

4.4 BIOLOGICAL RESOURCES

This section describes federal, State, and local regulations applicable to biological resources. It also describes the existing environmental setting of the County of Imperial with regard to the vegetation, sensitive habitats, general wildlife, and sensitive plant and animal species. A discussion of biological resource impacts is also provided, and mitigation measures are identified to address potential impacts.

4.4.1 Regulatory Setting

Federal Laws and Requirements

Federal Endangered Species Act

Enacted in 1973, the federal Endangered Species Act (ESA) provides for the conservation of threatened and endangered species and their ecosystems. The ESA prohibits the “take” of threatened and endangered species except under certain circumstances and only with authorization from the U.S. Fish and Wildlife Service (USFWS) through a permit under Section 4(d), 7 or 10(a) of the Act. Under the ESA, “take” is defined as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect or to attempt to engage in any such conduct.

Bald and Golden Eagle Protection Act

The Bald and Golden Eagle Protection Act (BGEPA) of 1940, as amended, prohibits anyone without a permit to “take” bald or golden eagles. “Take” is defined as “...pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest or disturb...” “Disturb” is defined as “...to agitate or bother a bald or golden eagle to a degree that causes, or is likely to cause, based on the best scientific information available: (1) injury to an eagle, (2) a decrease in its productivity, by substantially interfering with normal breeding, feeding, or sheltering behavior, or (3) nest abandonment, by substantially interfering with normal breeding, feeding, or sheltering behavior...”

Migratory Bird Treaty Act

Congress passed the Migratory Bird Treaty Act (MBTA) in 1918 to prohibit the kill or transport of native migratory birds, or any part, nest, or egg of any such bird unless allowed by another regulation adopted in accordance with the MBTA. The prohibition applies to birds included in the respective international conventions between the United States and Great Britain, the United States and Mexico, the United States and Japan, and the United States and Russia.

Clean Water Act

The U.S. Army Corps of Engineers (USACE) regulates the discharge of dredged and/or fill material into waters of the United States under Section 404 of the federal Clean Water Act. The term “waters of the United States” is generally defined to include navigable waters as well as other waters (such as streams and seeps) and wetlands that meet applicable regulatory criteria.

Executive Order 11990 - Protection of Wetlands

The basic requirement of Executive Order 11990 is that federal agencies avoid construction or management practices that would adversely affect wetlands unless that agency finds that (1) no

practicable alternative can be found, and (2) the proposed action includes all practicable measures to minimize harm to the wetlands. Executive Order 11990 directs all federal agencies to minimize the destruction, loss, or degradation of wetlands and preserve and enhance the natural beneficial values of wetlands in the conduct of the agency's responsibilities for (1) acquiring, managing, and disposing of federal lands and facilities; (2) providing federally undertaken, financed, or assisted construction and improvements; and (3) conducting federal activities and programs affecting land use, including but not limited to water and related land resources planning, regulating, and licensing activities.

Fish and Wildlife Coordination Act

The Fish and Wildlife Coordination Act authorizes the secretaries of Agriculture and Commerce to provide assistance to and cooperate with federal and state agencies to protect, rear, stock, and increase the supply of game and fur-bearing animals, as well as to study the effects of domestic sewage, trade wastes, and other polluting substances on wildlife. The act also directs the Bureau of Fisheries to use impounded waters for fish-culture stations and migratory-bird resting and nesting areas and requires consultation with the Bureau of Fisheries prior to the construction of any new dams to provide for fish migration. In addition, this act authorizes the preparation of plans to protect wildlife resources, the completion of wildlife surveys on public lands, and the acceptance by the federal agencies of funds or lands for related purposes provided that land donations received the consent of the state in which they are located.

Bureau of Land Management Policy

The Bureau of Land Management (BLM) also manages special status species in accordance with *Manual 6840, Special Status Species Management*. The manual establishes policy to manage species listed or proposed for listing pursuant to the ESA and BLM sensitive species which are found on BLM-administered lands. The BLM special status species policy aims to conserve and/or recover listed species and their habitats and to initiate proactive conservation measures that reduce or eliminate threats to BLM sensitive species to prevent them from requiring listing in the future (BLM 2008). A supplement to this manual, *BLM Manual Handbook 6840-1 Special Status Plant Management*, focuses on management of BLM sensitive plants. It includes details on survey coverage methods, in relation to likelihood of species occurring and intensity of impact that should guide plant surveys on BLM lands (BLM 1996).

State Regulations and Policies

California Endangered Species Act

The California Endangered Species Act (CESA) (California Fish and Wildlife Code, Section 2050 *et seq.*) is administered by the California Department of Fish and Wildlife (CDFW). CESA includes threatened, endangered, and candidate species. Under Section 2062 of the California Fish and Wildlife Code, the term "endangered species" refers to "...a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant which is in serious danger of becoming extinct throughout all, or a significant portion, of its range due to one or more causes, including loss of habitat, change in habitat, overexploitation, predation, competition, or disease..." Under Section 2067, the term "threatened species" refers to "...a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant that, although not presently threatened with extinction, is likely to become an endangered species in the foreseeable future in the absence of the special protection and management efforts..." Under Section 2068, the term "candidate species" refers to "...a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant that the commission has formally noticed as being under

review by the department for addition to either the list of endangered species or the list of threatened species, or a species for which the commission has published a notice of proposed regulation to add the species to either list...”(CDFW 2013b).

CESA prohibits the take of listed species except as otherwise provided in State law. Unlike its federal counterpart, CESA applies the take prohibitions to species that are candidates for State listing. The California Fish and Game (CFG) Code defines “take” as “...hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill...”

CDFW may authorize the incidental take of listed species under CESA through issuance of an incidental take permit pursuant to CFG Code, Section 2081, subdivisions (b) and (c). These provisions of the code, coupled with CDFW’s “CESA Implementing Regulations” (14 CCR 783.0 *et seq.*), authorize CDFW to issue an incidental take permit for a project as proposed if (1) the take is incidental to an otherwise lawful activity; (2) the impacts of the taking are minimized and fully mitigated by measures that are roughly proportional in extent to the project-related impact to the species, maintain the applicant’s objectives to the maximum extent possible and are capable of successful implementation; (3) the applicant ensures adequate funding to implement the measures and for monitoring compliance with and effectiveness of those measures; and (4) the issuance of the permit would not jeopardize the continued existence of the species.

California Environmental Quality Act

Title 14 California Code of Regulations (CCR) 15380 requires that endangered, rare, or threatened species or subspecies of animals or plants be identified within the influence of the project. If any such species are found, appropriate measures should be identified to avoid, minimize, or mitigate to the extent possible the effects of the project.

Natural Communities Conservation Planning Act

The California Legislature established the statutory framework for Natural Community Conservation Plans (NCCPs) through its enactment of the Natural Community Conservation Planning Act (NCCPA) (CFG Code, Section 2800 *et seq.*). The NCCP program is designed to support voluntary, collaborative planning efforts involving landowners, local governments, State and federal agencies, environmental organizations, and interested members of the public in the formulation and approval of NCCPs. NCCPs provide long-term, large-scale protection of natural vegetation communities and wildlife diversity while allowing compatible land uses and appropriate development and growth. The NCCP process provides an alternative to “single species” conservation efforts. The shift in focus from single species, project-by-project conservation efforts to large-scale conservation planning at the natural community level is intended to facilitate regional and subregional protection of a range of species (listed and unlisted) that inhabit a designated natural community or communities.

California Desert Native Plants Act

The California Food and Agriculture Code, Sections 80071–80075, provides protection for native desert plants. Plants protected or regulated by the California Desert Native Plants Act include (1) Joshua tree (*Yucca brevifolia*), (2) all species in the Agavaceae family (yuccas, nolas, century plants), (3) all species of cactus, including cholla, (4) stands of creosote rings with a diameter of 10 feet or wider, (5) *Psoralea [Dalea] spinosa* (smoketree), (6) all species of the genus *Prosopis* (mesquites), (7) all species of the family Fouquieriaceae (ocotillo, candlewood), (8) all species of the genus *Cercidium* (palos

verdes), (9) *Acacia greggii* (catclaw), (10) *Atriplex hymenelytra* (desert-holly), and (11) *Olneya tesota* (desert ironwood), including both dead and live desert ironwood (California Food and Agriculture Code, Sections 80071–80075).

California Department of Fish and Game Code, Section 1600–1616 (as amended)

Under Section 1602 of the CFG Code, CDFW requires formal notification for activities that divert or obstruct the natural flow or substantially change or use materials from the bed, channel, or bank of any river, stream, or lake. Desert washes, distributary networks, and riparian habitats (e.g., microphyll woodland) associated with watercourses are included in this requirement as they are part of the bed, channel, or bank. If CDFW determines that the project may substantially adversely affect existing fish and wildlife resources, the project proponent must enter into a lake or streambed alteration agreement (LSAA) with CDFW before the project can proceed. The LSAA includes measures developed by CDFW necessary to protect the fish and wildlife resources present at the site, which must be followed in the course of the project activity.

California Department of Fish and Game Code, Sections 3503, 3503.5, and 3513

CFG Code, Sections 3503, 3503.5, and 3513 protect migratory birds, bird nests and eggs including raptors (birds of prey) and raptor nests from take unless authorized by CDFW. Additionally, the State further protects certain species of fish, mammals, amphibians and reptiles, birds, and mammals through CDFW's Fully Protected Animals designation, which prohibits any take or possession of classified species. 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. Most Fully Protected Species have also been listed as threatened or endangered species under the more recent endangered species laws and regulations.

California Department of Fish and Game Code, Sections 1900-1913 — Native Plant Protection Act

The Native Plant Protection Act (NPPA) prohibits the taking, possessing, or sale within the State of any plant listed by CDFW as rare, threatened, or endangered. An exception to this prohibition in the Act allows landowners, under specified circumstances, to take listed plant species, provided that the owners first notify CDFW at least 10 days prior to the initiation of activities that would destroy them. The NPPA exempts from “take” prohibition “...the removal of endangered or rare native plants from a canal, lateral ditch, building site, or road, or other right of way...”

Regional and Local Requirements

Desert Renewable Energy Conservation Plan

The Desert Renewable Energy Conservation Plan (DRECP) is a landscape-scale, multi-agency, joint planning effort for 22.5 million acres in California's desert. Within the plan area, the DRECP will: (1) preserve, restore, and enhance natural communities and ecosystems and conserve sensitive species; (2) protect and enhance other resources and values on BLM-administered lands, including cultural resources, recreation opportunities, visual landscapes, etc.; (3) identify appropriate areas for siting utility-scale renewable energy projects; and (4) provide efficient and predictable environmental review and permitting for projects sited in these areas.

The plan consists of three components that will each support the DRECP's overall goals of efficient and predictable renewable energy development while providing for conservation of critical desert ecosystems:

- A Natural Community Conservation Plan (NCCP) under the California NCCP Act and the California Endangered Species Act
- A General Conservation Plan (GCP) under the Federal Endangered Species Act
- BLM Land Use Plan Amendments (LUPA) under the Federal Land Policy and Management Act

The NCCP component of the plan identifies specific areas as reflected by the biological goals and objectives for the conservation and management of the proposed covered species. The reserve design will be created to provide both compensation for impacts from renewable energy projects within the DRECP plan area and to support the overall Conservation Strategy.

Imperial Irrigation District HCP and NCCP

Imperial Irrigation District (IID) is preparing an HCP and NCCP to support applications for incidental take authorizations for the Transfer Project pursuant to FESA, Section 10 and CFG Code Section 2835 of the California Natural Communities Conservation Planning Act. The HCP/NCCP is anticipated to cover 96 fish, wildlife, and plant species for a term of up to 75 years. Covered activities include all water conservation projects and mitigation measures, whether undertaken by IID or by farmers, tenants, or landowners, in connection with both the conservation and transfer of up to 300,000 acre-feet/year of Colorado River water pursuant to the Transfer Project and/or the Quantification Settlement Agreement (QSA), compliance with the cap on IID's annual diversions of Colorado River water established by the QSA, and adaptive habitat management and monitoring activities. All activities related to IID Water Department operations including water delivery, drainage, and operation and maintenance will also be covered by these permits.

The Lower Colorado River Multi-Species Conservation Program HCP

The Lower Colorado River Multi-Species Conservation Program (LCR MSCP) is a multi-stakeholder, federal and non-federal partnership which seeks to balance the use of Colorado River water resources with the conservation of native species and their habitats in compliance with the federal ESA. The LCR MSCP area extends over 400 miles of the lower Colorado River from the lower end of the Grand Canyon to the Southerly International Boundary with Mexico. The LCR MSCP, which was enacted in 2006, provides ESA compliance for covered actions undertaken by federal agencies and non-federal partners. Covered actions include operations and maintenance activities on the lower Colorado River; the delivery of up to 9 million acre-feet of water to Arizona, California, Nevada, and Mexico; and power produced by six dams located on the lower Colorado River. ESA compliance is obtained through the implementation of a Habitat Conservation Plan (HCP) that describes conservation measures for 31 native species, including 6 currently listed under the ESA as endangered.

County of Imperial General Plan

The *Conservation and Open Space Element* provides detailed plans and measures for the preservation and management of biological and cultural resources, soils, minerals, energy, regional aesthetics, air quality, and open space. The purpose of the *Conservation and Open Space Element* is to promote the

protection, maintenance, and use of the County's natural resources with particular emphasis on scarce resources and to prevent wasteful exploitation, destruction, and neglect of the State's natural resources. Additionally, the purpose of the *Conservation and Open Space Element* is to recognize that natural resources must be maintained for their ecological value for the direct benefit to the public; to protect open space for the preservation of natural resources; and to manage production of resources for outdoor recreation and for public health and safety.

4.4.2 Existing Environmental Setting

Vegetation Communities

The County of Imperial is located within the Colorado Desert Subregion of the Sonoran Floristic Province. This region mixes an array of geographic substrates, topographic features, climatic regimes, soil types, and other physical factors which have combined to produce a mosaic of floristic components and associated natural habitats. Characteristic of this area is the presence of vast expanses of creosote bush (*Larrea tridentata*) and brittle bush (*Encelia farinosa*) on broad alluvial bajadas and adjacent mountain slopes interspersed with large washes containing several species of small microphyllous trees and shrubs. In addition to perennials, more than half of the desert's plant species are herbaceous annuals; and appropriately timed winter rains produce abundant early spring wildflowers. Over 365 plant species from 81 families are present within the Colorado Desert.

The vegetation communities within the County of Imperial are mapped and described using data and descriptions from the 2013 DRECP vegetation map (Menke et al. 2013) according to methodologies and nomenclature adopted by the U.S. National Vegetation Classification System (US-NVCS) and Federal Geographic Data Committee (FGDC). Data for unmapped areas in the western portion of the County were supplemented with LANDFIRE vegetation data (LANDFIRE 2013). In this effort, a total of 20 vegetation communities are recognized and mapped within the County of Imperial (Table 4.4-1). These 20 vegetation communities can be grouped into nine general land cover types. These include Chaparral and Coastal Scrub, Desert Scrub, Dune, Grassland, Riparian, Wetland, Desert Outcrop and Badlands, Agriculture, and Developed and Disturbed Areas. Land cover types and vegetation communities mapped within the County of Imperial are depicted in Figure 4.4-1 and briefly described below. For a detailed description of each of the vegetation communities, the reader is referred to the Draft DRECP and EIR/EIS.

