

III.11 LAND USE AND POLICIES

The Desert Renewable Energy Conservation Plan (DRECP) area encompasses the Mojave, Sonoran, and Colorado deserts in Southern California and covers approximately 22.6 million acres of desert regions and adjacent lands in seven counties within Southern California. These lands include:

- Areas of Eastern San Diego County and Imperial County in the southern portion of the DRECP area.
- Eastern Riverside County.
- Northeastern Los Angeles County.
- San Bernardino County, in the central portion of the DRECP area.
- Eastern Kern and Inyo counties in the northern portion of the DRECP area.

This analysis of land use and policies does not apply to lands managed by the Bureau of Land Management (BLM). This analysis applies to lands within or outside of the Land Use Plan Amendment (LUPA) Decision Area, where future transmission may be developed or where indirect effects from activities on BLM land may occur. With regard to BLM lands, several chapters of this environmental impact statement (EIS) include detailed information related to the physical and regulatory environments specific to land uses on LUPA Decision Area lands. These include Chapters III.9, Native American Interests; III.13, BLM Lands and Realty; III.14, BLM Land Designations, Classifications, Allocations, and Lands with Wilderness Characteristics; III.16, Livestock Grazing; III.18, Outdoor Recreation; and III.24, Department of Defense Lands and Operations.

This chapter provides an overall description of and summarizes the land uses, land ownership, and policies pertaining to the DRECP area. Appendix R1-11, Land Use and Policies, includes maps and tables supporting this chapter. The maps illustrate the land ownership within the DRECP area and by ecoregion subarea. The tables provide acreages of land use by federal, state, and local agency jurisdiction and by ecoregion subarea. This chapter summarizes the detailed land ownership and land acreages presented in Appendix R1-11.

III.11.1 Regulatory Setting

Federal, state, and local regulations pertaining to land use depend upon jurisdictional controls in affected lands. Federal and state regulations that apply to land use are summarized in the next few sections.

III.11.1.1 Federal

As discussed in Volume I, Section I.2, Legal Framework, several federal laws govern land use within the DRECP area and provide guidance for making land use decisions regarding federal lands, including:

- The National Environmental Policy Act of 1969.
- The Federal Endangered Species Act.
- The Migratory Bird Treaty Act.
- The Bald and Golden Eagle Protection Act of 1940, as amended.
- The National Historic Preservation Act.
- The Federal Land Policy and Management Act.

Volume I of this document summarizes these laws. Additional applicable federal laws and policies are contained in the California Desert Protection Act, Omnibus Public Land Management Act, Wild and Scenic Rivers Act, National Trails System Act, and the Bureau of Land Management Manual 6320. Chapter III.14 discusses additional federal laws and policies as applicable to BLM-administered lands. Laws, regulations, and orders specific to renewable energy development include the Energy Policy Act of 2005; Executive Orders 13212, 13514, 3285, and 3285A1; and the BLM Solar Energy Development Policy, all of which are summarized in Volume I of this document.

III.11.1.2 State

In addition to federal laws and regulations, a number of state laws govern land use in the DRECP area and provide guidance for making land use decisions that affect lands under the jurisdiction of California state agencies. These regulations include the California Environmental Quality Act, the California Endangered Species Act, and the Natural Community Conservation Planning Act. Volume I of this document summarizes these laws. Laws, regulations, and orders specific to renewable energy development include California's Renewables Portfolio Standard, the Renewable Energy Transmission Initiative, Executive Order S-14-08, Senate Bill 34, and Senate Bill X1-2.

State planning law requires each city and county to prepare and adopt a comprehensive, long-term general plan for its physical development (Government Code Section 65300 et seq.). A General Plan is the city and county's basic planning document. It provides the blueprint for development through the community and is the vehicle through which competing interests and the needs of the citizenry are balanced and meshed. State planning law has been codified in the California Government Code: Section 65300 et seq. (General Plan and specific plan),

Section 65800 et seq. (State Zoning Law), Section 66410 et seq. (Subdivision Map Act), and Section 65864 et seq. (development agreements); and, the California Land Conservation Act (the Williamson Act, California's premier agricultural land protection law).

III.11.1.3 Local

Local plans and regulations guide land use decisions within the DRECP area that are under the jurisdiction of cities, counties, and special districts (e.g., schools, utility providers). These lands generally include privately owned, locally controlled, or publicly owned lands such as parks, fire stations, libraries, schools, and hospitals. They also include utilities, such as water and sewer treatment facilities, pipelines, electric facilities, substations, and transmission and distribution lines. Local plans and regulations would not apply to lands owned by federal or state entities (e.g., BLM lands and California State Lands Commission [CSLC] lands). However, on publicly owned lands, federal and state agencies often consider local regulations in their decisions. For instance, the CSLC's practice is to consider and comply with local regulations when approving projects on state lands.

City and county governments exercise their land use and planning authority (regulation and control) through the adoption of land use plans such as a General Plan, a Local Coastal Plan, or an airport land use plan, and adoption of ordinances such as a land development code and zoning code.

III.11.2 Existing Land Management and Uses in the DRECP Area

Existing land management and use within the DRECP area boundaries are diverse, with a range of uses that are subject to jurisdictions or agencies with different statutory and regulatory responsibilities. As described in Section III.11.3, many land use and resource management plans are applicable to lands in the DRECP area. Major landholdings include:

- Two national parks, one national preserve, and one national historic site.
- Two national wildlife refuges and several state wildlife preserves.
- Portions of three national forests.
- Lands under the jurisdiction of seven BLM field offices in two districts.
- Eight tribal reservations and many smaller holdings of tribal lands.
- Six military reservations, weapons centers, air bases, and bombing and gunnery ranges.
- State school lands and reserved mineral interests where surface rights have been sold.
- State sovereign lands associated with Owens Lake and the Colorado River.

- Twelve state parks, many smaller state land units, and areas of special designation.
- Seven counties and many incorporated cities and towns.

Existing renewable energy projects (solar, wind, and geothermal) encompass approximately 89,000 acres within the DRECP area. These projects are shown in Chapter III.1, Figures III.1-2(a) and III.1-2(b). The main concentrations of renewable energy projects are in Kern, Los Angeles, San Bernardino, and Imperial counties. The affected environment includes 53 renewable energy projects totaling 6,250 megawatts (MW) that are either operational or under construction. As of October 2013, approximately 28% of these renewable energy projects were on BLM lands, and 72% were on either private or other public lands. Most of the large-scale renewable energy projects are on BLM lands in Riverside and San Bernardino counties (e.g., Desert Sunlight Solar Farm, 550 MW).

Table III.11-1 presents land acreage by ownership in the DRECP area, and Figure III.11-1 illustrates land ownership within the somewhat larger LUPA Decision Area. Section III.11.4 summarizes land uses in the DRECP area by ecoregion subarea.

**Table III.11-1
 DRECP Area Land Status**

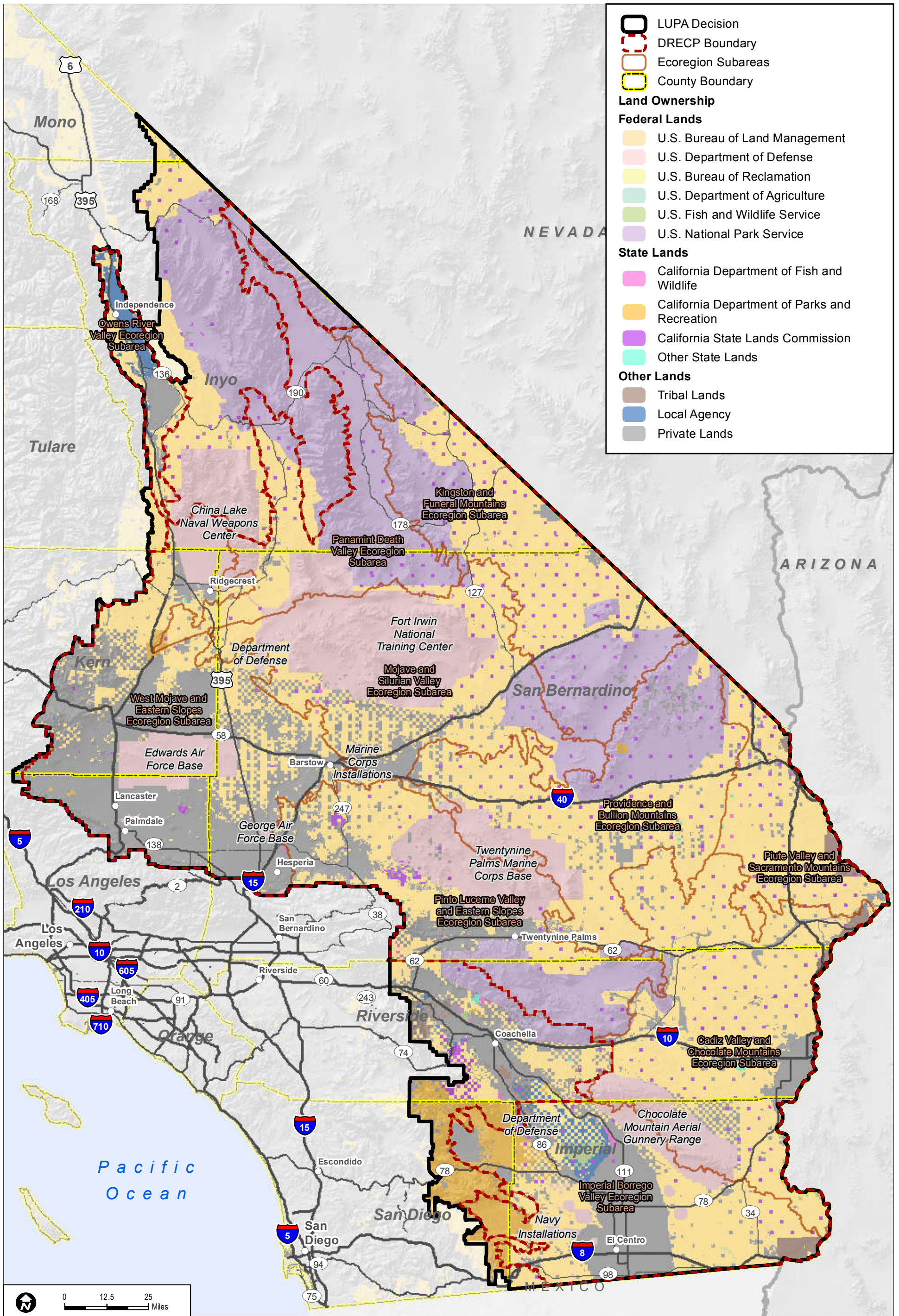
Land Management Agency	Acres	Percent of DRECP Area
BLM	10,008,266	44.3
Local Jurisdictions (counties, cities, districts – includes privately owned lands)	4,767,955	21.1
National Park Service	3,819,774	16.9
Department of Defense	3,035,622	13.4
CSLC	340,533	1.5
State Parks	292,771	1.3
Tribal Lands	132,296	0.6
Bureau of Reclamation	85,250	0.4
California Department of Fish and Wildlife	51,243	0.2
U.S. Fish and Wildlife Service	49,694	0.2
University of California	1,590	<0.01
U.S. Forest Service	565	<0.01
Total	22,583,898	100

