concolor*) in a fragmented, urbanizing landscape. *PLoS ONE* 10(7), 1–18.

Warren, R., J. Price, A. Fischlin, S. de la Nava Santos, and G. Midgley. 2010. Increasing impacts of climate change upon ecosystems with increasing global mean temperature rise. *Climatic Change* 106: 141–177 (2011). Published August 21, 2010. https://doi.org/10.1007/s10584-010-9923-5.

Water Education Foundation. California Wild and Scenic Rivers Act. https://www.watereducation.org/aquapedia/california-wild-and-scenic-rivers-act. Accessed July 13, 2023.

The Xerces Society for Invertebrate Conservation. 2023. Pollinator Conservation Strategy, Yolo Natural Heritage Program (HCP/NCCP). Portland Or/Sacramento CA. https://www.xerces.org/pollinator-conservation. Accessed July 17, 2023.

INTENTIONALLY BLANK