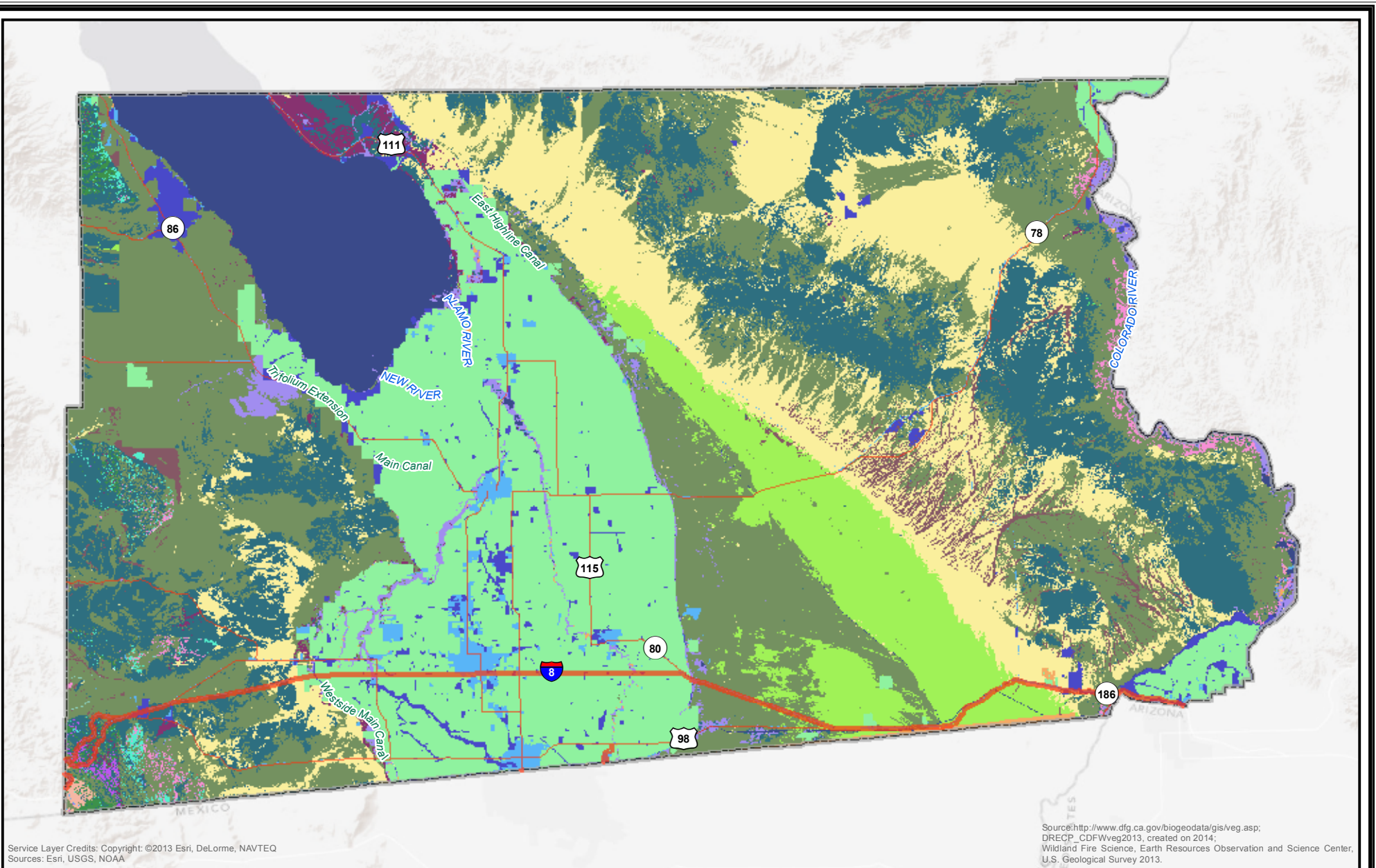
Chaparral and Coastal Scrub Communities

The chaparral and coastal scrub communities make up less than 1 percent (4,563 acres) of the County of Imperial (Figure 4.4-1). One scrub natural community (Central and South Coastal California Coastal Sage Scrub) and one chaparral natural community (Western Mojave and Western Sonoran Desert Borderland Chaparral) are found in the County (Table 4.4-1).

The Central and South Coastal California Coastal Sage Scrub natural community falls within the California coastal scrub macrogroup, which is characterized by a dominance of drought-deciduous shrubs and sometimes deep-rooted sclerophyllous shrubs (woody plants with small leathery evergreen leaves). This community is limited in its extent and occurs in a few scattered locations within the County (Figure 4.4-1).

Table 4.4-1: Land Cover Types and Vegetation Communities within the County of Imperial

Land Cover Type	Vegetation Community	Acres within the County	Percent within the County
Agriculture	Agriculture	548,444	19.1
Total		548,444	19.1
Chaparral and Coastal Scrub Community	Central and South Coastal Californian Coastal Sage Scrub	2,400	0.1
	Western Mojave and Western Sonoran Desert Borderland Chaparral	2,163	0.1
Total		4,563	0.2
Desert Outcrop and Badlands	North American Warm Desert Bedrock Cliff and Outcrop	461,129	16.1
Total		461,129	16.1
Desert Scrub	Arizonan Upland Sonoran Desert Scrub	12,940	0.5
	Inter-Mountain Dry Shrubland and Grassland	2	0.0
	Lower Bajada and Fan Mojavean - Sonoran Desert Scrub	817,640	28.5
	Shadscale - Saltbush Cool Semi-Desert Scrub	22,842	0.8
Total		853,429	29.8
Developed and Disturbed Areas	Developed and Disturbed Areas	37,566	1.3
	Rural	53,991	1.9
Total		91,557	3.2
Dunes	North American Warm Desert Dunes and Sand Flats	175,466	6.1
Total		175,466	6.1
Grassland	California Annual and Perennial Grassland	9,327	0.3
Total		9,327	0.3
Riparian	Madrean Warm Semi-Desert Wash Woodland/ Scrub	429,211	15.0
	Mojavean Semi-Desert Wash Scrub	326	0.0
	Sonoran-Coloradan Semi-Desert Wash Woodland/ Scrub	42,762	1.5
	Southwestern North American Riparian/Wash Scrub	38,682	1.3
Total		510,982	17.8
Wetland	North American Warm Desert Alkaline Scrub and Herb Playa and Wet Flat	7,134	0.2
	Open Water	199,591	7.0
	Playa	188	0.0
	Southwestern North American Salt Basin and High Marsh	37	0.0
Total		206,951	7.2
Unmapped	Unmapped	6,417	0.2
Total		6,417	0.2
Grand Total		2,868,265	100.0

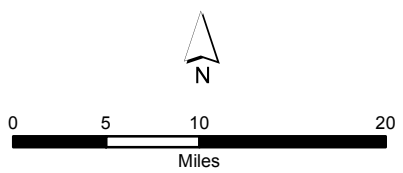


Service Layer Credits: Copyright: ©2013 Esri, DeLorme, NAVTEQ
Sources: Esri, USGS, NOAA

Source: <http://www.dfg.ca.gov/biogeodata/gis/veg.asp>;
DRECP_CDFWveg2013, created on 2014;
Wildland Fire Science, Earth Resources Observation and Science Center,
U.S. Geological Survey 2013.






















Legend
See Page 2 of this figure.

Figure 4.4-1
Imperial County Renewable Energy and
Transmission Element Update PEIR
Vegetation Communities
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Legend

General Community, Group Community

-  Agriculture, Agriculture
-  Chaparral and coastal scrub community (Cismontane scrub), Central and South Coastal Californian coastal sage scrub
-  Chaparral and coastal scrub community (Cismontane scrub), Western Mojave and Western Sonoran Desert borderland chaparral
-  Desert Outcrop and Badlands, North American warm desert bedrock cliff and outcrop
-  Desert Scrub, Arizonan upland Sonoran desert scrub
-  Desert Scrub, Inter-Mountain Dry Shrubland and Grassland
-  Desert Scrub, Lower Bajada and Fan Mojavean - Sonoran desert scrub
-  Desert Scrub, Shadscale - saltbush cool semi-desert scrub
-  Developed and Disturbed Areas, Developed and Disturbed Areas
-  Developed and Disturbed Areas, Rural
-  Dunes, North American warm desert dunes and sand flats
-  Grassland, California Annual and Perennial Grassland
-  Not Mapped, Not Mapped
-  Riparian, Madrean Warm Semi-Desert Wash Woodland/Scrub
-  Riparian, Mojavean semi-desert wash scrub
-  Riparian, Sonoran-Coloradan semi-desert wash woodland/scrub
-  Riparian, Southwestern North American riparian/wash scrub
-  Wetland, North American Warm Desert Alkaline Scrub and Herb Playa and Wet Flat
-  Wetland, Open Water
-  Wetland, Playa
-  Wetland, Southwestern North American salt basin and high marsh

Source: <http://www.dfg.ca.gov/biogeodata/gis/veg.asp>; DRECP_CDFWveg2013, created on 2014;
Wildland Fire Science, Earth Resources Observation and Science Center, U.S. Geological Survey 2013.

Figure 4.4-1
Imperial County Renewable Energy and
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The California chaparral macrogroup includes a single group: Western Mojave and Western Sonoran Desert Borderland Chaparral. This community occurs in a few scattered locations of Smoketree and Imperial Borrego valleys (Figure 4.4-1).

Desert Scrub Communities

The desert scrub communities cover approximately 29.8 percent, or 853,429 acres, of the County of Imperial (Figure 4.4-1). Three groups are mapped in the County and one community is mapped at the broader macrogroup level: Inter-mountain Dry Shrubland and Grassland (Table 4.4-1). Inter-mountain Dry Shrubland and Grassland vegetation is extremely limited within the County and occurs in a few small places in the Imperial Borrego Valley (Figure 4.4-1).

The majority of the scrub communities in Imperial County consist of two groups: Lower Bajada and Fan Mojavean–Sonoran Desert Scrub and Arizonan Upland Sonoran Desert Scrub (Table 4.4-1). Lower Bajada and Fan Mojavean–Sonoran Desert Scrub is found throughout most of the County of Imperial; but it is most common in the East Mesa, West Mesa, and Yuha Desert regions of the County (Figure 4.4-1).

Arizonan Upland Sonoran Desert Scrub primarily occurs along the Colorado River but also occurs in several small areas in the Chocolate Mountains and Imperial Borrego Valley (Figure 4.4-1). Shadscale–Saltbush Cool Semi-Desert Scrub is scattered throughout much of Imperial County but is most concentrated northeast of the Salton Sea near the Imperial-Riverside County border (Figure 4.4-1).

Dune Community

Dune communities make up approximately 6.1 percent, or 175,466 acres, of Imperial County and include one natural community: North American Warm Desert Dunes and Sand Flats (Table 4.4-1). This community is primarily limited to the Algodones Dune system, located in the East Mesa–Sand Hill portion of the County of Imperial, although several smaller stabilized dunes area exist west of Imperial Valley. (Figure 4.4-1).

Grassland Communities

Grassland communities cover only a small portion (less than 1 percent, or 9,327 acres) of the County and include the macrogroup California Annual and Perennial Grassland (Table 4.4-1). California Annual and Perennial Grassland occurs in small scattered areas in the western portion of the County (Figure 4.4-1).

Riparian Communities

Riparian communities constitute approximately 17.8 percent, or 510,982 acres, of the County and consist of four natural communities: Madrean Warm Semi-Desert Wash Woodland/Scrub, Mojavean Semi-Desert Wash Scrub, Sonoran–Coloradan Semi-Desert Wash Woodland/Scrub, and Southwestern North American Riparian/Wash Scrub (Table 4.4-1). About 84 percent of the riparian community is mapped only at the macrogroup level as Madrean Warm Semi-Desert Wash Woodland/Scrub.

Madrean Warm Semi-Desert Wash Woodland/Scrub is mapped in defined desert washes and is characterized by distinctly different plant composition and/or cover compared to adjacent upland communities in areas that did not receive alliance level mapping. This conglomerate group has been defined as a natural community in the DRECP and occurs in most areas in the County but is most

common in the Chocolate Mountains and Smoketree Valley areas and in the West Mesa area. (Figure 4.4-1). Microphyll woodlands may occur within this natural community.

Mojavean Semi-Desert Wash Scrub is one of two groups or communities within the Madrean Warm Semi-Desert Wash Woodland/Scrub macrogroup. This community occurs in a number of scattered locations, including the southeastern corner of the County (Figure 4.4-1), and is differentiated from the Sonoran–Coloradan Semi-Desert Wash Woodland/Scrub by specific alliances.

Sonoran–Coloradan Semi-Desert Wash Woodland/Scrub is the second group or community within the Madrean Warm Semi-Desert Wash Woodland/Scrub macrogroup. This community occurs in several smaller areas in the Palo Verde Valley and in the Imperial Borrego Valley area (Figure 4.4-1). Microphyll woodlands, as defined in the DRECP, are comprised of four alliances within this natural community.

Southwestern North American Riparian/Wash Scrub is characterized by native or non-native riparian shrubs and lacks a significant cover or presence of riparian trees. This natural community primarily occurs in Imperial Valley but occurs elsewhere throughout the County (Figure 4.4-1).

Wetland Communities

Wetland communities cover approximately 7.2 percent or 206,951 acres of Imperial County and include four land cover types or natural communities: North American Warm Desert Alkaline Scrub and Herb Playa and Wet Flat, Southwestern North American Salt Basin and High Marsh, Open Water, and Playa (Table 4.4-1). North American Warm Desert Alkaline Scrub and Herb Playa and Wet Flat occurs in small areas throughout the county and is primarily located in Imperial Borrego Valley, West Mesa, and Yuha Desert (Figure 4.4-1). Southwestern North American Salt Basin and High Marsh is limited within the County of Imperial and primarily occurs in several small areas west of the Salton Sea (Figure 4.4-1). Open water accounts for over 99 percent (199,431 acres) of the wetland communities in the County (Table 4.4-1), nearly all of which is associated with the Salton Sea. Playa consists of less than 1 percent of the wetland communities and is limited to several small areas in Imperial Borrego Valley and West Mesa (Figure 4.4-1).

Desert Outcrop and Badlands Communities

Desert outcrop and badlands cover approximately 16.1 percent, or 461,129 acres, of the County. This community includes a single group: North American Warm Desert Bedrock Cliff and Outcrop (Table 4.4-1). North American Warm Desert Bedrock Cliff and Outcrop is characterized by areas in which vegetation is largely absent. This natural community occurs throughout much of the County but is most prevalent in the Chocolate Mountains, Cargo Muchacho Mountains, Black Hills, Coyote Mountains, and Carrizo Badlands (Figure 4.4-1).

Agriculture

As described in Section 4.2.2 above, Approximately 538,326 acres, or 19 percent, of the total land within Imperial County is classified as farmland. As noted by the County of Imperial, the three main irrigated areas consist of Imperial Valley with 512,163 acres, Bard Valley in the southeast corner of the County with 14,737 acres, and Palo Verde Valley in the northeast corner of the County with 7,428 acres. These irrigated lands may include alfalfa, Bermuda grass, broccoli, carrots, cauliflower, citrus, cotton, dates, lettuce, melons, onion, romaine, spinach, Sudan grass, sugar beets, wheat, and livestock (County 2014).

Developed and Disturbed Areas

Developed and disturbed land is mapped over approximately 3.2 percent, or 91,557 acres, of the County and includes low- to high-intensity urban development and open space associated with developed areas, including uses such as golf courses (Table 4.4-1). Developed areas are primarily concentrated around the Calexico, El Centro, Imperial, and Brawley areas of the Imperial Valley and Salton City immediately west of the Salton Sea. Lands mapped as developed and disturbed also include areas of rural development.

General Wildlife and Wildlife Habitats

The Colorado Desert Subregion supports a variety of natural vegetation communities and landscape features that offer a diversity of wildlife habitat types. While these habitat types correspond with the general vegetation community types described above, they are also defined by a number of distinct landscape features such as washes and gullies, rocky outcrops and hillsides, cliffs and taluses, and cave and mine entrances. All contribute to the diversity and abundance of wildlife in the area as they provide for permanent residency and breeding, serve as a buffer from surrounding development, and function as movement corridors and connection with adjacent areas.

The diverse wildlife inhabiting the Colorado Desert includes many species specially adapted to the unique desert habitats. There are 481 vertebrate species that inhabit the Colorado Desert region at some point in their life cycle, including 282 species of birds, 82 species of mammals, 66 species of reptiles, 16 species of amphibians, and 35 species of fish (Bunn et al. 2007).