Note: All acreages derived from best available data. Because acres are based on specific land management boundaries, they have not been rounded in this section.

Includes municipalities, nonprofits, and public utility districts.

Some of the CSLC land is counted as BLM land as well due to mapping inaccuracies. Overlaps account for almost 1,700 acres.

There are no participating tribes in the draft DRECP to date; DRECP decisions would not apply to tribal lands. These data are for informational purposes only.



Sources: ESRI (2014); BLM (2015); RECON (2015)

FIGURE III.11-1

Land Ownership within the LUPA Decision Area

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III.11.2.1 Federal Lands

Six federal agencies manage approximately 17 million acres, or about 75% of the DRECP area.

III.11.2.1.1 Bureau of Land Management

The BLM manages approximately 10 million of the 17 million acres of federal land within the DRECP area, or 44% of the total DRECP area. Topographically, BLM land ranges from low deserts to high mountains. The land uses are as varied as the terrain and include livestock grazing, fish and wildlife habitat, energy development, land use authorizations, and a wide range of outdoor recreation activities. These uses are managed within a framework of numerous public land laws, the most comprehensive of which is the Federal Land Policy and Management Act. It requires that public lands be managed in accordance with land use plans, which must be developed based on the principles of multiple use and sustained yield. The term “multiple use” means the management of public lands must be performed in combinations that will best meet the present and future needs of the public. The term “sustained yield” means the achievement and maintenance in perpetuity of a high-level annual or regular periodic output of the various renewable resources of the public lands consistent with multiple use. The Federal Land Policy Management Act requires BLM to manage public lands on the basis of multiple use and sustained yield unless otherwise specified by law. BLM-managed lands are described in Chapter III.14.

III.11.2.1.2 Bureau of Reclamation

The Bureau of Reclamation manages facilities on approximately 85,000 acres, or 0.4% of the DRECP area. These lands consist of small parcels clustered primarily in two areas: immediately west of the Salton Sea and in the southeast corner of the DRECP area along the Colorado River. The Bureau of Reclamation manages its lands primarily for water development.

III.11.2.1.2 Department of Defense

The Department of Defense (DOD) administers 11 areas covering approximately 3 million acres, or approximately 13% of the DRECP area. The DOD manages its land to provide realistic test and training environments for military operations, as required by Title 10 (Armed Forces) of the United States Code. The majority of DOD lands are within the following five facilities: Edwards Air Force Base (306,675 acres), Marine Corps Air Ground Combat Center Twentynine Palms (597,064 acres), Chocolate Mountain Aerial Gunnery Range (447,165 acres), and Naval Air Weapons–China Lake and Fort Irwin Army National Training Center (1,242,467 acres). Chapter III.24 provides additional information regarding DOD lands and operations.

III.11.2.1.3 National Park Service

The National Park Service (NPS) administers approximately 3.8 million acres, or approximately 17% of the DRECP area. NPS lands within the DRECP area include Joshua Tree National Park (600,948 acres), Mojave National Preserve (1,418,911 acres), portions of Death Valley National Park (1,785,852 acres), and Manzanar National Historic Site (814 acres). Joshua Tree National Park is north of Interstate 10 (I-10) on the San Bernardino–Riverside county line. Mojave National Preserve is in the east-central part of the DRECP area, roughly bounded by I-15, I-40, and the Nevada state line. Death Valley runs along the northeastern boundary of the DRECP area in San Bernardino and Inyo counties.

The NPS manages its lands for the conservation, preservation, protection, and interpretation of the nation’s natural, cultural, and historic resources. Public use of NPS lands includes wilderness, recreation, scenic preservation, scientific study, education, conservation, historical use, and solitude. The NPS manages its wilderness lands under provisions of the Wilderness Act of 1964.

III.11.2.1.4 U.S. Fish and Wildlife Service

The U.S. Fish and Wildlife Service (USFWS) manages approximately 50,000 acres, or 0.2% of the DRECP area. The USFWS manages its lands for the conservation and protection of fish and wildlife and their habitats. Nearly all of the USFWS-administered land in the DRECP area is within the Sonny Bono Salton Sea National Wildlife Refuge in Imperial County.

III.11.2.1.5 U.S. Department of Agriculture, Forest Service

The U.S. Forest Service (USFS) manages nearly 600 acres of land, or less than 0.01% of the DRECP area. The USFS mission is to “achieve quality land management under the sustainable multiple-use management concept to meet the diverse needs of people (USFS 2013).” The majority of USFS land in the DRECP area is within Los Angeles County (411 acres). Remaining acres are located in San Bernardino (148 acres) and Kern (5 acres) counties.

III.11.2.2 State Lands

Four state agencies—California Department of Fish and Wildlife (CDFW), CSLC, California State Parks, and the University of California—together manage almost 690,000 acres, or roughly 3% of the DRECP area.

III.11.2.2.1 California Department of Fish and Wildlife

The CDFW manages approximately 51,200 acres of land, or approximately 0.2% of the DRECP area. As shown in Table R1.11-1 (presented in Appendix R1), CDFW-managed lands

include approximately 10,000 acres of wildlife areas, approximately 25,000 acres of ecological reserves, and approximately 15,000 acres of other areas.

III.11.2.2.2 California State Lands Commission

The CSLC manages approximately 340,533 acres of school lands, or 1.5% of the DRECP area. The CSLC also has jurisdiction over additional interests where the state has retained mineral rights after selling the surface rights. Together, these lands form a patchwork of small parcels found throughout the DRECP area, mostly in San Bernardino County and Eastern Riverside County. The CSLC is the largest state agency landowner in the DRECP area.

The CSLC manages its sovereign lands for the benefit of all the people of California, subject to the public trust, for water-related commerce, navigation, fisheries, recreation, open space, and other recognized uses.

On October 16, 2008, CSLC adopted a resolution supporting the environmentally responsible development of school lands under its jurisdiction for renewable energy-related projects. In this resolution, CSLC resolved that lands within its jurisdiction may be developed only with assurances that the state's unique and sensitive environments will be protected. The resolution also defines the CSLC's support for the environmentally responsible development of school lands under the CSLC's jurisdiction. The resolution further states that CSLC should encourage project proponents to submit applications for the use of school lands for the environmentally responsible development of renewable energy.

A memorandum of agreement, executed in May 2012 between the CSLC and the Department of the Interior, acting through BLM, describes the terms and procedures for land exchanges between these agencies to consolidate school lands into larger parcels suitable for commercial-scale renewable energy projects.

The CSLC also has jurisdiction over the beds of navigable lakes and waterways. These lands are known as sovereign lands, which CSLC manages on behalf of all people of the state pursuant to the Public Trust Doctrine. The CSLC negotiates leases of sovereign lands only when the proposed uses are determined by CSLC not to be inconsistent with the public trust.

III.11.2.2.3 California Department of Parks and Recreation

California State Parks administers approximately 1.3% of the DRECP area (292,800 acres) as state parks, recreation areas, a natural reserve, and other facilities within its system. California State Parks manages its lands to preserve the state's biological diversity, protect its natural and cultural resources, and create opportunities for high-quality outdoor

recreation. Chapter III.18 presents detailed information on recreational facilities in the DRECP area. Refer to this section for information on the acreage associated with California State Park facilities.

III.11.2.3 County Lands

The DRECP area includes all or portions of seven counties (Imperial, Inyo, Kern, Los Angeles, Riverside, San Bernardino, and San Diego) and 21 cities. Unincorporated lands within county jurisdictions, incorporated cities, and local districts account for nearly 4.8 million acres, or approximately 21% of the roughly 22.6 million acres within the DRECP area. Table R1.11-2 (presented in Appendix R1) provides the approximate distribution of planned land use types within the local agencies and jurisdictions of the seven counties. Land use authority for privately owned lands rests with the specific city or county in which the property is located.

III.11.2.3.1 Imperial County

Imperial County covers 2,942,080 acres and includes the seven incorporated cities of Brawley, Calexico, Calipatria, El Centro, Holtville, Imperial, and Westmorland, as well as federal, state, and tribal lands. Of this total, an estimated 2,774,033 acres are within the DRECP area. Approximately one-third of Imperial County's lands within the DRECP area (approximately 914,000 acres) are subject to local land use authority, which includes Imperial County; the unincorporated communities of Heber, Seeley, Ocotillo, Niland, Bombay Beach, Palo Verde, Desert Shores, Salton City, Salton Sea Beach, Winterhaven, and Bard; and incorporated cities and local districts (e.g., utility, hospital, or school districts). More than 60% of this total (approximately 1.7 million acres) is under federal jurisdiction, primarily under BLM and DOD jurisdictions. An additional almost 101,000 acres, or approximately 4% of Imperial County's land within the DRECP area, are under state agencies' jurisdictions. Local tribes control an estimated 56,000 additional acres.

III.11.2.3.2 Inyo County

As the second-largest county in California, Inyo County covers an estimated 6.5 million acres, or 10,140 square miles. Nearly half (2,987,400 acres) is in the DRECP area. The majority of lands in Inyo County are under the management of federal agencies. An estimated 2,668,000 acres of Inyo County in the DRECP area are made up of Inyo National Forest, Death Valley National Park, China Lake Naval Weapons Center, and BLM-administered lands. California state agencies control an additional 57,000 acres. Of the approximately 262,000 acres within the DRECP area but outside of federal, state, or tribal jurisdictions, the Los Angeles Department of Water and Power, as part of the Owens Valley aqueduct and associated lands, owns or controls 213,713 acres. The amount of land held in private

ownership is very small—only 1.9%. As a result of this pattern of public-land ownership, Inyo County is largely rural in character. Private, county, and Los Angeles Department of Water and Power facilities are included in Inyo County’s General Plan.

III.11.2.3.3 Kern County

The unincorporated area of Kern County includes an estimated 5 million acres of land. Of the approximately 1,746,000 acres within the DRECP area, approximately 821,000 acres, or 47%, are under federal jurisdiction, with the BLM and DOD controlling a majority (approximately 533,000 and 288,000 acres, respectively). An additional 28,000 acres, or 1.6% of the DRECP area within Kern County, are controlled by state agencies (CDFW, California State Parks, and CSLC), and an additional 231 acres are controlled by tribes. An estimated 897,000 acres (51%) of land in Kern County is designated for a range of uses, including general agriculture (approximately 281,000 acres), open space (approximately 292,000 acres), and residential (approximately 152,000 acres). An estimated 37,000 acres are planned for commercial, industrial, or industrial/commercial uses.

III.11.2.3.4 Los Angeles County

Los Angeles County encompasses 4,084 square miles, or more than 2.6 million acres. Of this, more than half (2,638 square miles or 1.7 million acres) is unincorporated. Approximately 680,000 acres are within the DRECP area, with an estimated 55,000 acres under federal jurisdiction (mostly DOD and BLM) and approximately 5,500 acres under the jurisdiction of California State Parks. Of the 680,000 acres subject to local agency or district control, by far the majority is planned for residential, mixed use, or other specific plan (approximately 524,000 acres) land uses. An estimated 55,000 acres within the DRECP area are designated for commercial, industrial, and combined industrial/commercial development, or public open space (approximately 8,900 acres).

III.11.2.3.5 Riverside County

Riverside County is the fourth largest county in the state, encompassing approximately 7,400 square miles (more than 4.7 million acres) and extending nearly 200 miles westward from the Colorado River to within 14 miles of the Pacific Ocean. It includes the desert regions of the Coachella Valley and Palm Springs, as well as the San Jacinto, Little San Bernardino, and Santa Rosa mountains; portions of Anza-Borrego Desert State Park and the Salton Sea State Recreation Area; and most of Joshua Tree National Park. Riverside County includes 28 incorporated cities and an unincorporated area encompassing an estimated 4.2 million acres. The General Plan Land Use Map describes Riverside County as predominately rural and natural in character.

The proposed DRECP area encompasses approximately 45% of Riverside County, or an estimated 2,147,000 acres, located in the eastern portion of the county. The eastern portion of Riverside County lies between the Colorado River on the east and the Santa Rosa and San Jacinto mountains on the west. This portion of Riverside County is distinguished from the western portion by its desert terrain and relatively lightly populated, relatively uncongested communities. Of the more than 2 million acres in eastern Riverside County, approximately 86% (1,846,000 acres) is under federal jurisdiction. The BLM controls 1.3 million acres, NPS controls 0.48 million acres, and DOD controls 0.11 million acres. The CSLC and CDFW hold jurisdiction over an additional approximately 35,000 acres and approximately 1,900 acres, respectively. Tribal lands account for approximately 12,000 acres. Of the estimated 252,000 acres subject to local control (county, cities, and districts), approximately 131,000 acres are designated as open space and 93,000 acres as general agriculture. Residential, rural residential, and specific plans account for approximately 22,000 acres. Designated commercial, industrial, and combined natural/mineral resources lands total approximately 1,500 acres. Remaining acres include lands within transportation rights-of-way and other categories.

III.11.2.3.6 San Bernardino County

San Bernardino County, with a land area of 20,106 square miles, is the largest county in the continental United States. Of the almost 13 million acres making up San Bernardino County, approximately 10.5 million acres (81% of the total) are outside the governing control of the San Bernardino County Board of Supervisors. This land is referred to as “non-jurisdiction” land or “non-jurisdiction” territory. Of this non-jurisdiction land, approximately 6 million acres are managed by BLM, and 1.9 million acres are managed by DOD. Of the remaining 19% of San Bernardino County’s total land area, approximately 4% lies within 24 incorporated cities. While the county influences a certain degree of development activity within these cities (primarily administrative buildings, criminal justice facilities, and certain limited infrastructure, including county-maintained roads), the city councils of the 24 cities directly regulate land use and planning within their respective cities. Fifteen percent (about 1.9 million acres) is entirely under county jurisdiction.

The proposed DRECP area encompasses an estimated 11,982,000 acres (18,721.9 square miles), or a majority of the county’s area. Of this total, approximately 83% (9,907,000 acres) is under federal jurisdiction. The BLM controls more than 6 million acres, DOD more than 2 million acres, and NPS more than 1.7 million acres. Remaining federal lands are controlled by the USFWS and USFS. Tribal lands account for approximately 63,000 acres. Lands under state jurisdiction total approximately 258,000 acres, with the CSLC holding jurisdiction over approximately 219,000 acres. Tribal lands account for approximately 63,000 acres of the DRECP area in San Bernardino County.

Of the estimated 1,754,000 acres subject to local control (county, cities, and districts), 830,000 acres are designated open space and 750,000 acres are designated as residential. An additional 47,000 acres are designated as general agriculture. Approximately 77,000 acres are designated Commercial, Industrial, or Specific Plan–Commercial Industrial. Remaining acres include lands within transportation rights-of-way and other categories.

III.11.2.3.7 San Diego County (part)

The unincorporated portion of San Diego County encompasses approximately 2.3 million acres, or 3,570 square miles. More than 90% of unincorporated county lands are either open space or undeveloped. This includes several large federal, state, and regional parklands that encompass much of the eastern portion of San Diego County.

The proposed DRECP area encompasses only a small portion (268,000 acres or just more than 417 square miles) of the easternmost portion of San Diego County. Of this total, approximately 74% (approximately 198,000 acres) is Anza-Borrego Desert State Park. The BLM controls only 179 acres. Of the remaining lands subject to county jurisdiction, the majority are designated Residential (approximately 58,000 acres) and Open Space (approximately 11,000 acres). Remaining acres are designated Commercial (633 acres) and Industrial (163 acres). No tribal lands are within the San Diego County portion of the DRECP area.

III.11.3 Existing Planning Documents

The discussion in the following sections summarizes federal, state, and county planning documents applicable to the DRECP area.