Small- to medium-sized mammals found within the County include the black-tailed jackrabbit (*Lepus californicus eremicus*), bobcat (*Felis rufus baileyi*), coyote (*Canis latrans mearnsi*), Botta's pocket gopher (*Thomomys bottae growlerensis*), canyon mouse (*Peromyscus crinitus disparilis*), desert cottontail (*Sylvilagus audubonii arizonae*), desert pocket mouse (*Perognathus penicillatus pricei*), desert kangaroo rat (*Dipodomys deserti*), kit fox (*Vulpes macrotis macrotis*), and California myotis (*Myotis californicus stephensi*). Representative bird species found in the County include the white-crowned sparrow (*Zonotrichia leucophrys*), sage thrasher (*Oreoscoptes montanus*), rock wren (*Salpinctes obsoletus*), rock pigeon (*Columba livia*), pyrrhuloxia (*Cardinalis sinuatus*), mourning dove (*Zenaida macroura*), black phoebe (*Sayornis nigricans*), blue-gray gnatcatcher (*Polioptila caerulea*), burrowing owl (*Athene cunicularia*), cactus wren (*Campylorhynchus brunneicapillus*), crissal thrasher (*Toxostoma crissale*), Gambel's quail (*Callipepla gambelii*), hermit thrush (*Catharus guttatus*), horned lark (*Eremophila alpestris*), killdeer (*Charadrius vociferus*), and loggerhead shrike (*Lanius ludovicianus*). Common reptile species found in the County include the chuckwalla (*Sauromalus ater*), desert horned lizard (*Phrynosoma platyrhinos*), desert night lizard (*Xantusia vigilis*), desert spiny lizard (*Sceloporus magister*), gopher snake (*Pituophis catenifer*), side-blotched lizard (*Uta stansburiana*), western diamondback (*Crotalus atrox*), and western whiptail lizard (*Aspidoscelis tigris*).

Many unique communities, particularly aquatic and dune systems, are limited in distribution within the Colorado Desert and are separated by vast expanses of arid desert terrain. Aquatic and wetland habitats are limited in extent but are critically important to wildlife. Runoff from seasonal rains and groundwater springs forms desert arroyos, desert fan palm oases, freshwater marshes, brine lakes, desert washes, ephemeral and perennial streams that provide conditions for desert riparian vegetation communities dominated by cottonwood, willow, and non-native tamarisk. Two of the region's most significant aquatic systems are the Colorado River and Salton Sea.

Some of the greatest changes to wildlife habitat in the region have resulted from the water diversions and flood control measures along the Colorado River. These measures have dramatically altered the region's hydrology by redistributing the water supply to large expanses of irrigated agriculture and metropolitan coastal areas. With the natural aquatic and wetland systems of the Colorado River dramatically altered and diminished, many wildlife species in the region have become increasingly dependent on the features of irrigated agricultural lands. With the majority of natural vegetation communities converted to agricultural uses, the Imperial Valley is now transected by a network of water delivery and drainage canals. In this context, the fields and orchards within agricultural areas, floodplain margins, and the weedy edges of fields and irrigation canals comprise the majority of wildlife habitats in the Imperial Valley.

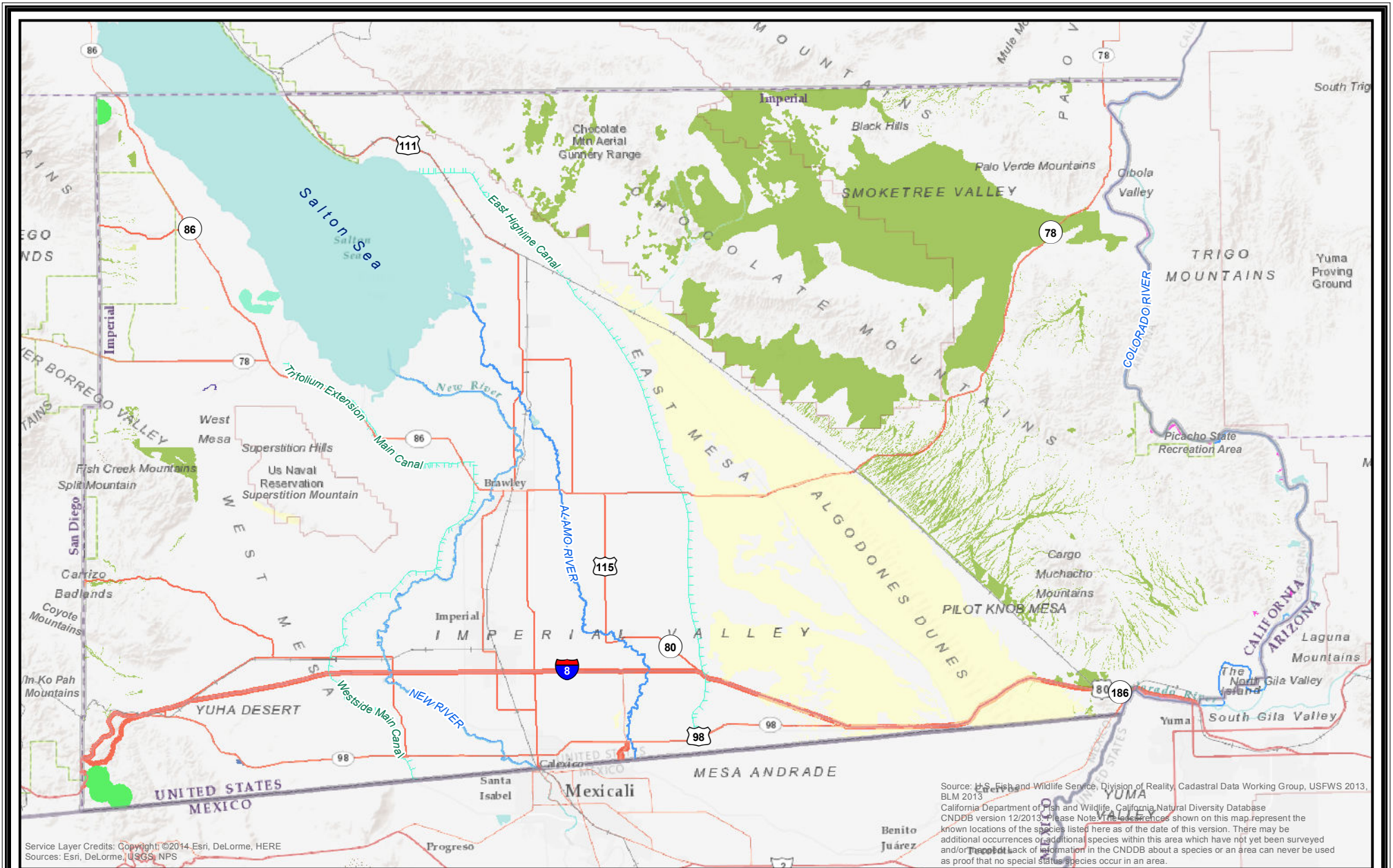
The Salton Sea is a critical component of the wildlife habitat in the County that currently sustains migratory birds of the Pacific Flyway, a major north-south route of travel for migratory birds in the Americas, extending from Alaska to Patagonia. Wetlands loss within California exceeds 90 percent of the acreage present at the time of statehood and is one of the reasons why the Salton Sea has become an important wintering and staging area for migratory birds. Populations of up to 1.5 million eared grebes (*Podiceps nigricollis*) have been documented at the sea during recent years along with up to one-half of California's wintering white-faced ibis (*Plegadis chihi*), tens of thousands of shorebirds, waterfowl, and white pelicans (*Pelecanus erythrorhynchos*). Nearly 40 percent of the nesting black skimmers (*Rynchops niger*) in California are found at the sea, along with significant breeding colonies of double-crested cormorants (*Phalacrocorax auritus*), Caspian terns (*Hydroprogne caspia*), and the largest breeding population of gull-billed terns (*Gelochelidon nilotica*) in western North America.

Sensitive Habitats

Sensitive habitats are generally considered by local, State or federal agencies as those habitats that support special status species, provide important habitat values for wildlife, represent areas of unusual or regionally restricted habitat types, and/or provide high biological diversity. Habitat types considered sensitive include those listed on the California Natural Diversity Data Base (CNDDDB) working list as "high priority" habitats (i.e., those habitats that are rare or endangered within California). Lead and trustee agencies may request that impacts to these communities be addressed in environmental documents. According to the CNDDDB, seven sensitive habitat types comprising some 53,141 acres total are present within the County (CNDDDB 2014). The locations of these sensitive habitats are shown on Figure 4.4-2, while their associated acreages are presented in Table 4.4-2.

Migratory Corridors and Linkages

Migratory corridors are linear features that connect large patches of natural open space and provide avenues for the immigration and emigration of animals. Habitat linkages are patches of native habitat that function to join larger patches of habitat. They serve as connections between habitat patches and help reduce the adverse effects of habitat fragmentation. Although individual animals may not move through a habitat linkage, the linkage does represent a potential route for gene flow and long-term dispersal. Habitat linkages may serve as both live-in habitat and avenues of gene flow for small animals such as reptiles and amphibians.



Legend

CNDDB_November2014

CNDDB Terrestrial Communities

- Active Desert Dunes
- Crucifixion Thorn Woodland
- Desert Fan Palm Oasis Woodland
- Mesquite Bosque
- Sonoran Cottonwood Willow Riparian Forest
- Stabilized and Partially Stabilized Desert Dunes
- Transmontane Alkali Marsh
- Microphyll Woodland
- Dunes/Sand

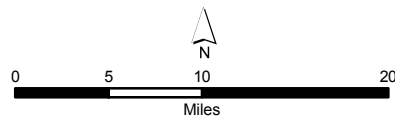


Figure 4.4-2
Imperial County Renewable Energy and
Transmission Element Update PEIR
CNDDB Sensitive Habitats

Table 4.4-2: CNDDDB Sensitive Habitats within Imperial County

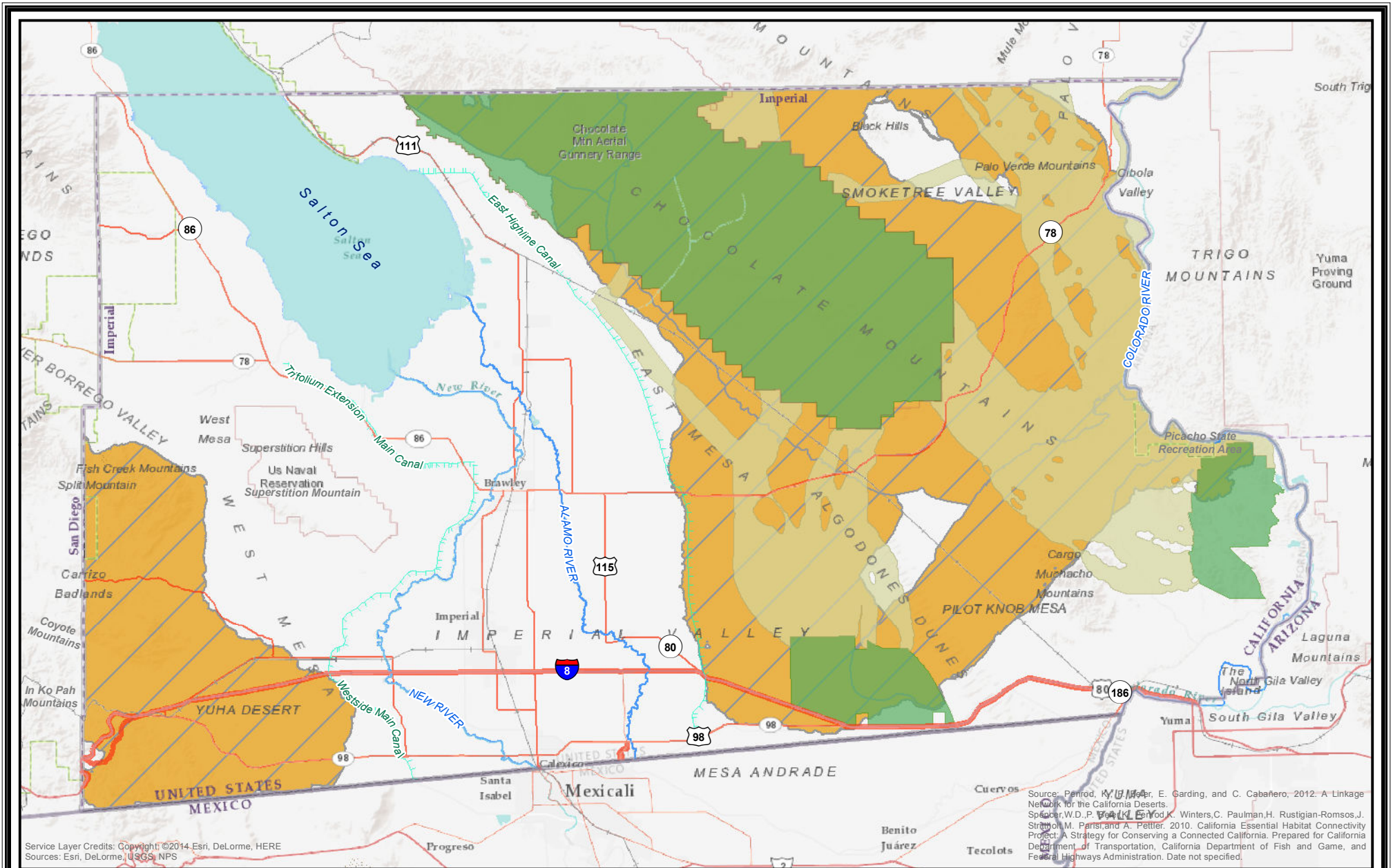
CNDDDB Sensitive Habitats	Total Acreage
Crucifixion Thorn Woodland	93
Desert Fan Palm Oasis Woodland	7,110
Mesquite Bosque	42
Microphyll Woodlands	42,762
Sonoran Cottonwood Willow Riparian Forest	818
Active and Partially Stabilized Desert Dunes	2,234
Transmontane Alkali Marsh	82
Total Acreage of Sensitive Habitats	53,141

Several connectivity assessment efforts have been undertaken to identify areas where maintaining or restoring ecological connectivity is essential to conserving the biological diversity in the State of California. These include the California Desert Connectivity Project (CDCCP) and California Essential Habitat Connectivity Project (CEHCP), both of which are briefly described below.

The CDCCP (Penrod et al. 2012) was developed to provide a comprehensive and detailed habitat connectivity analysis for the California deserts. The CDCCP included both models for least-cost corridor habitat permeability for several focal species and identification of a Desert Linkage Network using “land facet” methods based on the approach described by Beier and Brost (2010). The land facet method is designed to identify “swaths” of habitat of fairly uniform physical conditions that will interact with uncertain climate changes to maintain habitat for species and species’ movement (Penrod et al. 2012). Each identified linkage consists of a corridor for each land facet and a corridor for high diversity of land facets and should support movement of species associated with that facet (Penrod et al. 2012).

The CEHCP (Spencer et al. 2010) was developed at a coarser scale than the CDCCP. The CEHCP did not use focal species to identify areas needing connection; rather, it used indices of environmental integrity and other biological inputs to identify large “Natural Landscape Blocks” and “Essential Connectivity Areas” throughout California. These are particularly useful in identifying important areas to conserve outside of conservation priority areas not already conserved or mapped by other efforts.

As shown on Figure 4.4-3, important linkage networks identified by the CDCCP cover approximately 402,863 acres within Imperial County and include the Chocolate Mountains, East Mesa, and Picacho regions. These linkages are primarily located along the desert valleys, providing connectivity between isolated mountain ranges within the eastern portion of the County. Important linkage networks identified by the CEHCP cover approximately 1.8 million acres within the County and include the Chocolate Mountains, East Mesa, and Picacho regions in the east and Imperial Borrego Valley, West Mesa, and Yuha Desert regions in the west—providing a north-south connectivity between eastern and western Imperial County deserts (Figure 4.4-3).

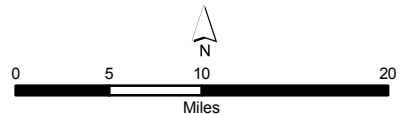


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Sources: Esri, DeLorme, USGS, NPS

Source: Penrod, K. G., E. Garding, and C. Cabañero, 2012. A Linkage Network for the California Deserts.
Spencer, W.D., P. Penrod, K. Winters, C. Paulman, H. Rustigian-Romos, J. Strahm, M. Paris, and A. Pettier. 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. Date not specified.

- Legend**
- CDCCP Desert Linkage Network
 - Landscape Blocks
 - CEHCP Essential Connectivity Areas

Figure 4.4-3
Imperial County Renewable Energy and
Transmission Element Update PEIR
Habitat Connectivity Areas
Within Imperial County



Special Management Areas and Designated Critical Habitat

Approximately 1.1 million acres within the County of Imperial, including federally designated critical habitat, designated wilderness areas, desert wildlife management areas (DWMAs), areas of critical environmental concern (ACECs), national wildlife refuges, State parks and State wildlife management areas (WMAs), and other special areas are managed in whole or in part for the conservation and management of biological resources. BLM is the County of Imperial’s largest land manager, with about 559,187 acres, or 19.5 percent of lands in the County designated as wilderness areas, DWMAs, and ACECs. Federally designated critical habitat and National Wildlife Refuge lands account for about 416,125 acres or 14.5 percent and 47,096 acres or 1.6 percent of lands in the County, respectively. State parks account for 71,645 acres or 2.5 percent of lands, while State WMAs account for 7,808 acres or less than 1 percent of lands within the County of Imperial. A list of the special management areas and designated critical habitats along with their respective acreages in the County are presented in Table 4.4-3. The location of these special management areas and designated critical habitat areas within the County are shown in Figure 4.4-4.

Table 4.4-3: Special Management Areas Including Designated Critical Habitat

Land Designation	Total Acreage
Federally Designated Critical Habitat	
desert pupfish	770
razorback sucker	2,458
desert tortoise	340,645
Peninsular bighorn sheep	50,268
Peirson's milk-vetch	21,984
Total	416,125
National Wildlife Refuge Lands	
Cibola National Wildlife Refuge	4,977
Imperial National Wildlife Refuge	10,332
Sonny Bono Salton Sea National Wildlife Refuge	31,787
Total	47,096
ACECs and DWMAs	
Chuckwalla DWMA	169,164
Coyote Mountains Fossil Site	5,875
East Mesa	42,140
Indian Pass	1,886
Lake Cahuilla - A	1,231
Lake Cahuilla - B	2,528
Lake Cahuilla - C	5,592
Lake Cahuilla - D	4,722
Pilot Knob	869
Plank Road	297
San Sebastian Marsh/San Felipe Creek	6,568

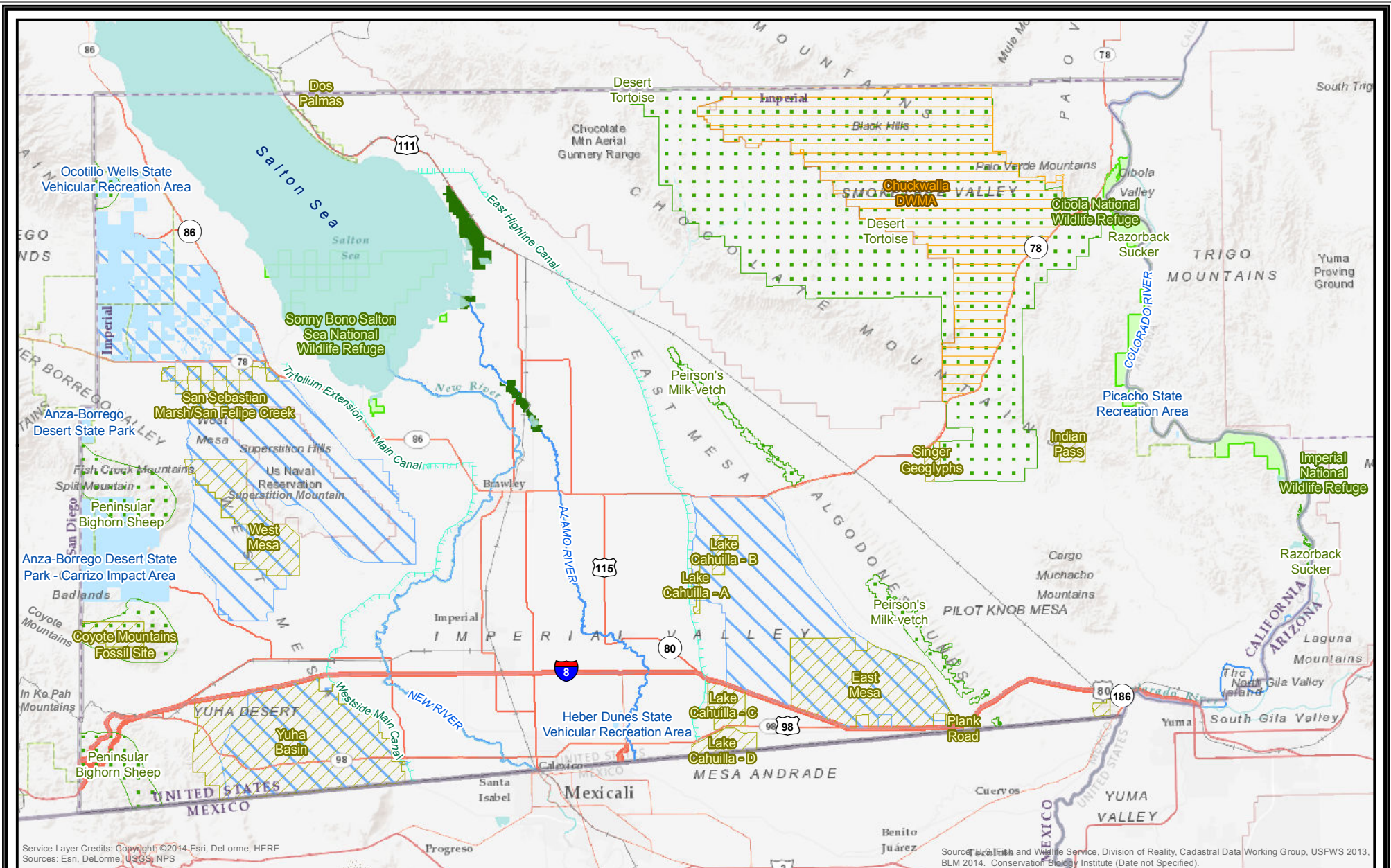
Table 4.4-3: Special Management Areas Including Designated Critical Habitat

Land Designation	Total Acreage
Singer Geoglyphs	1,884
West Mesa	20,304
Yuha Basin	71,847
Total	334,907
Designated Wilderness Areas	
Coyote Mountains Wilderness	18,197
Fish Creek Mountains Wilderness	22,457
Imperial Refuge Wilderness	7,903
Indian Pass Wilderness	33,909
Jacumba Wilderness	33,454
Little Chuckwalla Mountains Wilderness	2,624
Little Picacho Wilderness	39,584
North Algodones Dunes Wilderness	26,144
Palo Verde Mountains Wilderness	31,026
Picacho Peak Wilderness	8,982
Total	224,280
State Parks and WMAs	
Anza-Borrego Desert State Park	1,966
Anza-Borrego Desert State Park - Carrizo Impact Area	28,633
Heber Dunes State Vehicular Recreation Area	325
Ocotillo Wells State Vehicular Recreation Area	40,160
Picacho State Recreation Area	561
Imperial Wildlife Area	7,808
Total	71,645

Special Status Plant and Animal Species

A number of plant and animal species known to occur within Imperial County and elsewhere in California are accorded “special status” designation because of their recognized rarity or vulnerability to various causes of habitat loss or population decline. Some of these receive specific protection defined in federal or State endangered species legislation. Others have been designated as “sensitive” on the basis of adopted policies and expertise of State resource agencies or organizations with acknowledged expertise, or policies adopted by local governmental agencies such as counties, cities, and special districts to meet local conservation objectives. These species are referred to collectively as “special status species” in this Programmatic EIR.

Special status plant and animal species include those listed as threatened or endangered under the Federal/California Endangered Species Acts (FESA/CESA), species proposed for listing, species that are fully protected or of special concern to the California Department of Fish and Wildlife (CDFW), and other



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 Sources: Esri, DeLorme, USGS, NPS

Source: U.S. Fish and Wildlife Service, Division of Realty, Cadastral Data Working Group, USFWS 2013, BLM 2014. Conservation Biology Institute (Date not Specified).

- Legend**
- BLM ACEC Designated Areas
 - BLM DWMA Designated Areas
 - U.S. Fish & Wildlife Service National Wildlife Refuge
 - CDFW Wildlife Management Areas
 - California State Parks
 - BLM Flat-tailed Horned Lizard Reserve

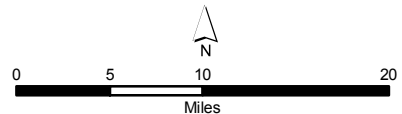


Figure 4.4-4
 Imperial County Renewable Energy and
 Transmission Element Update PEIR
 Special Management Areas Including
 Designated Critical Habitat

species identified either by the U.S Fish and Wildlife Service (USFWS), California Native Plant Society (CNPS), or the California Native Plant Protection Act (NPPA) Section 1901 as unique or rare. For plants, this includes species that would meet the criteria for listing but have not yet been formally listed, such as plants included in Lists 1A, 1B, and 2 of the CNPS's Inventory (Skinner and Pavlik 1994). Plant species on CNPS Lists 3 and 4 generally do not qualify for protection under CESA and NPPA.

Special Status Plant Species

The Colorado Desert region is known for a high degree of biological diversity and includes many threatened and endangered species as well as animals known only to this part of the State. The CNDDDB and CNPS together list some 57 special status plant species that occur within Imperial County, listed below in Tabl3 4.4-4. Three of these special-status plant species are federally or state listed as threatened or endangered. CNDDDB occurrence data for special-status plant species within Imperial County are shown on Figure 4.4-5.

Table 4.4-4: Special Status Plant Species with CNDDDB and CNPS Occurrences within Imperial County

Species Common Name (<i>Scientific Name</i>)	Species Status*	Species Habitat Requirements (CDFW 2013a)
chaparral sand-verbena (<i>Abronia villosa</i> var. <i>aurita</i>)	CRPR - 1B.1, BLM-S	Found in sandy areas within chaparral and coastal scrub (80-1600 meters).
pygmy lotus (<i>Acmispon haydonii</i>)	CRPR - 1B.3	Found in rocky sites within Sonoran desert scrub and pinyon-juniper woodland (520-1200 meters).
Harwood's milk-vetch (<i>Astragalus insularis</i> var. <i>harwoodii</i>)	CRPR - 2B.2	Found in open sandy flats and sandy or stony desert washes within desert dunes (0-710 meters).
Peirson's milk-vetch (<i>Astragalus magdalenae</i> var. <i>peirsonii</i>)	FT, SE, DRECP	Found in slopes and hollows in mobile dunes, usually from windblown sands within desert dunes (60-225 meters).
gravel milk-vetch (<i>Astragalus sabulonum</i>)	CRPR - 2B.2	Found in sandy or gravelly flats of washes and roadsides within desert dunes, Mojavean desert scrub, and Sonoran desert scrub (60-930 meters).
California ayenia (<i>Ayenia compacta</i>)	CRPR - 2B.3	Found in sandy and gravelly washes on the desert floor and in dry desert canyons within Mojavean desert scrub and Sonoran desert scrub (150-1095 meters).
little-leaf elephant tree (<i>Bursera microphylla</i>)	CRPR - 2B.3	Found on hillsides, in washes, and canyon sides within Sonoran desert scrub (200-700 meters).
pink fairy-duster (<i>Calliandra eriophylla</i>)	CRPR - 2B.3	Found in sandy or rocky sites within Sonoran desert scrub (120-1500 meters).
Saguaro (<i>Carnegiea gigantea</i>)	CRPR - 2B.2	Found in rocky sites within Sonoran desert scrub (50-1500 meters).
Emory's crucifixion-thorn (<i>Castela emoryi</i>)	CRPR - 2B.2	Found in gravelly soils and at times in playas and washes within Mojavean desert scrub, Sonoran desert scrub, and playas (85-770 meters).
Peirson's pincushion (<i>Chaenactis carphoclinia</i> var. <i>peirsonii</i>)	CRPR - 1B.3	Found in open sandy or rocky sites within Sonoran desert scrub (3-500 meters).
Abrams' spurge (<i>Chamaesyce abramsiana</i>)	CRPR - 2B.2	Found in sandy areas within Mojavean desert scrub and Sonoran desert scrub (5-915 meters).
Arizona spurge (<i>Chamaesyce arizonica</i>)	CRPR - 2B.3	Found in sandy soils within Sonoran desert scrub (50-300 meters).
flat-seeded spurge (<i>Chamaesyce platysperma</i>)	CRPR - 1B.2, BLM-S, DRECP	Found within sandy areas and shifting dunes possible in California but more common in Arizona and Mexico, within Mojavean desert scrub and desert dunes (395-730meters).
sand evening-primrose (<i>Chylismia arenaria</i>)	CRPR - 2B.2	Found in sandy or rocky areas within Sonoran desert scrub (70-915 meters).

Table 4.4-4: Special Status Plant Species with CNDDDB and CNPS Occurrences within Imperial County

Species Common Name (<i>Scientific Name</i>)	Species Status*	Species Habitat Requirements (CDFW 2013a)
Las Animas colubrine (<i>Colubrina californica</i>)	CRPR - 2B.3	Found on narrow, steep, rocky ravines or washes within Mojavean desert scrub (10-1000 meters).
Wiggins' croton (<i>Croton wigginsii</i>)	RARE, CRPR- 2B.2, BLM-S, DRECP	Found on sand dunes and sandy arroyos within desert dunes and Sonoran desert scrub (50-100 meters).
Munz's cholla (<i>Cylindropuntia munzii</i>)	CRPR - 1B.3, BLM-S, DRECP	Found in sandy and rocky desert flats and hills within Sonoran desert scrub (15-600 meters).
Arizona cottontop (<i>Digitaria californica var. californica</i>)	CRPR - 2B.3	Found on rocky hillsides within Sonoran desert scrub and Mojavean desert scrub (290-1490 meters).
glandular ditaxis (<i>Ditaxis claryana</i>)	FE, SE, CRPR- 2B.2	Found in dry washes and rocky hillsides with sandy soils within Mojavean and Sonoran desert scrub (0-465 meters).
San Diego button-celery (<i>Eryngium aristulatum var. parishii</i>)	CRPR - 1B.1	Found in hardpan and claypan vernal pools within coastal scrub and valley and foothill grasslands.
annual rock-nettle (<i>Eucnide rupestris</i>)	CRPR - 2B.2	Found within Sonoran desert scrub (500-600 meters).
sticky geraea (<i>Geraea viscida</i>)	CRPR - 2B.3	Found in coarse sand to gravelly sand soils, often in post-burn areas, within chaparral (450-1700 meters).
Algodones Dunes sunflower (<i>Helianthus niveus ssp. Tephrodes</i>)	SE, CRPR -1B.2, BLM-S, DRECP	Found in partialized stabilized desert dunes (50-100 meters).
curly herissantia (<i>Herissantia crispa</i>)	CRPR - 2B.3	Found within Sonoran desert scrub (700-725 meters).
Mexican hulsea (<i>Hulsea mexicana</i>)	CRPR - 2B.3	Found in volcanic soils or burns and disturbed sites within chaparral (665-1200meters).
bitter hymenoxys (<i>Hymenoxys odorata</i>)	CRPR - 2B.1	Found in sandy sites within riparian scrub and Sonoran desert scrub (45-150 meters).
California satintail (<i>Imperata brevifolia</i>)	CRPR - 2B.1	Found in mesic sites, alkali seeps, and riparian areas within coastal scrub, riparian scrub, Mojavean scrub, and meadows and seeps (0-500 meters).
Baja California ipomopsis (<i>Ipomopsis effusa</i>)	CRPR - 2B.1	Found in alluvial washes within Sonoran desert chaparral (0-100 meters).
slender-leaved ipomopsis (<i>Ipomopsis tenuifolia</i>)	CRPR - 2B.3	Found on rocky or gravelly slopes within chaparral, pinyon- juniper woodland, and Sonoran desert scrub (100-1200 meters).