III.11.3.1 Federal Planning Documents

III.11.3.1.1 Bureau of Land Management

There are multiple BLM land use plans in the DRECP area: the California Desert Conservation Area Plan, and the Caliente and Bishop Resource Management Plans. Chapter III.14 includes a discussion of applicable regulations and these plans, as amended by programmatic planning efforts such as the Solar Programmatic Environmental Impact Statement Record of Decision. Volume II, in the No Action Alternative discussion, addresses additional planning decisions applicable to the DRECP.

III.11.3.1.2 Bureau of Reclamation

Within the DRECP area, the Lower Colorado River Multi-Species Conservation Program covers lands under the Bureau of Reclamation’s jurisdiction. These lands comprise more

than 400 miles of the lower Colorado River and historic 100-year floodplain from Lake Mead to the Mexico border.

III.11.3.1.3 Department of Defense

The Sikes Act of 1960, as amended, provides for Department of the Interior and DOD cooperation with state agencies in the planning, development, and maintenance of fish and wildlife resources on military reservations throughout the United States. Integrated Natural Resource Management Plans allow DOD to implement landscape-level management of its natural resources while coordinating with various stakeholders. Integrated Natural Resource Management Plans have been developed for each DOD installation within the DRECP area and include China Lake, Edwards, Twentynine Palms, Fort Irwin, Chocolate Mountains, and Barstow. DOD lands are described in Chapter III.24.

The DOD Siting Clearinghouse was established in the summer of 2010 and formally authorized by Congress through Section 358 of Public Law 111-383 in January 2011. Its purpose is to coordinate the DOD review of applications for projects that are filed with the Secretary of Transportation pursuant to Section 44718 of Title 49, United States Code, and referred to DOD by the Department of Transportation (specifically the Federal Aviation Administration). The Clearinghouse coordinates the efforts of all DOD components (including the Joint Staff, Army, Navy, Air Force, Marines, and other critical offices) in the assessment of project proposals and the development of official DOD positions on the impacts of those projects on military missions. The Clearinghouse website is: <http://www.acq.osd.mil/dodsc/>.

III.11.3.1.4 National Park Service

General management plans for NPS lands within the DRECP area include the Death Valley National Park General Management Plan (2002), Joshua Tree National Park General Management Plan (1995), and the Mojave National Preserve General Management Plan (2002), as discussed in the following sections.

III.11.3.1.4.1 Death Valley National Park General Management Plan

The Death Valley National Park General Management Plan (2002) expands existing Death Valley National Park management strategies and the NPS mission and policies to management of the resources within the lands added to the park in 1994. It also adds designation of 95% of the park as wilderness. The park seeks to protect resources commensurate with the visitor-use mandate as its highest priority, with no degradation of park values. The plan also strives to balance its resource preservation mission with specific mandates from Congress while disallowing degradation of park values.

III.11.3.1.4.2 Joshua Tree National Park General Management Plan

The Joshua Tree National Park General Management Plan (1995) expands existing Joshua Tree National Park management strategies and the NPS mission and policies to management of the resources within the park. The plan provides a framework for overall park management and identifies items needed to target its planning around several key issues. These issues include urban encroachment, renewable energy development and other adjacent land uses, wilderness status and conditions, and visitor-use issues including transportation facilities, local community needs, user conflicts, user capacity, and natural and cultural resource degradation from visitor use.

III.11.3.1.4.3 Mojave National Preserve General Management Plan

The vision for the Mojave National Preserve General Management Plan (2002) is to protect and perpetuate a natural environment and cultural landscape where the protection of self-sustaining native desert ecosystems is ensured for future generations. Educational opportunities and research activities concerning the natural and cultural environment are encouraged, and access for all visitors is ensured. The plan strives to perpetuate both the solitude and quiet, as well as the sense of discovery and adventure that exist today. The plan emphasizes minimum overall development that would detract from this setting. The plan depends upon communities to provide most visitor support services such as food, gas, and lodging.

III.11.3.2 State of California

Planning documents governing state lands within the DRECP area include Anza-Borrego Desert State Park, Red Rock Canyon State Park, Ocotillo Wells State Vehicular Recreation Area (SVRA), Heber Dunes SVRA, Arthur B. Ripley Desert Woodland State Park, Saddleback Butte State Park, Tomo-Kahni State Historic Park, and Antelope Valley California Poppy State Natural Reserve. The plans governing uses within these areas are discussed in the following sections. Information about planning documents for Arthur B. Ripley Desert Woodland State Park, Saddleback Butte State Park, and Tomo-Kahni State Historic Park is currently unavailable. The state Off-Highway Motor Vehicle Recreation Division proposes to acquire approximately 28,275 acres in Eastern Kern County that are interspersed within BLM parcels currently used for off-highway vehicle recreation, grazing, camping, and other activities. This area, when acquired, would be administered as an SVRA by the Off-Highway Motor Vehicle Recreation Division as a unit within the Hungry Valley District.

III.11.3.2.1 Anza–Borrego Desert State Park General Plan and Environmental Impact Report

The Anza–Borrego Desert State Park General Plan (2005) addresses some 600,000 acres in Eastern San Diego County, Southern Riverside County, and Western Imperial County. The General Plan provides guidelines for land use management within the park, including land acquisitions and the facilities required to accommodate an expected tourism increase. The General Plan delineates six management zones and sets general and specific goals and guidelines to guide park management. The General Plan also identifies recreational, operational, interpretive, and resource management opportunities and constraints consistent with their wilderness classifications (California Public Resources Code 5019.53 and 5019.68) and with the Department of Resource Management directives.

The General Plan identifies additional areas for the expansion of state wilderness by approximately 55,797 acres. It establishes the approximate 443-acre We-nelsch Cultural Preserve in the San Felipe Valley area to restrict development and uses for the protection of significant sensitive resources, in addition to establishing goals, guidelines, and management zones for resource management, facility operations, and accessible interpretive and recreational public programs.

III.11.3.2.2 Red Rock Canyon State Park General Plan Revision and Environmental Impact Report

Red Rock Canyon State Park occupies approximately 27,000 acres within the Mojave Sector of the Tehachapi District of the California State Park system and lies at the southernmost tip of the Sierra Nevada, where it converges with the El Paso Range. The park is approximately 25 miles northeast of Mojave and 80 miles east of Bakersfield in Kern County. It features various desert cliffs, buttes, and rock formations. The area was once home to the Kawaiisu Indians, who left petroglyphs in the El Paso Mountains and other evidence of their inhabitation. The park now protects significant paleontology sites and the remains of 1890s-era mining operations. The park includes two natural preserves and provides recreation activities, camping, sightseeing, equestrian activities, hiking, and opportunities for reflection and solitude.

The Red Rock Canyon State Park General Plan Revision is in process. The purpose of the General Plan Revision/Environmental Impact Report is to guide future development activities and management objectives within the park.

III.11.3.2.3 Ocotillo Wells State Vehicular Recreation Area General Plan Update

The Ocotillo Wells SVRA encompasses more than 85,000 acres and is open for off-highway vehicle exploration and recreation within its boundaries. Outside the boundaries, to the

south and east, large tracts of BLM land are also open to off-highway vehicle use. The western boundary and part of the northern boundary connect with the 500,000-acre Anza-Borrego Desert State Park, which is closed to off-highway vehicle recreation.

The Ocotillo Wells SVRA General Plan Update is currently underway. California State Parks has received public comments on draft preliminary goals addressing visitor experience and opportunities, resource management, interpretation and education, and other park operations.

III.11.3.2.4 Heber Dunes State Vehicular Recreation Area

Heber Dunes SVRA is 3 miles north of the U.S.–Mexico border, crossing at Highway 7 (Calexico/Mexicali) south of the city of El Centro and I-8, 8 miles east of the community of Heber in Imperial County. It encompasses 343 acres and is the most recent addition to the state’s Off-Highway Motor Vehicle Recreation Division.

On December 1, 2011, the Off-Highway Motor Vehicle Recreation Commission approved the Heber Dunes SVRA General Plan and Environmental Impact Report. The General Plan outlines broad goals and guidelines for the management of Heber Dunes SVRA. The approval of the General Plan also allows facility improvements to the park. Proposed facility improvements include a maintenance and ranger station, staff and volunteer residence area, picnic areas, training track, and upgraded utilities and roads.

III.11.3.2.5 Antelope Valley California Poppy State Natural Reserve Resource Management Plan, General Development Plan, and Environmental Impact Report (1979)

The Antelope Valley California Poppy State Natural Reserve is on California’s most consistent poppy-bearing land. Other wildflowers—owl’s clover, lupine, goldfield, cream cups, and coreopsis, to name a few—share the desert grassland to produce a mosaic of color and fragrance each spring. The Antelope Valley is in the western Mojave Desert at elevations from 2,600 to 3,000 feet, making it a high desert environment.

The objective of the approximately 1,760-acre poppy reserve differs from other state reserves because it is intended “to make available significant displays of blooming poppies and associated wildflowers for visitor enjoyment” (1979). In addition, the plan seeks to protect important cultural, wildlife, visual, and recreational resources within the reserve while allowing visitor access. More than 97% of study area lands are included for natural preservation. Remaining areas include passive resource interpretation or active resource interpretation and administrative services. As discussed in the Resource Management Plan, “Power lines can be disruptive,” and “Necessary utilities shall be located underground.

Construction of long-distance transmission lines across the reserve should be firmly resisted” (p. 11 of the Resource Management Plan).

III.11.3.3 Regional and County Planning Documents

Regional and county planning documents provide a guide to future physical planning. Land use authority for privately owned land is held by the specific city or county where the property is located. Local land use regulations, ordinances, and policies will apply to any future projects proposed on locally controlled jurisdictional lands. Summaries of the regional Habitat Conservation Plans and adopted county General Plans are provided in the following sections along with summaries of regulations specific to siting or promoting renewable energy projects within affected jurisdictions.

III.11.3.3.1 Imperial County General Plan

The Imperial County General Plan Land Use Element designates eight primary uses within the DRECP area boundaries. These are Agriculture, Community Area, Government/Special Public, Industry, Recreation/Open Space, Special Purpose Facility, Specific Plan Area, and Urban Area.

Much of the DRECP area lands covered by the Imperial County General Plan are classified as Agriculture. The county has made preservation of designated agricultural lands a priority. Industrial uses are generally not permitted on lands designated for agriculture except for those directly associated with agricultural products and processes, or for geothermal plants, which may be allowed with a conditional use permit subject to zoning and environmental reviews. Solar and wind energy facilities may be regulated differently than other types of power plants by implementing zoning requirements as part of conditional use permits.

Adopted in 2006, the Geothermal/Alternative Energy and Transmission Element provides guidance on the planning process for the development of geothermal/alternative energy resources and electrical transmission corridors. Imperial County is in the process of updating and amending the Geothermal/Alternative Energy Element of its General Plan through the Assembly Bill X1 13 funds received from the California Energy Commission. The county is revising ordinances, maps, and other required environmental documents.

III.11.3.3.2 Inyo County General Plan

Land Use Element

The Inyo County General Plan Land Use Element encompasses a variety of land uses that set the scale, pattern, and types of development for Inyo County within the DRECP area. These designations are grouped into four general categories: Residential, Commercial,

Industrial, and Other. The “Other” designation includes Open Space and Recreation, Public Service Facilities, Agriculture, Natural Resources, Natural Hazards, State and Federal Lands, and Tribal Lands/U.S. Bureau of Indian Affairs. The General Plan acknowledges that the majority of lands within the county are within the control of various state and federal landholding agencies and the City of Los Angeles. Private lands in the county account for less than 2% of the land area. All lands owned by the Los Angeles Department of Water and Power are classified according to their proposed uses (e.g., Residential, Industrial). In 2011, the Planning Commission and the Board of Supervisors approved an update to the Inyo County General Plan to address renewable solar and wind energy development in the county. The update included a General Plan Land Use Designation Overlay and identified areas where it would be appropriate to develop renewable wind and solar energy resources. However, the county had to rescind its Renewable Energy General Plan Amendment due to California Environmental Quality Act litigation (Inyo County 2014a). Inyo County is working on completing its Renewable Energy General Plan Element through the Assembly Bill X1 13 grant funds received from the California Energy Commission.

Government Element

The Government Element focuses on the need for the coordination of land use decisions with lands managed by government agencies. Goal GOV-3 of this element addresses the loss of private lands and states: “To provide opportunities for the private ownership of land by maintaining and expanding, when possible, the amount of privately owned land available in the county” (Inyo County 2014b).

III.11.3.3.3 Kern County General Plan

Land Use, Open Space, and Conservation Element

The focus of the Land Use, Open Space, and Conservation Element is to provide “for a variety of uses for future economic growth while also assuring the conservation of Kern County’s agricultural, natural, and resource attributes” (2009). Land Use, Open Space, and Conservation policies address a range of issues including air quality; archaeological, paleontological, cultural, and historical preservation; threatened and endangered species; surface water and groundwater; economic development; and oak tree conservation. Energy development is recognized as potentially conflicting with urban or other established uses.

Energy Element

The Kern County Energy Element defines critical energy-related issues facing the county and sets forth goals, policies, and implementation measures to both protect the county’s energy resources and encourage orderly energy development while affording maximum protection of the public’s health and safety and the environment. The general goal of the

Energy Element is to establish Kern County's position as California's leading energy producer, to encourage safe and orderly energy development within the county, and to become actively involved in the decisions and actions of other agencies as they affect energy development within Kern County. Some of the policies developed to achieve this goal concern wind, geothermal, and solar energy development follow:

- The goal of wind energy development policies is to promote the safe and orderly development of wind energy as a clean method of generating electricity while providing protection for the environment.
- The goal of geothermal development policies is to provide for the safe and orderly development of Kern County's geothermal resources, including direct-use applications of low- and moderate-temperature resources and electrical generation from high-temperature resources.
- Solar energy development policies recognize that solar energy represents a major potential resource due to favorable climatic conditions in the desert and valley regions of the county.

The Energy Element of the General Plan also contains policies and implementation measures that relate directly to other county plans and programs, including the Kern County Zoning Ordinance. This ordinance contains provisions and standards for most types of energy development and identifies two combining districts that set standards specifically for two types of energy development: the Wind Energy Combining District and the Petroleum Extraction Combining District.

III.11.3.3.4 Los Angeles County General Plan and Antelope Valley Area Plan

The Antelope Valley Areawide General Plan, in conjunction with other chapters and elements of the County of Los Angeles General Plan, is a coordinated statement of public policy developed by the County of Los Angeles for making important public decisions relating to the future of the Antelope Valley.

Through the Assembly Bill X1 13 grant funds received from the California Energy Commission, Los Angeles County has started creating a renewable energy ordinance to help mitigate development issues such as cumulative impacts. The county will also revise its renewable energy policies as it updates its General Plan and the Antelope Valley Area Plan. These policies will be the foundation for the ordinance.

Land Use

Under the draft plan, utility-scale renewable energy production facilities may be allowed in Rural Land designations without a plan amendment. Applications for these facilities,

however, require discretionary approval and are subject to California Environmental Quality Act and county environmental reviews and public hearings. Applications must be consistent with the relevant goals and policies of the Area Plan, especially Conservation and Open Space Element goals 10, 13, and 14, and all other related policies as presented in the Conservation and Open Space Element.

Utility installations are also compatible with nonurban, nonresidential land uses that include remote areas designated Non-Urban 1 (Antelope Valley Areawide General Plan, p. V1-5). See additional goals and policies of the County of Los Angeles General Plan (policies 2 and 3) and the Antelope Valley Areawide General Plan (policies 18, 19, 40, 65, 66, 69, 70, 101-103, 114, 135, 140, 141, and 217; 1986).

Conservation and Open Space Element: Significant Ecological Areas

The Significant Ecological Areas Program is a component of the Los Angeles County General Plan Conservation and Open Space Element. Significant ecological areas are ecologically important land and water systems that support valuable habitat for plants and animals. They are often essential for the preservation of rare, threatened, or endangered species and the conservation of biological diversity in Los Angeles County. Significant ecological areas are not preserves, but rather areas where the county deems it important to ensure a balance between development and resource conservation. The DRECP area encompasses all or portions of three significant ecological areas: Antelope Valley, Joshua Tree Woodlands, and San Andreas.

III.11.3.3.5 Riverside County General Plan

As stated in the Riverside County General Plan, a central vision for Riverside County is “the desire to maintain and enhance the character of Riverside County, including its extraordinary natural resources and unique communities, by clearly defining areas which are suitable for future growth and those which are suitable to be preserved and maintained.” Growth should be directed to areas that are well served by public facilities and services; and significant environmental features—including drainage ways, lands subject to extreme natural hazards, or lands that offer scenic beauty—are to be preserved.

Land Use Element

The Riverside County General Plan Land Use Element identifies five foundation components, under which all designated land uses fall: Agriculture, Rural, Rural Community, Open Space, and Community Development. Much of the unincorporated portions of the county are divided into 19 area plans, 2 of which are in the DRECP area (Desert Center and Palo Verde Valley). Additional lands in the eastern portion of the county (referred to as the Eastern Riverside County Desert Areas) and within the DRECP area are

not within an approved area plan. The majority of unincorporated land is designated Open Space (which allows residential development at one dwelling per 20 acres). Lands designated Agriculture, Rural, and Rural Community, when combined with Open Space, comprise more than 98% of the eastern portion of the county.

The Rural Desert land-use designation is the only General Plan land use that specifically allows renewable energy projects, including solar, geothermal, and wind. The Rural Desert land use designation allows for single-family residences, limited agriculture, and animal keeping. In addition to allowing the renewable energy uses of solar, geothermal, and wind, as well as the associated uses required to develop and operate these renewable energy sources, allowed uses include limited recreational uses, compatible resource development (which may include the extraction of mineral resources with approval of a surface mining permit), and governmental and utility uses. The Rural Desert land use designation applies generally to remote desert areas characterized by poor access and lack of water and other services.

While lands designated Rural Desert specifically allow renewable energy development, countywide policies address the development of wind turbines as related to land use, visual resources, noise, and design.

Multipurpose Open Space Element

The Multipurpose Open Space Element policies of the General Plan both address the need to protect energy resources including renewable energy (wind, solar, geothermal, and biomass) resources, and recognize the importance of developing alternative energy resources. The following is relevant to the DRECP.