Table 4.4-4: Special Status Plant Species with CNDDDB and CNPS Occurrences within Imperial County

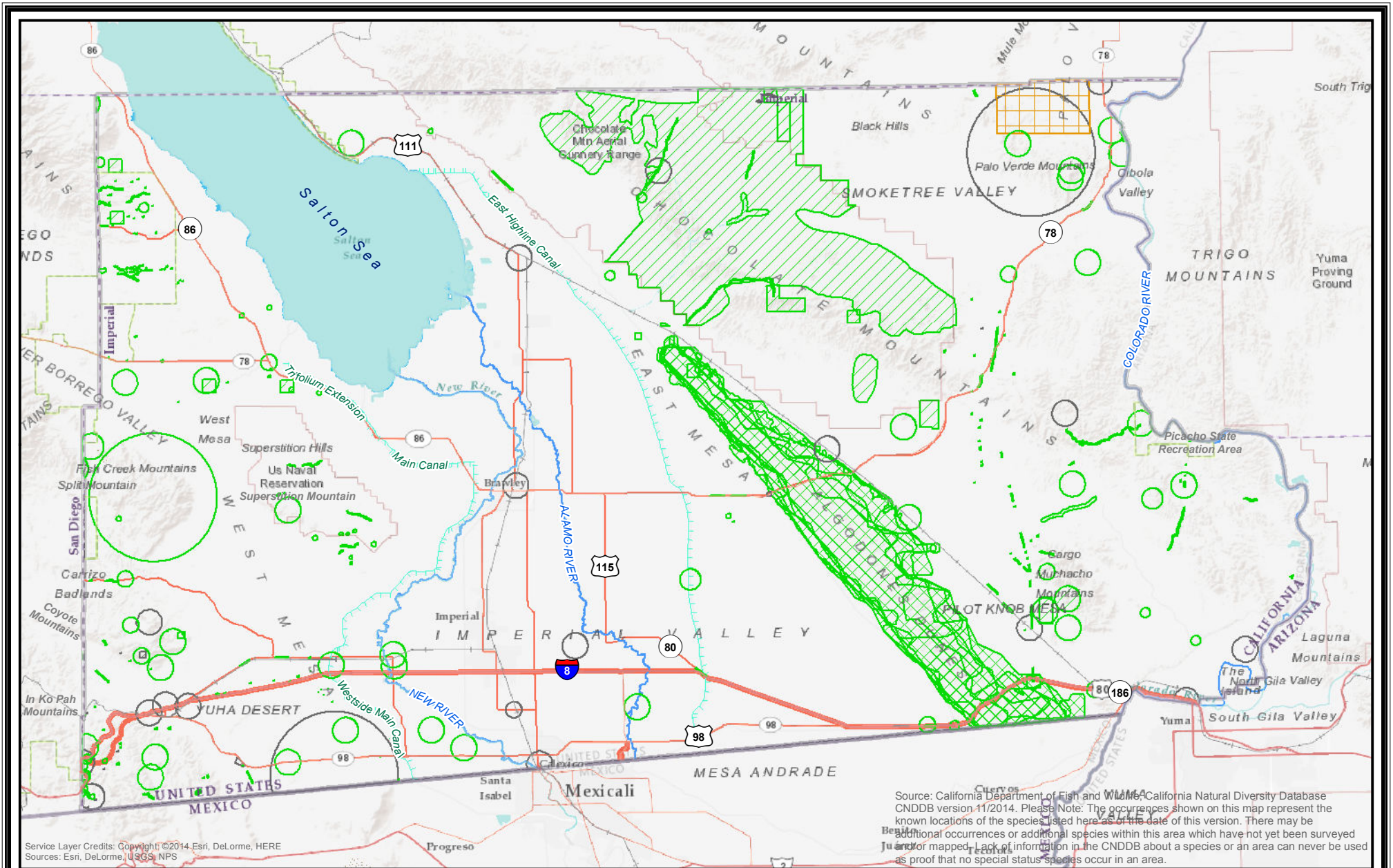
Species Common Name (<i>Scientific Name</i>)	Species Status*	Species Habitat Requirements (CDFW 2013a)
slender-spined all-thorn (<i>Koeberlinia spinosa</i> ssp. <i>Tenuispina</i>)	CRPR - 2B.2	Found in sandy washes within Sonoran desert scrub and riparian woodland (145-510 meters).
Little San Bernardino Mtns. Linanthus (<i>Linanthus maculatus</i>)	CRPR - 1B.2, BLM-S, DRECP	Found in sandy areas (usually light quartz sand) in washes and bajadas within desert dunes, Mojavean desert scrub, and Joshua Tree woodland (195-2075 meters).
Mountain Springs bush lupine (<i>Lupinus excubitus</i> var. <i>medius</i>)	CRPR - 1B.3, BLM-S	Found in dry, sandy, or gently sloping canyon washes and flats in steeper slopes and drainages within pinyon-juniper woodland and Sonoran desert scrub (425-1370 meters).
Parish's desert-thorn (<i>Lycium parishii</i>)	CRPR - 2B.3	Found within coastal scrub and Sonoran desert scrub (300-1000 meters).
brown turbans (<i>Malperia tenuis</i>)	CRPR - 2B.3	Found in sandy areas and rocky slopes within Sonoran desert scrub (15-335 meters).
spear-leaf matelea (<i>Matelea parvifolia</i>)	CRPR - 2B.3	Found on dry, rocky ledges and slopes within Mojavean and Sonoran desert scrub (440-1095 meters).
hairy stickleaf (<i>Mentzelia hirsutissima</i>)	CRPR - 2B.3	Found in washes, fans, slopes, and rocky areas within Sonoran desert scrub (5-800 meters).
Darlington's blazing star (<i>Mentzelia puberula</i>)	CRPR - 2B.2	Found in sandy crevices in cliffs or rocky slopes within Mojavean desert scrub (90-1280 meters).
spiny-hair blazing star (<i>Mentzelia tricuspis</i>)	CRPR - 2B.1	Found in sandy or gravelly slopes or washes within Mojavean desert scrub (150-1280 meters).
mud nama (<i>Nama stenocarpum</i>)	CRPR - 2B.2	Found on lake shores, river banks, and in intermittently wet areas within marshes and swamps (5-500 meters).
slender cottonheads (<i>Nemacaulis denudata</i> var. <i>gracilis</i>)	CRPR - 2B.2	Found in dunes or sand within coastal dunes, desert dunes, and Sonoran desert scrub (0-560 meters).
Wiggins' cholla (<i>Opuntia wigginsii</i>)	CRPR - 3.3	Found in sandy soils within Sonoran desert scrub (30-885 meters).
giant Spanish-needle (<i>Palafoxia arida</i> var. <i>gigantea</i>)	CRPR - 1B.3, BLM-S	Found in active and stable sand dunes within desert dunes (15-100 meters).
roughstalk witch grass (<i>Panicum hirticaule</i> ssp. <i>Hirticaule</i>)	CRPR - 2B.1	Found in desert dunes, Joshua tree woodland, Mojavean and Sonoran desert scrub (45-1315 meters).

Table 4.4-4: Special Status Plant Species with CNDDDB and CNPS Occurrences within Imperial County

Species Common Name (Scientific Name)	Species Status*	Species Habitat Requirements (CDFW 2013a)
desert beardtongue (<i>Penstemon pseudospectabilis</i> ssp., <i>Pseudospectabilis</i>)	CRPR - 2B.2	Found in sandy washes and sometimes rocky slopes within Mojavean and Sonoran desert scrub (80-1935 meters).
sand food (<i>Pholisma sonorae</i>)	CRPR - 1B.2, BLM-S, DRECP	Found in loose and deep sand dunes on the more stable and windward faces of slopes within desert dunes (0-200 meters).
Arizona pholistoma (<i>Pholistoma auritum</i> var. <i>arizonicum</i>)	CRPR - 2B.3	Found at one site in California within Mojavean desert scrub with <i>Larrea</i> , <i>Acacia</i> , <i>Hyptis</i> , and <i>Cercidium</i> (300-700 meters).
Thurber's pilostyles (<i>Pilostyles thurberi</i>)	CRPR - 4.3	A parasite on <i>Psoralea emoryi</i> and found in alluvial plains and sandstone talus within Sonoran desert scrub.
Deep Canyon snapdragon (<i>Pseudorontium cyathiferum</i>)	CRPR - 2B.3	Found in Sonoran desert scrub (0-80 meters).
Orocopia sage (<i>Salvia greatae</i>)	CRPR - 1B.3, BLM-S, DRECP	Found in broad alluvial bajadas and fans adjacent to washes in gravelly or rocky slopes of canyons within Mojavean and Sonoran desert scrub (-40-825 meters).
desert spike-moss (<i>Selaginella eremophila</i>)	CRPR - 2B.2	Found in shady areas with gravelly soils in crevices or rocky areas within Sonoran desert scrub and chaparral (200-900 meters).
Cove's cassia (<i>Senna covesii</i>)	CRPR - 2B.2	Found in dry, sandy desert washes within Sonoran desert scrub (305-1070 meters).
southern jewel-flower (<i>Streptanthus campestris</i>)	CRPR - 1B.3	Found in open rocky areas within chaparral, lower montane coniferous forest, and pinyon-juniper woodland (600-2790 meters).
San Bernardino aster (<i>Symphyotrichum defoliatum</i>)	CRPR - 1B.2, BLM-S	Found in mesic grassland or near ditches, in streams and disturbed areas within meadows and springs seeps, marshes and swamps, coastal scrub, cismontane woodland, lower montane coniferous forest, and grassland (2-2040 meters).
dwarf germander (<i>Teucrium cubense</i> ssp. <i>depressum</i>)	CRPR - 2B.2	Found in dunes and playa margins and scrub within desert dunes, playas, and Sonoran desert scrub (45-400 meters).
Orcutt's woody-aster (<i>Xylorhiza orcuttii</i>)	CRPR - 1B.2, BLM-S	Found in arid canyons, often in washes, within Sonoran desert scrub (265-365 meters).

Table 4.4-4: Special Status Plant Species with CNDDDB and CNPS Occurrences within Imperial County

Species Common Name (<i>Scientific Name</i>)	Species Status*	Species Habitat Requirements (CDFW 2013a)
<p>* Status Codes FE = Federally Listed Endangered FT = Federally Listed Threatened FC = Federal Candidate FD = Federally Delisted SE = State Listed Endangered ST = State Listed Threatened CRPR = California Rare Plant Rank BLM-S = BLM Sensitive DRECP = Species considered "Adequately Conserved" by DRECP.</p>		



Legend

- | | |
|---|---|
| CNDDDB Documented Species Occurrence | ■ Multiple (80m) - 800s |
| ■ Plant (80m) - 100s | ▨ Multiple (specific) |
| ▨ Plant (specific) | ▧ Multiple (non-specific) |
| ▧ Plant (non-specific) | ○ Multiple (circular) |
| ○ Plant (circular) | ■ 900s Sensitive EO's (Commercial only) |

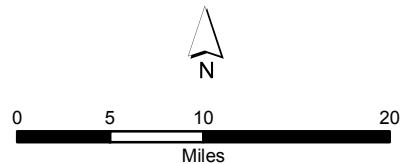


Figure 4.4-5
Imperial County Renewable Energy and Transmission Element Update PEIR
CNDDDB and CNPS Special-Status
Plant Species Occurrences within Imperial County

Special-Status Animal Species

Of the 481 vertebrate species that inhabit the Colorado Desert region, the CNDDDB lists some 82 special status animal species that occur within Imperial County, listed below in Table 4.4-5. These include 39 species of birds, 22 species of mammals, 11 species of reptiles, 4 species of fish, and 6 invertebrate species. Twenty-one of the 82 special status animal species within Imperial County are federally or state listed as threatened, endangered, or fully protected. CNDDDB occurrence data for special status animal species within Imperial County are shown on Figure 4.4-6.

Table 4.4-5: Special Status Animal Species with CNDDDB Occurrences within Imperial County

Species Common Name (<i>Scientific Name</i>)	Species Status*	Species Habitat Requirements
Invertebrates		
Carlson's dune beetle (<i>Anomala carlsoni</i>)	None	Occurs on north- or east-facing slip faces. Inhabits creosote bush scrub, psammophytic scrub, and microphyll woodland habitats.
Hardy's dune beetle (<i>Anomala hardyorum</i>)	None	Occurs on north- or east-facing slip faces and troughs of loose, drifting sand between the dune crests. Inhabits creosote bush scrub, psammophytic scrub, and microphyll woodland habitats.
Algodones sand jewel beetle (<i>Lepismadora algodones</i>)	None	Found along the eastern edge of the Imperial Sand Dunes in the transitional zone between creosote bush scrub, psammophytic scrub, and microphyll woodland habitats.
California mellitid bee (<i>Melitta californica</i>)	None	No data available for this species.
cheeseweed owlfly (<i>Oliarces clara</i>)	None	Populations occur on or near bajadas. Larvae are associated with creosote-bush roots, upon which they likely feed. Adults typically aggregate at local high topographic features to mate.
Andrews' dune beetle (<i>Psuedocotalapa andrewsi</i>)	BLM-S	Found along the eastern edge of the Imperial Sand Dunes in the transitional zone between creosote bush scrub, psammophytic scrub, and microphyll woodland habitats.
Fish		
desert pupfish (<i>Cyprinodon macularius</i>)	FE, SE, DRECP	Inhabits salt and fresh water ponds, springs, marshes and streams of southern California deserts with up to 68 PPT of salt, in temperatures ranging from 9-45 Celsius, and dissolved oxygen levels down to 0.
bonytail (<i>Gila elegans</i>)	FE, SE	Found in the Colorado River bordering California. Requires gravel riffles for spawning. Adapted for swimming in swift water but young and adults hang out in backwater and eddies.
Colorado pikeminnow (<i>Ptychocheilus lucius</i>)	FE, SE	Found in the Colorado River bordering California. Adults are typically found in the main channel while smaller fish are found in shallow, quiet waters.
razorback sucker (<i>Xyrauchen texanus</i>)	FE, SE	Found in the Colorado River bordering California. Spawn in areas with sand/gravel/rock in shallow water. Adapted to swift moving water but need quiet waters as well.
Reptiles and Amphibians		
barefoot gecko (<i>Coleonyx switaki</i>)	ST, BLM-S, DRECP	Found only in areas of massive rock and rock outcrops at the heads of canyons within cracks and crevices.

Table 4.4-5: Special Status Animal Species with CNDDDB Occurrences within Imperial County

Species Common Name (<i>Scientific Name</i>)	Species Status*	Species Habitat Requirements
red-diamond rattlesnake (<i>Crotalus ruber</i>)	SSC	Found in rocky, dense areas with rodent burrows, cracks or surface cover objects within chaparral, woodland, grassland, and desert areas.
desert tortoise (<i>Gopherus agassizii</i>)	FT, ST, DRECP	Requires friable soil for burrow and nest construction. Occurs within desert habitats and mostly within creosote scrub with wildflower blooms, desert washes, and Joshua tree habitats.
banded gila monster (<i>Heloderma suspectum cinctum</i>)	SSC, BLM-S	Inhabits lower slopes of rocky canyons and arroyos and desert flats among succulents and scrubs. Requires sandy or friable soils for egg laying. Occurs in areas moister than the surroundings.
Sonoran Desert toad (<i>Incilius alvarius</i>)	SSC	Breeds in temporary pools and irrigation ditches along the Colorado River and southern Imperial County.
Sonoran mud turtle (<i>Kinosternon sonoriense</i>)	None	Inhabits springs, creeks, ponds, the water holes of intermittent streams of oak and piñon-juniper woodlands, foothills, grasslands, and deserts.
northern leopard frog (<i>Lithobates pipiens</i>)	SSC	Requires near permanent or semi-permanent water source with shoreline cover and submerged and emergent aquatic vegetation.
lowland leopard frog (<i>Lithobates yavapaiensis</i>)	SSC, BLM-S	Found along the Colorado River and in streams near the Salton Sea.
flat-tailed horned lizard (<i>Phrynosoma mcallii</i>)	SSC, BLM-S, DRECP	Requires fine sand and vegetation cover for burrowing to avoid temperature extremes. Restricted to desert washes and desert flats.
Couch's spadefoot (<i>Scaphiopus couchii</i>)	SSC, BLM-S	Inhabits temporary desert rain pools that last at least 7 days, with water temperatures greater than 15 Celsius, subterranean refuge sites close by, and an insect food base, especially termites.
Colorado Desert fringe-toed lizard (<i>Uma notata</i>)	SSC, BLM-S	Requires fine, loose, windblown sand for burrowing. Found in sand dunes, dry lakebeds, sandy beaches and riverbeds, and sparse desert scrub in the Colorado desert region.
Birds		
Cooper's hawk (<i>Accipiter cooperii</i>)	WL	Inhabits open or marginal woodland habitats, with nest sites mainly in riparian growths of deciduous trees in canyon bottoms or river flood-plains but also in live oaks.
golden eagle (<i>Aquila chrysaetos</i>)	BCC, FP, BLM-S, DRECP	Inhabits rolling foothills and mountains areas, sage-juniper flats and deserts with nest sites including cliff-walled canyons and large trees in open areas.
great egret (<i>Ardea alba</i>)	None	Inhabits marshes, tide flats, irrigated pastures, and margins of rivers and lakes.
great blue heron (<i>Ardea herodias</i>)	None	Inhabits marshes, lake margins, tide-flats, rivers, streams, and wet meadows.
short-eared owl (<i>Asio flammeus</i>)	SSC	Inhabits fresh and saltwater swamp lands, lowland meadows and irrigated alfalfa fields. Requires tule patches or tall grass for nest building and nests on the ground in depressions concealed by vegetation.

Table 4.4-5: Special Status Animal Species with CNDDDB Occurrences within Imperial County

Species Common Name (<i>Scientific Name</i>)	Species Status*	Species Habitat Requirements
burrowing owl (<i>Athene cunicularia</i>)	BCC, SSC, BLM-S, DRECP	Inhabits open, dry annual or perennial grasslands, deserts, and scrublands with low-growing vegetation. Depends on burrowing mammals, mainly California ground squirrel, for nest sites.
ferruginous hawk (<i>Buteo regalis</i>)	BCC, WL	Inhabits open grasslands, sagebrush flats, desert scrub, low foothills, and fringes of open pinyon-juniper habitats with Lagomorphs, squirrels, and mice for a food source.
western snowy plover (<i>Charadrius alexandrinus nivosus</i>)	FT, BCC, SSC	Inhabits sandy beaches, salt pond levees, and shores of large alkali lakes with sandy, gravelly, or friable soils for nesting.
mountain plover (<i>Charadrius montanus</i>)	BCC, SSC, BLM-S, DRECP	Inhabits areas with short vegetation, bare ground, and flat topography including: short grasslands, freshly plowed fields, newly sprouting grain fields, and sod farms with burrowing rodents.
western yellow-billed cuckoo (<i>Coccyzus americanus occidentalis</i>)	FT, BCC, SE, BLM-S, DRECP	Nests in riparian forests along the broad, lower flood-bottoms of larger river systems with willow and cottonwoods.
gilded flicker (<i>Colaptes chrysoides</i>)	BCC, SE, BLM-S, DRECP	Inhabits Sonoran desert habitat and riparian woodlands along the Colorado River. Nests in willows, cottonwood, tree yucca, and saguaro cactus.
yellow warbler (<i>Dendroica petechia brewsteri</i>)	BCC, SSC	Inhabits riparian areas with willows, cottonwoods, aspens, sycamores, and alders for nesting. Also nests in montane shrubbery in open coniferous forests.
Sonoran yellow warbler (<i>Dendroica petechia sonorana</i>)	BCC, SSC	Inhabits desert areas, especially scrub habitats with friable soils for digging. Feeds almost exclusively on arthropods, especially scorpions and Orthopteran insects.
southwestern willow flycatcher (<i>Empidonax traillii extimus</i>)	FE, SE, DRECP	Inhabits riparian woodlands within southern California.
merlin (<i>Falco columbarius</i>)	WL	Inhabits seacoast, tidal estuaries, woodlands, savannahs, edges of grasslands and deserts, farms and ranches with clumps of trees or wind breaks required for roosting.
prairie falcon (<i>Falco mexicanus</i>)	BCC, WL	Inhabits dry, open terrain, either level or hilly. Nests on cliffs and forages far afield.
gull-billed tern (<i>Gelochelidon nilotica</i>)	BCC, SSC	Occurs in Riverside and Imperial counties, nests on sandy islets and known to feed on fish at the mouth of the Colorado River and on grasshoppers in alfalfa fields.
bald eagle (<i>Haliaeetus leucocephalus</i>)	FD, BCC, SE, FP, DRECP	Nests mostly within 1 mile of water in large, old-growth, or dominant live trees with open branches, especially ponderosa pine. Roosts communally along ocean shores, lake margins, and rivers for both nesting and wintering.
Caspian tern (<i>Hydroprogne caspia</i>)	BCC	Inhabits freshwater lakes and marshes and brackish or salt waters of estuaries and bays. Nests on sandy or gravelly beaches and shell banks in small colonies inland and along the coast.

Table 4.4-5: Special Status Animal Species with CNDDDB Occurrences within Imperial County

Species Common Name (<i>Scientific Name</i>)	Species Status*	Species Habitat Requirements
yellow-breasted chat (<i>Icteria virens</i>)	SSC	Summer resident that inhabits riparian thickets of willows and other brushy tangles near water courses. Nests in low, dense riparian areas consisting of willow, blackberry, wild grape. Forages within 10 feet of the ground.
least bittern (<i>Ixobrychus exilis</i>)	BCC, SSC	Colonial nester inhabiting marshlands and borders of ponds and reservoirs that provide ample cover. Nests usually placed in tules over water.
loggerhead shrike (<i>Lanius ludovicianus</i>)	BCC, SSC	Inhabits broken woodlands, savannah, pinyon-juniper, Joshua tree, riparian woodlands, desert oasis, scrub, and washes within open country with perches for hunting and scanning. Nests in fairly dense shrubs.
California gull (<i>Larus californicus</i>)	WL	Inhabits littoral waters, sandy beaches, waters, and shorelines of bays, tidal mud-flats, marshes, lakes, etc. Nests in colonies on islets in large interior lakes, fresh or alkaline.
California black rail (<i>Laterallus jamaicensis coturniculus</i>)	BCC, ST, FP, BLM-S, DRECP	Inhabits freshwater marshes, wet meadows and shallow margins of saltwater marshes bordering larger bays. Needs water depths of about 1 inch that do not fluctuate during the year and dense vegetation for nesting habitat
Gila woodpecker (<i>Gila woodpecker</i>)	BCC, SE, BLM-S, DRECP	In California, inhabits cottonwoods and other desert riparian trees, shade trees, and date palms. Cavity nester in riparian trees or saguaro cactus.
elf owl (<i>Micrathene whitneyi</i>)	SE, BCC, BLM-S, DRECP	In California, nesting area limited to cottonwood-willow and mesquite riparian zone along the Colorado River. Nests in deserted woodpecker holes, often in larger trees which offer insulation from high daytime temperatures.
brown-crested flycatcher (<i>Myiarchus tyrannulus</i>)	WL	Inhabits desert riparian areas along Colorado River. Requires riparian thickets, trees, snags, and shrubs for foraging perches, nesting cavities, and cover.
Lucy's warbler (<i>Oreothlypis luciae</i>)	BCC, SSC, BLM-S	Partial to thickets of mesquite, riparian scrub, and even stands of tamarisk within the Lower Colorado River valley and the washes and arroyos emptying into it.
California brown pelican (<i>Pelecanus occidentalis californicus</i>)	FD, SD, FP, BLM-S	Colonial nester just outside the surf line of coastal islands of small to moderate size which afford immunity from attack by ground-dwelling predators.
summer tanager (<i>Piranga rubra</i>)	SSC	Summer resident requiring cottonwood-willow riparian along lower Colorado River, and locally elsewhere in California deserts. Prefers older, dense stands along streams.
white-faced ibis (<i>Plegadis chihi</i>)	WL	Occurs in dense tule thickets for nesting interspersed with areas of shallow water for foraging. Shallow fresh-water marsh.
black-tailed gnatcatcher (<i>Polioptila melanura</i>)	SSC	Inhabits mixed desert scrub, creosote scrub, mesquite scrub, dry washes, and desert ravines.
vermillion flycatcher (<i>Pyrocephalus rubinus</i>)	SSC	Nests in cottonwood, willow, mesquite, and other large desert riparian trees. During nesting, inhabits desert riparian adjacent to irrigated fields, irrigation ditches, pastures, and other open, mesic areas.

Table 4.4-5: Special Status Animal Species with CNDDDB Occurrences within Imperial County

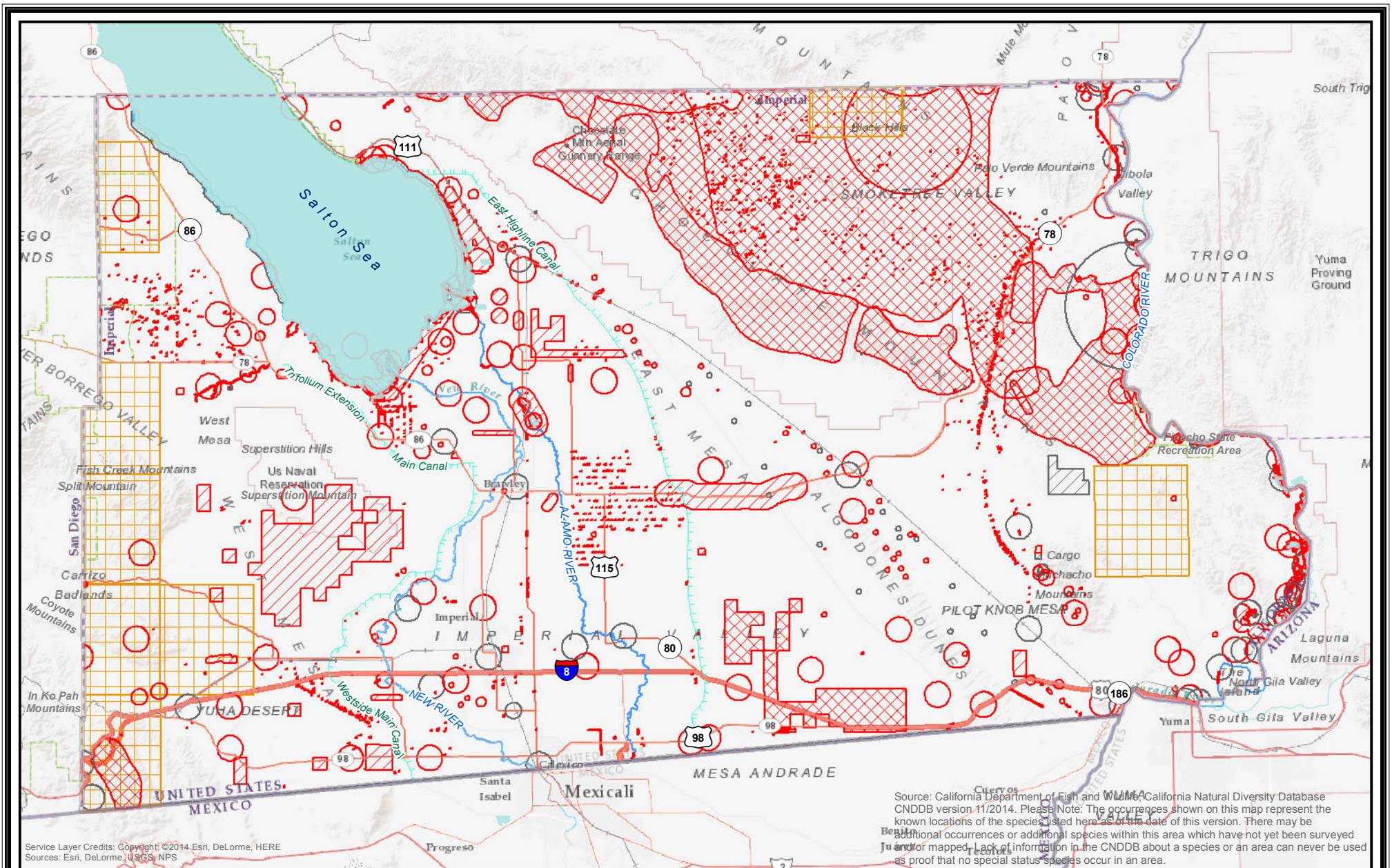
Species Common Name (<i>Scientific Name</i>)	Species Status*	Species Habitat Requirements
Yuma clapper rail (<i>Rallus longirostris yumanensis</i>)	FE, ST, FP, DRECP	Prefers stands of cattails and tules dissected by narrow channels of flowing water; principle food is crayfish. Nests in freshwater marshes along the Colorado River and along the south and east ends of the Salton Sea.
black skimmer (<i>Rynchops niger</i>)	BCC, SSC	Nests on gravel bars, low islets, and sandy beaches in unvegetated sites. Nesting colonies usually include less than 200 pairs.
crissal thrasher (<i>Toxostoma crissale</i>)	SSC	Nests in dense vegetation along streams/washes; mesquite, screwbean mesquite, ironwood, catclaw acacia, arrowweed, and within deserts in desert riparian and desert wash habitats.
Le Conte's thrasher (<i>Toxostoma lecontei</i>)	BCC, SSC	Commonly nests in a dense, spiny shrubs or densely branched cactus in desert wash habitat, usually 2 to 8 feet above ground. Desert resident; primarily of open desert wash, desert scrub, alkali desert scrub, and desert succulent scrub habitats.
Arizona Bell's vireo (<i>Vireo bellii arizonae</i>)	BCC, SE, BLM-S, DRECP	Nests in willow, mesquite, or other small tree/shrub, within 8 feet (usually 2 to 3 feet) of ground. Summer resident along Colorado River. Chiefly inhabits willow thickets with undergrowth of <i>Baccharis glutinosa</i> .
least Bell's vireo (<i>Vireo bellii pusillus</i>)	FE, SE, DRECP	Nests placed along margins of bushes or on twigs projecting into mesquite pathways, usually willow, Baccharis and mesquite. Summer resident of southern California in low riparian in vicinity of water or in dry river bottoms; below 2000 feet.
Mammals		
pallid bat (<i>Antrozous pallidus</i>)	SSC, BLM-S, DRECP	Inhabit deserts, grasslands, shrublands, woodlands, and forests. Most common in open, dry habitats with rocky areas for roosting. Roosts must protect bats from high temperatures. Very sensitive to disturbance of roosting sites.
pallid San Diego pocket mouse (<i>Chaetodipus fallax pallidus</i>)	SSC	Inhabits desert wash, desert scrub, desert succulent scrub, pinyon-juniper, etc. Within sandy herbaceous areas, usually in association with rocks or coarse gravel.
Townsend's big-eared bat (<i>Corynorhinus townsendii</i>)	SC, SSC, BLM-S, DRECP	Roosts in the open, hanging from walls and ceilings. Roosting sites limited. Extremely sensitive to human disturbance. Occurs in a variety of habitats throughout California. Most common in mesic sites.
western mastiff bat (<i>Eumops perotis californicus</i>)	SSC, BLM-S, DRECP	Inhabits many open, semi-arid to arid habitats, including conifer and deciduous woodlands, coastal scrub, grasslands, chaparral, etc. Roosts in crevices in cliff faces, high buildings, trees, and tunnels.
hoary bat (<i>Lasiurus cinereus</i>)	None	Inhabits foothills, deserts, mountains, lowlands, and coastal valleys. Needs dense foliage in sites that are hidden from above with few branches below, near water for roosting.
western yellow bat (<i>Lasiurus xanthinus</i>)	SSC	Found in valley foothill riparian, desert riparian, desert wash, and palm oasis habitats. Roosts in trees, particularly palms. Forages over water and among trees.
California leaf-nosed bat (<i>Macrotus californicus</i>)	SSC, BLM-S, DRECP	Inhabits desert riparian, desert wash, desert scrub, desert succulent scrub, alkali scrub, and palm oasis habitats. Needs rocky, rugged terrain with mines or caves for roosting.