Wind Energy. Wind is a beneficial source of energy that also provides economic and revenue advantages to the county. Issues to be considered when developing new wind energy conversion systems include aesthetics, safety, noise, air navigation interferences, land use, wildlife and general ecology, slopes and erosion, particulate matter (PM₁₀ and PM_{2.5}) and dust control, and wind access and equity. Policy Open Space 10.1 identifies the need to provide for orderly and efficient wind energy development that maximizes beneficial uses of wind resources and minimizes detrimental effects to residents and the environment. Policy Open Space 10.2 provides for continuation of the county's Wind Implementation Monitoring Program to study the evolution of wind energy technology, identify the means to solve environmental and community impacts, and provide for the ability to respond with changes in the county's regulatory structure. Additional countywide policies are discussed earlier in the section for the Land Use Element.

Solar Energy. The Riverside County General Plan identifies the following policies for the protection and use of solar energy, either through development of systems to convert solar

energy to electricity or through passive solar systems incorporated into building design. General Plan policies call for enforcement of the state's Solar Shade Control Act, which promotes all feasible means of energy conservation and uses of alternative energy supply sources, encourages efforts to provide active and passive solar access opportunities in new developments, and permits and encourages the use of passive solar devices and other state-of-the-art energy resources (OS 11.1, 11.2 and 11.3, respectively).

Geothermal Resources. The General Plan recognizes that geothermal resources can be used to produce electricity but cautions that geothermal development should not negatively affect the environment. There is no active geothermal energy production in the county, though geothermal resources do exist. County policies (Open Space 12.1–12.3) provide direction for proposals for the development of geothermal resources. In general, development of nonelectrical, direct-heat uses of geothermal heat and fluids for space, agricultural, and industrial heating may be allowed but only after consideration of the potential impacts to environmental, cultural, aesthetic, archaeological, and social resources. Policies also require that the benefits of development be weighed against the potential negative effects of hot springs, geysers, and other thermal features upon ecological, educational, and recreational values.

III.11.3.3.6 San Bernardino County General Plan

San Bernardino County's General Plan was adopted in 2007. The DRECP area includes a majority of the land in San Bernardino County. The General Plan Land Use Element designates primary uses in the General Plan within the boundaries of the DRECP area. The Conservation Element addresses the conservation, development, and use of natural resources and includes the goals, policies, and programs that ensure that these resources are preserved to the greatest extent feasible.

San Bernardino County has also received grant funds from the California Energy Commission. The county is developing a new Renewable Energy and Conservation Element for its General Plan. The county also plans to make strategic changes to its regulatory system with code updates associated with the new General Plan Element.

III.11.3.3.7 San Diego County General Plan

The County of San Diego General Plan anticipates significant pressure on natural resources and increased demand for energy due to a projected population increase of 38% by 2030 and its corresponding demand for new housing and related energy uses.

Open Space and Conservation Element

General Plan goals and policies in the Open Space and Conservation Element include guidance measures to accommodate renewable energy while protecting resources. In addition, county ordinances have been adopted regarding renewable energy development, as noted below.

Renewable Energy Facility Permitting

The County of San Diego adopted Ordinance No. 10073, Ordinance Amending the San Diego County Zoning Ordinance Related to Small, Medium, and Large Wind Turbine Systems, which defines and establishes setback, height, noise, and other requirements for facility installations, and Ordinance No. 10072, the Solar Energy Ordinance.

III.11.4 Land Ownership and Use by Ecoregion Subarea

The DRECP area has been divided into 10 ecoregion subareas, based on vegetation communities and geographic conditions. These ecoregion subareas do not follow jurisdictional boundaries. Lands within these ecoregion subareas include private land holdings subject to the planning authority of applicable county or incorporated cities, as well as tribal, state, and federal lands. A description of the land use within the DRECP area ecoregion subareas is provided in the following sections.

Land uses on federal- and state-managed lands are described in Sections III.11.2.1 and III.11.2.2, respectively. BLM land uses are discussed in Chapter III.14.

III.11.4.1 Cadiz Valley and Chocolate Mountains Ecoregion Subarea

The Cadiz Valley and Chocolate Mountains ecoregion subarea includes the northeastern portion of Imperial County, and Eastern Riverside and San Bernardino counties, encompassing approximately 3,052,000 acres. Table R1.11-3a (presented in Appendix R1) provides a detailed breakdown of land ownership acreage. The largest landowner in this ecoregion subarea is the federal government, with approximately 2,590,000 acres. State and tribal¹ lands make up 57,000 acres and 39,000 acres, respectively. The remaining lands (approximately 366,000 acres) are under the ownership of regional and local agencies or districts, or private entities. As shown in Figure R1.11-3a in Appendix R1, lands are generally in public ownership, with the largest holdings under the jurisdiction of BLM. Land ownership within the ecoregion subarea also includes DOD lands, NPS lands, USFWS

¹ There are no participating tribes in the Draft DRECP to date; therefore, DRECP decisions would not apply to tribal lands. The data provided in this section is for informational purposes only.

lands, CSLC lands, State Parks lands, and private lands. There is also an area of tribal lands in the northeastern portion of the ecoregion subarea; but because there are no participating tribes, DRECP recommendations would not apply to these tribal lands. Figure R1.11-1b in Appendix R1 shows the General Plan land uses adopted by Imperial, Riverside, and San Bernardino counties. Agriculture and residential uses are concentrated near the Colorado River in Eastern Imperial and Riverside counties, and near the junctions of major transportation corridors. Areas of open space are found throughout the ecoregion subarea. Table R1.11-3b (presented in Appendix R1) provides a detailed breakdown of adopted land uses by county. Table III.11-2 provides a summary of land use.

**Table III.11-2
 Cadiz Valley and Chocolate Mountains Ecoregion
 Subarea Summary of Land Use by County (acres)**

Land Use	Acres
<i>Imperial County</i>	
Federal	564,428
State	11,802
County – Designated Land Use	66,336
Tribal	31
<i>Riverside County</i>	
Federal	1,327,833
State	32,807
County – Designated Land Use	241,281
Tribal	12,074
<i>San Bernardino County</i>	
Federal	697,272
State	12,622
County – Designated Land Use	58,540
<i>Tribal</i>	
	26,957
Designated Land Use: Cadiz Valley and Chocolate Mountains Ecoregion Subarea Total Acres	3,051,983

Note: All acreages derived from best available data.

III.11.4.2 Imperial Borrego Valley Ecoregion Subarea

The Imperial Borrego Valley ecoregion subarea includes the southeastern portion of San Diego County and a majority of Imperial County (excluding the northeastern portion), and encompasses approximately 2,410,000 acres: approximately 1,150,000 acres of federal land, approximately 287,000 acres of state lands, approximately 56,000 acres of tribal lands, and approximately 92,000 acres of other lands (e.g., municipalities, nonprofits, and public utility districts). Table R1.11-4a (presented in Appendix R1) provides a detailed breakdown of land ownership acreage. As shown in Figure R1.11-2a

in Appendix R1, lands are mostly under federal management, with a large portion of privately owned lands within the central portion of the ecoregion subarea. Land management within the ecoregion subarea includes BLM, DOD, Bureau of Reclamation, USFWS, California State Parks, CDFW, CSLC, and private lands. There is also an area of tribal lands in the southeastern portion of the ecoregion subarea; but because there are no participating tribes, DRECP recommendations would not apply to tribal lands. Figure R1.11-2b in Appendix R1 shows the General Plan land uses as adopted by Imperial and San Diego counties. Agriculture uses are concentrated in the center portion of the ecoregion subarea, with open space uses to the east and west. Table R1.11-4b (presented in Appendix R1) provides a detailed breakdown of adopted land uses by county. Table III.11-3 provides a summary of acreage by land use.

**Table III.11-3
 Imperial Borrego Valley Ecoregion Subarea Summary of Land Use by County (acres)**

Land Use	Acres
<i>Imperial County</i>	
Federal	1,138,550
State	89,116
County – Designated Land Use	847,234
Tribal	55,952
<i>Riverside County</i>	
Federal	11,642
State	16
County – Designated Land Use	8
Tribal	0
<i>San Diego County</i>	
Federal	174
State	197,639
County – Designated Land Use	69,782
Imperial Borrego Valley Ecoregion Subarea Total Acres	2,410,114

Note: All acreages derived from best available data.

III.11.4.3 Kingston and Funeral Mountains Ecoregion Subarea

The Kingston and Funeral Mountains ecoregion subarea includes the southeastern portion of Inyo County and northeastern portion of San Bernardino County. As shown in Figure R1.11-3a in Appendix R1, lands are generally in public ownership with the largest holdings under the jurisdiction of the BLM and NPS. Land ownership within the ecoregion subarea also includes CSLC, CDFW, and private lands. Of the approximately 2,470,000 acres in this ecoregion subarea, approximately 2,321,000 acres are under federal ownership,

approximately 83,000 acres are under state ownership, and the remaining approximately 66,000 acres are under the jurisdiction or ownership of other public and private entities (e.g., municipalities, nonprofits, and public utility districts). Table R1.11-5a (presented in Appendix R1) provides a detailed breakdown of land ownership acreage.

Figure R1.11-3b in Appendix R1 shows the General Plan land uses as adopted by San Bernardino County. Open space is the predominant land use within the ecoregion subarea. Areas of residential use are scattered along Highway 164 and I-15. Table R1.11-5b (presented in Appendix R1) provides a detailed breakdown of adopted land uses by county. Table III.11-4 provides a summary of acreage by land use.

**Table III.11-4
 Kingston and Funeral Mountains Ecoregion Subarea
 Summary of Land Use by County (acres)**

Land Use	Acres
<i>Inyo County</i>	
Federal	1,133,990
State	37,976
County – Designated Land Use	29,901
<i>San Bernardino County</i>	
Federal	1,186,994
State	45,348
County – Designated Land Use	35,838
Kingston and Funeral Mountains Ecoregion Subarea Total Acres	2,470,047

Note: All acreages derived from best available data.

III.11.4.4 Mojave and Silurian Valley Ecoregion Subarea

The Mojave and Silurian Valley ecoregion subarea, which encompasses approximately 2,644,000 acres, is mostly within San Bernardino County but does include a small portion of Eastern Kern County. As shown in Figure R1.11-4a in Appendix R1, lands are generally in public ownership, with the largest holdings (approximately 2,400,000 acres) under the federal jurisdiction of BLM, DOD, and NPS. Land ownership within the ecoregion subarea also includes state lands (approximately 39,000 acres) under the jurisdiction of the CSLC and CDFW. The remaining approximately 205,000 acres are under the ownership of other public and private entities (e.g., municipalities, nonprofits, and public utility districts). Table R1.11-6a (presented in Appendix R1) provides a detailed breakdown of land ownership by acreage.

Figure R1.11-4b in Appendix R1 shows the General Plan land uses as adopted by Kern and San Bernardino counties. Residential uses are mostly concentrated near Barstow along I-15

and I-40. Open space and military uses constitute the majority of the uses in the ecoregion subarea. Table R1.11-6b (presented in Appendix R1) provides a detailed breakdown of adopted land uses by county. Table III.11-5 provides a summary of acres by land use.

**Table III.11-5
 Mojave and Silurian Valley Ecoregion Subarea Summary of Land Use by County (acres)**

Land Use	Acres
<i>Kern County</i>	
Federal	19,393
State	144
County – Designated Land Use	2,810
<i>San Bernardino County</i>	
Federal	2,380,627
State	39,379
County – Designated Land Use	201,746
Mojave and Silurian Valley Ecoregion Subarea Total Acres	2,644,100

Note: All acreages derived from best available data.

III.11.4.5 Owens River Valley Ecoregion Subarea

The Owens River Valley ecoregion subarea encompasses 417,558 acres and is entirely within western Inyo County. As shown in Figure R1.11-5a in Appendix R1, the majority of lands in this ecoregion subarea are managed by federal agencies (approximately 193,000 acres) such as BLM, DOD, and NPS. Lands under state ownership (e.g., CSLC and CDFW) total approximately 2,500 acres. In addition, there are 567 acres of tribal lands. The remaining approximately 221,000 acres are under the ownership of other public and private entities (e.g., municipalities, nonprofits, and public utility districts, etc.). Table R1.11-7a (presented in Appendix R1) provides a detailed breakdown of land ownership acreage. Table R1.11-7b (presented in Appendix R1) provides a detailed breakdown of adopted land uses by county. Table III.11-6 provides a summary of acres by land use.

**Table III.11-6
 Owens River Valley Ecoregion Subarea Summary of Land Use by County (acres)**

Land Use	Acres
<i>Inyo County</i>	
Federal	193,403
State	2,559
County – Designated Land Use	221,029
<i>Tribal</i>	
Owens River Valley Ecoregion Subarea Total Acres	417,558

Note: All acreages derived from best available data. The acreage provided for State lands only includes CSLC school lands and CDFW land and not the Owens Lake (sovereign land) owned by the CSLC.

III.11.4.6 Panamint Death Valley Ecoregion Subarea

The Panamint Death Valley ecoregion subarea encompasses approximately 1,937,000 acres and includes Northwestern San Bernardino County, portions of Eastern Inyo County, and a small portion of Northeastern Kern County. As shown in Figure R1.11-6a in Appendix R1, the majority of lands within this ecoregion subarea are under federal ownership (approximately 1,878,000 acres) by NPS, BLM, and DOD. There are scattered areas of CSLC and private lands throughout the ecoregion subarea. State lands total approximately 33,000 acres and are under the jurisdiction of the CSLC, CDFW, and California State Parks. The remaining approximately 26,000 acres are under the ownership of other public and private entities (e.g., municipalities, nonprofits, and public utility districts). Table R1.11-8a (presented in Appendix R1) provides a detailed breakdown of land ownership acreage. Figure R1.11-6b in Appendix R1 shows the General Plan land uses as adopted by San Bernardino County. The southern portion of the ecoregion subarea contains a mixture of open space and military uses. Table R1.11-8b (presented in Appendix R1) provides a detailed breakdown of adopted land uses by county. Table III.11-7 provides a summary of acres by land use.

**Table III.11-7
 Panamint Death Valley Ecoregion Subarea Summary of Land Use by County (acres)**

Land Use	Acres
<i>Inyo County</i>	
Federal	1,226,250
State	16,108
County – Designated Land Use	8,894
<i>Kern County</i>	
Federal	73,241
State	4,242
County – Designated Land Use	3,846
<i>San Bernardino County</i>	
Federal	578,883
State	12,225
County – Designated Land Use	13,711
Panamint Death Valley Ecoregion Subarea Total Acres	1,937,402

Note: All acreages derived from best available data.

III.11.4.7 Pinto Lucerne Valley and Eastern Slopes Ecoregion Subarea

The Pinto Lucerne Valley and Eastern Slopes ecoregion subarea includes a portion of Northern Riverside and San Bernardino counties and encompasses approximately 2,319,000 acres. As shown in Figure R1.11-7a in Appendix R1, lands are generally in public ownership, with the largest holdings under the federal jurisdiction (approximately 1,750,000 acres) of BLM,

NPS, and DOD. Land ownership within the ecoregion subarea also includes state lands (approximately 40,000 acres) under the jurisdiction of the CSLC and CDFW. There are 158 acres of tribal lands. The remaining approximately 528,000 acres are under the ownership of other public and private entities (e.g., municipalities, nonprofits, and public utility districts). Table R1.11-9a (presented in Appendix R1) provides a detailed breakdown of land ownership acreage. Figure R1.11-7b in Appendix R1 shows the General Plan land uses adopted by Riverside and San Bernardino counties. A swath of residential use runs from the Apple Valley area in the west to the Twentynine Palms area in the east and is generally surrounded by open space. Table R1.11-9b (presented in Appendix R1) provides a detailed breakdown of adopted land uses by county. Table III.11-8 provides a summary of acres by land use.

**Table III.11-8
 Pinto Lucerne Valley and Eastern Slopes
 Ecoregion Subarea Summary of Land Use by County (acres)**

Land Use	Acres
<i>Riverside County</i>	<i>521,744</i>
Federal	506,738
State	4,319
County – Designated Land Use	10,689
<i>San Bernardino County</i>	<i>1,796,972</i>
Federal	1,243,504
State	35,686
County – Designated Land Use	517,623
Tribal	158
Pinto Lucerne Valley and Eastern Slopes Ecoregion Subarea Total Acres	2,318,717

Note: All acreages derived from best available data exclusive of federal, state and tribal landholdings.

III.11.4.8 Piute Valley and Sacramento Mountains Ecoregion Subarea

The Piute Valley and Sacramento Mountains ecoregion subarea is entirely within San Bernardino County and encompasses approximately 1,091,951 acres. As shown in Figure R1.11-8a in Appendix R1, the majority of lands in this ecoregion subarea are under the federal jurisdiction (approximately 955,000 acres) of BLM, NPS, and USFWS. State land ownership within the ecoregion subarea includes approximately 32,000 acres under CSLC and CDFW jurisdiction. There are also areas of tribal lands (approximately 36,000 acres) in the eastern portion of the ecoregion subarea. The remaining approximately 69,000 acres are under the ownership of other public and private entities (e.g., municipalities, nonprofits, and public utility districts). Table R1.11-10a (presented in Appendix R1) provides a detailed breakdown of land ownership acreage. Figure R1.11-8b in Appendix R1 shows the General Plan land uses adopted by San Bernardino County. Open space is the predominant use throughout the ecoregion subarea, with a mixture of other land uses—including residential—clustered along the border with Arizona. Table R1.11-10b

(presented in Appendix R1) provides a detailed breakdown of adopted land uses by county. Table III.11-9 provides a summary of acres by land use.

**Table III.11-9
 Piute Valley and Sacramento Mountains Ecoregion
 Subarea Summary of Land Use by County (acres)**

Land Use	Acres
<i>San Bernardino County</i>	<i>1,091,951</i>
Federal	954,735
State	32,270
County – Designated Land Use	68,620
Tribal	36,325
Piute Valley and Sacramento Mountains Ecoregion Subarea Total Acres	1,091,951

Note: All acreages derived from best available data.