Table 4.4-5: Special Status Animal Species with CNDDDB Occurrences within Imperial County

Species Common Name (<i>Scientific Name</i>)	Species Status*	Species Habitat Requirements
western small-footed myotis (<i>Myotis ciliolabrum</i>)	BLM-S	Prefers open stands in forests and woodlands. Requires drinking water. Feeds on a wide variety of small flying insects. Wide range of habitats, mostly arid wooded and brushy uplands near water. Seeks cover in caves, buildings, mines, and crevices.
Arizona myotis (<i>Myotis occultus</i>)	SSC	Found in lowlands of the Colorado River and adjacent desert mountain ranges. Needs roosting areas in tree hollows, rock crevices, under bridges, etc.
cave myotis (<i>Myotis velifer</i>)	SSC, BLM-S	Found in lowlands of the Colorado River and adjacent mountain ranges. Requires caves or mines for roosting.
Yuma myotis (<i>Myotis yumanensis</i>)	BLM-S	Optimal habitats are open forests and woodlands. Closely associated with sources of water over which it feeds. Maternity colonies occur in caves, mines, buildings, or crevices.
Colorado Valley woodrat (<i>Neotoma albigula venusta</i>)	None	Inhabits low-lying areas with patches of beaver-tail cacti (<i>Opuntia</i> spp.) and mesquite.
pocketed free-tailed bat (<i>Nyctinomops femorosaccus</i>)	SSC	Found in lowlands of the Colorado River and adjacent mountain ranges within a variety of arid areas in southern California including; pine-juniper woodlands, desert scrub, palm oasis, desert wash, and desert riparian. Requires caves or mines for roosting.
big free-tailed bat (<i>Nyctinomops macrotis</i>)	SSC	Occurs in low-lying arid areas in southern California. Requires high cliffs or rocky outcrops for roosting sites. Feeds principally on large moths.
southern grasshopper mouse (<i>Onychomys torridus ramona</i>)	SSC	Inhabits desert areas, especially scrub habitats with friable soils for digging. Prefers low to moderate shrub cover. Feeds almost exclusively on arthropods, especially scorpions and Orthopteran insects.
desert bighorn sheep (<i>Ovis canadensis nelsoni</i>)	FP, BLM-S, DRECP	Widely distributed from the White Mountains in Mono County to the Chocolate Mountains in Imperial County within open, rocky, steep areas with available water and herbaceous forage.
Peninsular bighorn sheep DPS (<i>Ovis canadensis nelson</i>)	FE, ST, FP, DRECP	Optimal habitat includes steep-walled canyons and ridges bisected by rocky or sandy washes, with available water. Eastern slopes of the peninsular ranges below 4,600 feet elevation. This DPS of the subspecies inhabits the peninsular range.
Palm Springs pocket mouse (<i>Perognathus longimembris bangsi</i>)	SSC, BLM-S	Occurs in all canopy coverage classes within desert riparian, desert scrub, desert wash, and sagebrush habitats. Most common in creosote-dominated desert scrub. Rarely found on rocky sites.
Yuma mountain lion (<i>Puma concolor browni</i>)	SSC	Lives in dense bottomland vegetation, also found in adjacent, rocky uplands. Low elevations in the Colorado River valley of California.
Colorado River cotton rat (<i>Sigmodon arizonae plenus</i>)	SSC	Inhabits isolated sections of alluvial bottom along the Colorado River in areas supporting sedges, rushes, and other marsh plants. Colorado River floodplain from the Nevada border to about bard. Distribution is spotty.
Yuma hispid cotton rat (<i>Sigmodon hispidus eremicus</i>)	SSC	Inhabits wetlands and uplands with dense grass and herbaceous plants. Makes runways through vegetation. Nests on surface and in burrows along the Colorado River and in grass and agricultural areas near irrigation waters.

Table 4.4-5: Special Status Animal Species with CNDDDB Occurrences within Imperial County

Species Common Name (<i>Scientific Name</i>)	Species Status*	Species Habitat Requirements
American badger (<i>Taxidea taxus</i>)	SSC	Needs sufficient food, friable soils, and open, uncultivated ground. Preys on burrowing rodents. Digs burrows; most abundant in drier open stages of most shrub, forest, and herbaceous habitats with friable soils.
<p>* Status Codes</p> <ul style="list-style-type: none"> CDFW WL = Watch List FE = Federally Listed Endangered FT = Federally Listed Threatened FP = Federally Protected FC = Federal Candidate FD = Federally Delisted BCC = Federal Birds of Conservation Concern SE = State Listed Endangered ST = State Listed Threatened SSC = State Species of Special Concern WL = State Watch List BLM-S = BLM Sensitive DRECP = Species considered "Adequately Conserved" by DRECP None = Listed in CNDDDB but has no formal listing status. 		



Source: California Department of Fish and Wildlife, California Natural Diversity Database CNDDDB version 11/2014. Please Note: The occurrences shown on this map represent the known locations of the species listed here as of the date of this version. There may be additional occurrences or additional species within this area which have not yet been surveyed or mapped. Lack of information in the CNDDDB about a species or an area can never be used as proof that no special status species occur in an area.

- Legend**
- | | |
|---|---------------------------------------|
| CNDDDB Documented Species Occurrence | Multiple (80m) - 800s |
| Animal (80m) - 200s | Multiple (specific) |
| Animal (specific) | Multiple (non-specific) |
| Animal (non-specific) | Multiple (circular) |
| Animal (circular) | 900s Sensitive EO's (Commercial only) |

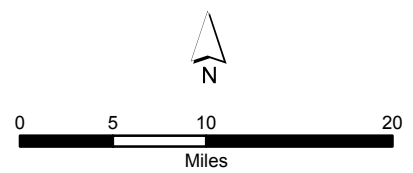


Figure 4.4-6
 Imperial County Renewable Energy and
 Transmission Element Update PEIR
 CNDDDB Special-Status Animal Species
 Occurrences within Imperial County

4.4.3 Significance Criteria

The thresholds for significance of impacts for the analysis are based on the environmental checklist in Appendix G of the State California Environmental Quality Act (CEQA) Guidelines. Consistent with the CEQA Guidelines and the professional judgment of the County's staff and environmental consultants, the project would result in a significant impact on the environment if it would:

- Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS
- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by CDFW or USFWS
- Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means
- Interfere substantially with the movement of any native resident or migratory fish and 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

4.4.4 Impacts and Mitigation

BIO-1: Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by CDFW or USFWS

Construction and Operation

Future renewable energy facilities developed under the proposed Project would result in direct and indirect impacts to special status plant and animal species. The principal impacts to special status plant and animal species likely to be associated with the proposed Project include: (1) the loss of habitats due to construction activities; (2) habitat fragmentation; (3) direct mortality, (4) displacement of some wildlife species; and (5) an increase in the potential for illegal collection of special status plant species and kill and harassment of special status wildlife species. The magnitude of impacts to these species would depend on a number of factors including the type and duration of disturbance, the species of plant or animal present, time of year, and implementation of required and recommended mitigation measures.

Direct effects to habitat for special status plant and animal species (i.e., modification of community structure, species composition, and extent of cover types) would occur from disturbance or removal of vegetation associated with construction of solar reflectors and photovoltaic (PV) panels, wind turbines,

geothermal wells, buildings, access roads, and electrical distribution, and other facilities. If present within the development areas, direct effects on these species could also occur from construction activities, which could directly kill or damage individual plants, plant populations, or animals through right-of-way clearing, earth-moving activities, and vehicle traffic. Areas of permanent disturbance could also remove portions of the seed bank, and areas of temporary disturbance also can alter the seed bank for special status plant species.

Collisions with turbines, meteorological towers (and associated guy wires), and overhead distribution lines represent a potential collision hazard related to wind energy facilities for special status bird and bat species. Bird and bat deaths from collisions with wind energy structures have received the major emphasis regarding adverse impacts to ecological resources associated with wind energy technology. In some instances, turbines, and other facility structures may interfere with behavioral activities, including migratory movements, and may provide additional perch sites for predatory birds such as raptors and ravens, thereby increasing predatory levels on other wildlife (desert tortoise).

Public vehicle use of roads reconstructed to access project areas can have an additive, or possibly a synergistic influence, on reducing special status animal use of adjacent habitats, as well as causing additional impacts. Public access to reconstructed roads in many of the proposed overlay zones could increase the potential for mortality and general harassment of special status animal species. Direct mortality from vehicle collisions would be expected to occur along access roads, especially in wildlife concentration areas or travel corridors. Amphibians, being somewhat small and inconspicuous, are vulnerable to road mortality when they migrate between wetland and upland habitats; reptiles are vulnerable because they use roads for thermal cooling and heating. Many ground nesting passerine bird species are susceptible to road mortality in spring because they often fly to and from their nests near ground level.

Construction activities could also increase the potential for occurrence of indirect and dispersed direct effects to these species, if present. Disturbances from construction could increase the potential for the invasion and establishment of noxious weed species. Invasion by non-native species is particularly problematic, as they are capable of effective competition with native species for space, water, light, nutrients, and subsequent survival. Over time, the successful establishment of non-native species can choke out native vegetation and eventually dominate large areas.

Additional indirect impacts could include an increased potential for wind to erode disturbed surfaces into adjacent areas that provide suitable habitat for these species. Airborne dust generated by vehicles could inhibit photosynthesis and transpiration in special status plant species. Inhibited and reduced rates of photosynthesis could affect the rate of growth, the reproductive capacity of individual plants, and ultimately the ability of these individuals to persist in adjacent areas. Varying amounts of dust settling on vegetation can block stomata, increase leaf temperature, and reduce photosynthesis (Thompson et al. 1984; Farmer 1993). Native desert vegetation naturally experiences chronic exposure to windblown dust and is not likely to be significantly affected, except in extreme cases alongside travel corridors where sand loosened by excessive vehicular activities could accumulate and partially bury individuals residing in adjacent habitat.

Indirect effects due to displacement of special status animal species also could occur as a result of construction activities associated with future renewable energy facilities developed under the proposed Project. In response to the increase in human activity (e.g., equipment operation, vehicular traffic, and noise) some species may avoid or move away from the sources of disturbance to other habitats. This

avoidance or displacement could result in underutilization of the physically unaltered habitats adjoining the disturbances. The net result would be that the value of habitats near the disturbances would be decreased, and previous distributional patterns would be altered. The habitats would not support the same level of use by these species as before the onset of the disturbance. Additionally, some special status animal species could be displaced to other habitats, leading to some degree of overuse and degradation to those habitats.

Sensitive habitats and special management areas including designated critical habitats that may be impacted are presented in Table 4.4-2 and Table 4.4-3, respectively. Habitats that may be impacted include, but are not limited to, microphyll woodlands, desert fan palm oasis woodland, and active and partially stabilized desert dunes. Designated critical habitats that may be impacted include, but are not limited to, areas for flat-tailed horned lizard, desert tortoise, desert pupfish, Peninsular bighorn sheep, and Peirson's milk-vetch. See Table 4.4-2 and Table 4.4-3 for a complete list of potentially impacted sensitive habitats and designated critical habitats. Special status plant and animal species that may be impacted are presented in Table 4.4-4 and Table 4.4-5, respectively. Special status plant and animal species that may be impacted include, but are not limited to, Peirson's milk-vetch, Algodones Dunes sunflower, mountain plover, Yuma clapper rail, burrowing owl, California black rail, golden eagle, flat-tailed horned lizard, desert pupfish, Peninsular bighorn sheep, and Townsend's big eared bat. See Table 4.4-4 and Table 4.4-5 for a complete list of potentially impacted special status plant and animal species. Therefore, construction and operation of future renewable energy facilities developed under the proposed Project may result in significant impacts on special status plant and animal species.

Mitigation Measures

Consistent with the requirements of the federal and State ESAs and other applicable laws, regulations, policies, program guidance, and management plans (e.g., FLPMA), the siting and design of future renewable energy facilities developed under the proposed Project would be conducted in a manner to avoid or minimize impacts on special status plant and animal species to the maximum extent possible. The mitigation measures below present standard biological mitigation typically required to reduce impacts to a level less than significant; however, additional mitigation requirements may be developed for future renewable energy facilities developed under the proposed Project based on existing biological conditions at future project sites.

BIO-1a: Conduct Surveys for Special Status Plant Species. As a requirement of an application for a renewable energy facility, surveys for special status plant species shall be conducted by qualified and agency-approved botanists to determine the presence or absence of sensitive plant species within the project footprint. Surveys shall be conducted following CDFW or BLM survey guidelines and be appropriately timed to coincide with the blooming periods for these species. Special status plants identified within the construction disturbance area shall be avoided to the extent feasible. A qualified botanist shall supervise the installation of orange construction fencing or other visible material to establish buffer zones between special status plants and construction disturbance.

BIO-1b: Conduct Surveys for Special Status Animal Species. As a requirement of an application for a future renewable energy facility, surveys for special status animal species shall be conducted by qualified and agency-approved biologists to determine the presence or absence of sensitive animal species within the footprint of a future renewable energy project. Any special status mammal, reptile, and amphibian species detected during surveys shall be passively relocated to areas outside the construction zone and prevented from reentering the future project area with the installation of silt

fencing or other exclusion fencing. All fencing shall be periodically monitored and maintained for the duration of construction. Passive relocation shall only be done in the nonbreeding season in accordance with guidelines and consultations with resource agencies. This includes covering or excavating all burrows or dens and installing one-way doors into occupied burrows. This would allow any animals inside to leave the burrow but would exclude any animals from reentering the burrow. The burrows shall then be excavated and filled in to prevent their reuse.

If direct impacts to special status species cannot be avoided, an agency-approved biologist shall prepare a species-specific Mitigation and Monitoring Plan that would detail the approved, site-specific methodology proposed to minimize and mitigate impacts to each species. Passive relocation, destruction of burrows, construction of artificial burrows, etc. shall be completed only upon prior approval by and in cooperation with CDFW and/or USFWS.

BIO-1c: Mark Areas of Construction Boundaries. All areas to be disturbed during construction of future renewable energy facilities developed under the proposed Project would be required to flag disturbance boundaries prior to construction. All disturbances would be confined to these flagged areas, and all employees would be instructed that their activities must be confined to locations within the flagged areas. Project proponents of future renewable energy facilities developed under the proposed Project would be required to have environmental monitors on site during construction activities.

BIO-1d: Power Wash Equipment Prior to Arrival On Site. All construction equipment used during construction of future renewable energy facilities developed under the proposed Project would be required to be power washed prior to arrival at the future project site to prevent the transportation and establishment of noxious weeds in the project area.

BIO-1e: Implement a Worker Environmental Awareness Program. A brief Worker Environmental Awareness Program (WEAP) would be implemented for construction crews prior to the commencement of project activities for future renewable energy facilities developed under the proposed Project. Training materials and briefings would include, but would not be limited to, discussion of the federal and State ESAs, the consequences of noncompliance with these acts, identification and values of wildlife and natural plant communities, hazardous substance spill prevention and containment measures, and review of all required and recommended mitigation measures.

BIO-1f: Additional Project Mitigation: Additional biological mitigation may be required based on the renewable energy technology to be developed at specific project locations. Project proponents for future renewable energy facilities would be required to evaluate how specific renewable energy facilities may impact sensitive species and how to mitigate impacts through site design and/or mitigation and monitoring activities. Project-specific mitigation and monitoring for future renewable energy facilities may include, but would not be limited to, a Bird and Bat Conservation Strategy based on the type of renewable energy technology to be utilized for a future renewable project.

Significance After Mitigation

Implementation of mitigation measures BIO-1a through BIO-1f would reduce direct and indirect impacts to special status plant and animal species to a level less than significant.

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 CDFW and USFWS

Construction and Operation

Future renewable energy facilities developed under the proposed Project that would be located within or adjacent to sensitive natural communities could cause an incremental loss of these community types. State-protected natural communities within the County include: crucifixion thorn woodland, desert fan palm oasis woodland, mesquite bosque, microphyll woodlands, Sonoran cottonwood willow riparian forest, active and partially stabilized desert dunes, and transmontane alkali marsh. Although sensitive natural communities are likely to be avoided under most instances, impacts to these communities may occur where avoidance of these areas are not feasible. Direct effects to sensitive natural communities would be similar to those described for special status species habitat above and include the direct modification of community structure, species composition, and extent of cover types which would occur from disturbance or removal of vegetation associated with construction of solar reflectors and PV panels, wind turbines, geothermal wells, buildings, access roads, and other facilities. Therefore, construction and operation of future renewable energy facilities developed under the proposed Project may result in significant impacts on riparian habitat or other sensitive natural communities.

Mitigation Measures

Because they are often associated with jurisdictional waterbodies including wetlands, impacts on many of the sensitive communities would be covered during the permitting process; however, the permitting process would not address impacts on upland communities such as crucifixion thorn woodland and active and partially stabilized desert dunes. Impacts on such communities would be addressed in coordination with CDFW and could be considered potentially significant. Consistent with the requirements of special area management guidelines such as those for ACECs, the siting and design of proposed renewable energy projects would be conducted in a manner to avoid or minimize, to the maximum extent possible, impacting sensitive natural communities. Further, implementation of BIO-2 could further avoid or minimize potential impacts on riparian habitat or other sensitive natural communities and reduce the impact to a level less than significant.

BIO-2: Develop a Habitat Restoration Plan and Provide for Offsite Mitigation for Temporary or Permanent Impacts. As a requirement of an application for a future renewable energy facility, project proponents shall make an effort to minimize impacts on sensitive natural communities, especially riparian habitats, when designing and permitting projects in order to preserve both the habitat and the overall ecological functions of these areas. These efforts to minimize impacts on riparian habitats and other sensitive natural communities shall be done consistent with CDFW guidelines. Future project proponents shall minimize ground disturbance and construction footprints within and near such areas to the extent practicable. Where avoidance of these areas is not feasible, future project proponents shall arrange for offsite replacement of removed habitats in accordance with consultation with CDFW.

Prior to construction, future project proponents shall develop a Habitat Restoration Plan (HRP) for review and approval by CDFW and the County of Imperial. The HRP shall be prepared by a qualified biologist and/or botanist and shall detail the methods for restoring or enhancing any riparian habitats or other sensitive natural communities impacted within the project area. The goal of the HRP shall be to mitigate any temporary or permanent impacts to riparian habitats or other sensitive natural

communities. Mitigation ratios would be developed through consultation with CDFW and the County of Imperial.

Significance After Mitigation

Implementation of mitigation measure BIO-2 would reduce temporary and permanent impacts to riparian habitats and other sensitive natural communities to a level less than significant.

BIO-3: Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filing, hydrological interruption, or other means

Construction and Operation

Future renewable energy facilities developed under the proposed Project may result in direct and/or indirect impacts to jurisdictional Waters of the United States including wetlands (i.e., areas regulated by the USACE, State and Regional Water Boards, and RWQCB and/or CDFW). Wetlands and other jurisdictional surface water resources located within the proposed overlay zones include desert washes and other streams, the majority of which are dry at most times. The majority of these watercourses would be avoided through project design; however, impacts to jurisdictional waters or wetlands could still occur, for example, where an access road would cross a watercourse which could result in a temporary disturbance to or permanent loss of wetlands or jurisdictional waters or loss of function from these features through increased erosion and water quality degradation.

The modification of streams, washes, and drainages would alter surface runoff timing and drainage patterns and could increase peak flows and water flow velocities of downgradient streams. All these processes could lead to increased erosion, sediment transport, and sediment deposition impacts. The discharge of wastewater and stormwater could also increase the flow rates of the receiving surface waters. Land disturbance impacts are expected to be greater in areas occupied by an alluvial fan or other landscape features with topography more than in a flat areas. Many of the proposed overlay zones are located in areas of the County that are drained primarily by sheet flow and desert washes. These areas contain alluvial fans with braided channels that drain the surrounding mountains; and the active washes crossing many of these areas are generally unstable and subject to erosion, incision, and avulsion/migration of the braided channel network. Low-frequency, high-intensity monsoonal storms in the region can result in high volumes of stormwater flow, which can cause high volumes of surface runoff to occur in the vicinity of these areas. Any temporary disturbance to or permanent loss of wetlands and other jurisdictional water bodies or loss of function of these features through direct fill or increased erosion and water quality degradation could be considered a significant impact.

Mitigation Measures

Mitigation measures HYDRO-3 described in Section 4.9.4 would also be implemented to reduce impacts on wetlands and other jurisdictional waters.

BIO-3: Provide restoration/compensation for affected jurisdictional areas. Impacts to areas under the jurisdiction of the USACE, RWQCB Regional Water Boards, State Water Board, and CDFW shall be avoided to the extent feasible. Where avoidance of jurisdictional areas is not feasible, each applicant shall provide the necessary mitigation required as part of wetland permitting by creation/restoration/preservation of suitable jurisdictional or equivalent habitat along with adequate buffers to

protect the function and values of jurisdictional area mitigation. The location(s) of the mitigation would be determined in consultation with USACE, CDFW, RWQCB, and BLM as part of the wetland permitting process. A jurisdictional delineation and impact assessment shall be prepared for each site based on the final alignment and final engineering plans when they are complete. Mitigation ratios would be developed through consultation with the wetland permitting agencies. The width of wetland buffers would also depend on the sensitivity of the jurisdictional habitat and on the requirements of the wetland permitting agencies.

Significance After Mitigation

Implementation of mitigation measures BIO-3 and HYDRO-3 would reduce impacts on wetlands and other jurisdictional waters to a level less than significant.

BIO-4: Interfere substantially with the movement of any native resident or migratory fish and wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites

Construction and Operation

Future renewable energy facilities developed under the proposed Project would have the potential to indirectly interfere 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. Important linkage networks identified by both the CDCCP and CEHCP cover approximately 1.8 million acres within the County of Imperial and include the Chocolate Mountains, East Mesa, and Picacho regions in the east and Imperial Borrego Valley, West Mesa, and Yuha Desert regions in the west—providing a north-south connectivity between eastern and western Imperial County deserts. Perhaps the most important of these is the Chocolate Mountains – Little Picacho linkage which currently has no impediments to wildlife movement and provides essential habitat connectivity to areas for desert bighorn sheep.

Unlike road barriers (which can be modified with fencing and crossing structures), future renewable energy facilities with large impact footprints, such as solar energy facilities, developed under the proposed Project create barriers to movement which cannot easily be removed, restored, or otherwise mitigated. Linkage areas used as wildlife movement and travel corridors for wildlife could be vulnerable to development of future renewable energy facilities, particularly at pinch points where physiographic constrictions force animals through relatively narrow corridors (Berger 2004). Associated road networks constructed to access future renewable energy facilities could also impact species through direct road mortality, habitat fragmentation and loss, and reduced connectivity. The severity of these effects depends on the ecological characteristics of a given species. Roads cause habitat fragmentation because they break large habitat areas into small, isolated habit patches which support fewer individual species; these small populations lose genetic diversity and are at risk of local extinction. Any direct or indirect interference with an established linkage network for wildlife could be considered a potential significant impact.

Mitigation Measures

BIO-4: Minimize Impacts to Designated Linkage Networks. Impacts to identified linkage networks shall be avoided to the extent feasible. Where direct avoidance of these areas is not feasible, the applicant shall modify the proposed Project footprint to the extent practicable to allow broad (i.e., 2-km wide)

swaths between project facilities for animal movement. Where such modifications are not feasible, the applicant shall consult with CDFW, BLM, and other land management agencies as appropriate to discuss other options such as wildlife crossing structures to facilitate wildlife movement in areas crossed by newly constructed roads. One or more crossing structures should be constructed at a crossing point to provide connectivity for species that are likely to use the area. Different species prefer different types of structures (Clevenger et al. 2001; Mata et al. 2005). For bighorn sheep or other ungulates, an open structure such as a bridge is crucial. For medium-sized mammals, large box culverts with natural earthen substrate flooring are optimal (Evink 2002). For small mammals and reptiles, pipe culverts are preferable (Clevenger et al. 2001). Additional mitigation may be required to offset impacts and would depend on the sensitivity of the area and on the individual requirements of land management agency.

Significance After Mitigation

Implementation of mitigation measure BIO-4 would reduce impacts associated with direct or indirect interference with an established linkage network for wildlife to a level less than significant.

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

Construction and Operation

The Conservation and Open Space Element of the County General Plan includes the following goals regarding the preservation of biological resources:

Goal 1: Environmental resources shall be conserved for future generations by minimizing environmental impacts in all land use decisions.

Goal 2: The County will preserve the integrity, function, productivity, and long-term viability of environmentally sensitive habitats, and plant and animal species.

Goal 6: The County shall seek to achieve maximum conservation practices and maximum development of renewable alternative sources of energy.

The proposed Project has developed the following goals and objectives that would preserve biological resources consistent with the goals of the Conservation and Open Space Element:

Goal 1 – Support the safe and orderly development of renewable energy while providing for the protection of environmental resources.

Objective 1.1: The County of Imperial supports the goals and objectives of the Desert Renewable Energy Conservation Plan to plan for, encourage, and facilitate the full development of all renewable energy resources within its jurisdiction.

Objective 1.2: Lessen impacts of site and design production facilities on agricultural, natural, and cultural resources.

Objective 1.3: Require the use of directional geothermal drilling and “islands” in irrigated agricultural soils and sensitive or unique biological areas.

Objective 1.4: Analyze potential impacts on agricultural, natural, and cultural resources, as appropriate.

Objective 1.5: Require appropriate mitigation and monitoring for environmental issues associated with developing renewable energy facilities.

Goal 2 – Encourage development of electrical transmission lines along routes which minimize potential environmental effects.

Objective 2.1: To the extent practicable, maximize utilization of IID’s transmission capacity in existing easements or rights-of-way. Encourage the location of all major transmission lines within designated corridors, easements, and rights-of-way.

Objective 2.2: Where practicable and cost-effective, design transmission lines to minimize impacts on agricultural, natural, and cultural resources, urban areas, military operation areas, and recreational activities.

Goal 4 – Support development of renewable energy resources that will contribute to the restoration efforts of the Salton Sea.

Objective 4.1: Prioritize the Salton Sea exposed seabed (playa) for renewable energy development.

Objective 4.2: Encourage the development of renewable energy facilities that will contribute to the reduction or elimination of airborne pollutants created by exposure of the seabed of the Salton Sea as it recedes.

Objective 4.3: Develop mitigation measures and monitoring programs to minimize impacts to avian species that may be affected by renewable energy facilities constructed near the Salton Sea.

Goal 8 – The County will develop overlay zones that would facilitate the development of renewable energy resources while preserving and protecting agricultural, natural, and cultural resources. Development of overlay zones shall include coordination with federal, State, County, Tribal governments, educational entities, the public, and local industries.

Objective 8.1: Allow for County review with appropriate development and performance standards for development of local resources within the overlay zones.

Objective 8.2: Promote the exchange of information concerning renewable energy development to be circulated between industry, County staff, and the public.

Objective 8.3: Provide the public adequate opportunity to obtain information on the current status of renewable energy development and to provide input on matters related to the development of renewable energy resources.

These goals and objectives of the proposed Project presented above would ensure consistency with the goals of the *Conservation and Open Space Element* regarding the preservation of biological resources, and impacts would be less than significant. Implementation of mitigation measures BIO-1a through BIO-

4 would provide further consistency with the applicable goals of the *Conservation and Open Space Element*.

Mitigation Measures

Mitigation measures BIO-1a through BIO-4 would also be implemented to reduce impacts related to local policies or ordinances protecting biological resources.

Significance After Mitigation

Implementation of mitigation measures BIO-1a through BIO-4 would reduce impacts related to local policies or ordinances protecting biological resources to a level less than significant.

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

Construction and Operation

Future renewable energy facilities developed under the proposed Project would not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State habitat conservation plan. All or portions of three HCP and/or NCCPs are present in the County: Imperial Irrigation District HCP and NCCP, Lower Colorado River Multi-Species Conservation Program HCP, and Desert Renewable Energy Conservation Plan. While some future renewable energy facilities developed under the proposed Project may be located within the planning areas of the IID HCP/NCCP and LCRMSCP HCP, activities consistent with renewable energy development would not be covered under either of these plans. Only activities related to IID Water Department operations including water delivery, drainage, and operation and maintenance will be covered by the IID HCP/NCCP; and, similarly, only activities related to U.S. Bureau of Reclamation operations including water delivery, operation and maintenance, and power produced by six dams located on the lower Colorado River will be covered by the LCRMSCP HCP.

In direct contrast, the DRECP plan area covers most of the County of Imperial and is focused on a specific range of Covered Activities related to development of renewable energy facilities and environmental compliance. These Covered Activities include the construction, operation, maintenance, and decommissioning of renewable energy facilities within the overall plan area, as well as DRECP Conservation Actions. Accordingly, solar, wind, geothermal, and other sources of renewable energy developed under the proposed Project would not conflict with the provisions of an adopted HCP, NCCP, or other approved local, regional, or State habitat conservation plan, and impacts would be less than significant. Implementation of mitigation measures BIO-1a through BIO-4 would provide further consistency with the applicable plans described above.

Mitigation Measures

Mitigation measures BIO-1a through BIO-4 would also be implemented to reduce impacts related to conflicts with an adopted HCP, NCCP, or other approved local, regional, or State habitat conservation plan.

Significance After Mitigation

Implementation of mitigation measures BIO-1a through BIO-4 would reduce impacts related to conflicts with an adopted HCP, NCCP, or other approved local, regional, or State habitat conservation plan to a level less than significant.

4.4.5 Cumulative Impacts

Potential cumulative impacts on biological resources could occur due to all existing, approved, proposed, and reasonably foreseeable projects within the County. Future development associated with approved, proposed, and reasonably foreseeable projects within Imperial County would have an unknown and unquantifiable impact on special status species, biologically sensitive habitats, and potential jurisdictional wetlands and waters of the United States. Furthermore, increased development and disturbance created by human activities could result in direct mortality, habitat loss, and the deterioration of habitat suitability; however, implementation of BIO-1a through BIO-4 described in Section 4.4.4 above would mitigate impacts to biological resources associated with development of future renewable energy facilities under the proposed Project to a level less than significant. Furthermore, it was determined that the proposed Project would not conflict with the Imperial Irrigation District HCP and NCCP, Lower Colorado River Multi-Species Conservation Program HCP, or the DRECP. These biological conservation planning efforts serve to manage and preserve biological resources at the regional level, and maintaining consistency with these plans would demonstrate successful mitigation of biological impacts that would minimize cumulative impacts to sensitive species and habitat. Similarly, existing, approved, proposed, and reasonably foreseeable projects within the County would also be required to mitigate impacts to biological resources and demonstrate consistency with regional biological conservation planning efforts within Imperial County. Therefore, implementation of appropriate biological mitigation measures and compliance with the HCP and NCCPs within Imperial County would ensure that biological impacts would remain cumulatively less than significant.

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