III.11.4.9 Providence and Bullion Mountains Ecoregion Subarea

The Providence and Bullion Mountains ecoregion subarea is entirely within San Bernardino County and encompasses approximately 2,615,000 acres. As shown in Figure R1.11-9a in Appendix R1, land ownership is predominantly federal (approximately 2,341,000 acres) and includes BLM, DOD, and NPS. Land ownership within the ecoregion subarea also includes state lands (approximately 69,000 acres) under the jurisdiction of the CSLC, California State Parks, CDFW, and the University of California. The remaining approximately 205,000 acres are under the ownership of other public and private entities (e.g., municipalities, nonprofits, and public utility districts). Table R1.11-11a (presented in Appendix R1) provides a detailed breakdown of land ownership acreage. Figure R1.11-9b in Appendix R1 shows the general land uses adopted by San Bernardino County. Open space is the predominant use, with residential use scattered sporadically throughout the ecoregion subarea. Table R1.11-11b (presented in Appendix R1) provides a detailed breakdown of adopted land uses in the county. Table III.11-10 provides a summary of acreage by land use.

**Table III.11-10
 Providence and Bullion Mountains Ecoregion
 Subarea Summary of Land Use by County (acres)**

Land Use	Acres
<i>San Bernardino County</i>	<i>2,615,216</i>
Federal	2,341,279
State	69,379
County – Designated Land Use	204,558
Providence and Bullion Mountains Ecoregion Subarea Total Acres	2,615,216

Note: All acreages derived from best available data.

III.11.4.10 West Mojave and Eastern Slopes Ecoregion Subarea

The West Mojave and Eastern Slopes ecoregion subarea includes lands within Inyo, Kern, Los Angeles, and San Bernardino counties and encompasses 3,627,169 acres. Federal land ownership includes approximately 1,420,000 acres. As shown in Figure R1.11-10a in Appendix R1, BLM is the single largest land manager in the ecoregion subarea. Land ownership within the ecoregion subarea also includes DOD lands. State lands (approximately 41,000 acres) are under the jurisdiction of California State Parks, CDFW, and CSLC. The remaining approximately 2,166,000 acres are under the ownership of other public and private entities (e.g., municipalities, nonprofits, and public utility districts). Table R1.11-12a (presented in Appendix R1) provides a detailed breakdown of land ownership acreage. Figure R1.11-10b in Appendix R1 shows the General Plan land uses adopted by Kern, Los Angeles, and San Bernardino counties. Land uses in the ecoregion subarea are diverse and include agriculture, open space, residential, government and public facilities, and industrial. Table R1.11-12b (presented in Appendix R1) provides a detailed breakdown of adopted land uses by county. Table III.11-11 provides a summary of acreage by land use.

**Table III.11-11
 West Mojave and Eastern Slopes Ecoregion
 Subarea Summary of Land Use by County (acres)**

Land Use	Acres
<i>Inyo County</i>	
Federal	116,739
State	113,968
County – Designated Land Use	524
<i>Kern County</i>	
Federal	2,247
State	1,642,637
County – Designated Land Use	728,500
Tribal	23,563
<i>Los Angeles County</i>	
Federal	890,343
State	231
County – Designated Land Use	680,066
<i>San Bernardino County</i>	
Federal	54,673
State	5,473
County – Designated Land Use	619,920
West Mojave and Eastern Slopes Ecoregion Subarea Total Acres	
	3,627,169

Note: All acreages derived from best available data.

III.11.4.11 Land Ownership and Use—Bureau of Land Management Land

The BLM LUPA Decision Area encompasses approximately 10 million acres of BLM-administered lands in the 10 ecoregion subareas of the DRECP area, in addition to the BLM-administered lands that are within CDCA but outside of the DRECP, as shown in Table III.11-12.

**Table III.11-12
 Total Acres of BLM Ownership in LUPA Decision Area**

DRECP	Acres
DRECP Ecoregion Subarea:	
Cadiz Valley and Chocolate Mountains	2,209,662
Imperial Borrego Valley	854,146
Kingston and Funeral Mountains	1,184,484
Mojave and Silurian Valley	1,003,000
Owens River Valley	189,067
Panamint Death Valley	457,137
Pinto Lucerne Valley and Eastern Slopes	882,996
Piute Valley and Sacramento Mountains	933,462
Providence and Bullion Mountains	1,415,824
West Mojave and Eastern Slopes	878,490
DRECP Total	10,008,268
CDCA Outside of DRECP Area	
Acres	
BLM lands in CDCA but outside of DRECP	1,084,830
LUPA Decision Area Total (DRECP plus CDCA outside of DRECP)	11,093,098

Due to rounding, total is slightly different from value for BLM lands on Table III.11-1.

III.11.5 Land Ownership and Use Outside of DRECP Area

Local governments determine the type and intensity of land uses allowed in lands under their jurisdictions. The uses permitted on lands within city or county jurisdictions are determined by local General Plans, Specific Plans, and the zoning ordinances enacted to implement them. Typically, some uses are allowed as a matter of right while others are discretionary and require review and approval for a conditional use permit. Within overall use classifications—such as Residential, Commercial, or Industrial—there can be wide variations in the specific uses allowed, as well as their densities. For example, areas zoned Residential can include density subcategories ranging from very low (such as 1 single-family residence per 80 acres), to high urban (such as high-rise condominiums and apartments). Commercial, Industrial, and Other Use classifications also vary in their applicable allowances and prohibitions. Not all jurisdictions permit all types of land use within their borders.

As prescribed by the California Public Utilities Code, the California Public Utilities Commission has authority over approval of transmission and substation facilities and their siting on lands under local city or county jurisdictions. Even though the California Public Utility Commission's authority supersedes local authority, the agency endeavors to be consistent with local plans and policies to the extent feasible and considers these when evaluating proposed facilities and locations.

Development of facilities on federal land requires federal agency approval since this land is not under state jurisdiction. Similar to local jurisdictions, federal agencies such as BLM and USFS provide for uses and activities on the lands they administer. Plans prepared by these agencies typically include provisions for recreation and resource development (e.g., mining) as well as manage conservation and resource protection areas. Based on federal legislation and agency regulations, each agency establishes which uses are allowed and where they can occur. The agencies have specific processes and requirements to consider amendments to their land use or land management plans. Other federal agencies, such as DOD or the Bureau of Reclamation, also have land in their respective jurisdictions and determine the allowable uses of these properties. Some federal land is highly restricted in its allowed uses, such as at military installations or in designated wilderness areas, while other federal land is more flexible and open to alternate uses.

Transmission lines are linear facilities, extending ribbon-like for many miles across the land. They terminate at substations or switchyards before rejoining the transmission system. Transmission line voltage is either increased (stepped up) or decreased (stepped down) at substations. Outside the DRECP area, it is expected that electricity generated from renewable generation sources will be delivered via the existing transmission system, which may require upgrading or expanding. The need for additional substations is not anticipated.

Transmission lines and substation facilities outside the DRECP area would likely be located in a variety of remote, rural, suburban, and urban settings, depending upon electricity demand.

III.11.5.1 Transmission Lines

Most new transmission lines connecting the DRECP area to load centers are expected to be within corridors where existing transmission lines have already been built and are operational. New transmission lines in these corridors would introduce additional towers and conductors into the landscape.

From the DRECP area, new transmission lines would head south and west to load centers in the Los Angeles and San Diego regions and north to the San Francisco Bay Area.

Transmission lines into the Los Angeles and San Diego regions would traverse two distinct and vastly different landscapes: undeveloped or minimally developed land and highly developed land. Most new lines would need to traverse the desert and mountains between the remote renewable energy facilities and existing transmission tie-ins. In most instances, the desert and mountain areas are sparsely settled and are in a mix of public, private, and tribal ownership. Outside of the desert and mountains, much of the relatively flat land is occupied by expanses of suburban and urban development. This includes residential uses at varying densities, commercial and office uses, light and heavy industrial uses, recreation, and institutional uses.

A transmission line heading north to the San Francisco Bay Area from the DRECP area would pass through sparsely populated mountains and then through either orchards and cropland or the foothill grasslands of the Western Central Valley.

III.11.5.1.1 San Diego Area

New transmission lines from the DRECP area to the San Diego area would be in the existing Sunrise 500/230 kV transmission corridor, which extends from Imperial County to substations near Alpine (Suncrest Substation) and Poway (Sycamore Substation). The transmission corridor roughly parallels I-8 and runs alternately north and south of that interstate highway.

From Ocotillo in Imperial County into San Diego County, most of the alignment is through open desert characterized by flat valley floors, outwash plains, and rugged mountains. In Eastern San Diego County, the land becomes hilly; supports scattered, relatively low vegetation; and is dominated by rocky landforms. Jacumba, Boulevard, and Buckman Springs are small communities along the corridor. Residences and businesses are located at low density throughout the region. There are relatively few public roads. Except in isolated communities, land use intensity is low. There is agricultural activity in some valley locations. Much of the area is administered by either BLM or USFS (Cleveland National Forest). As the corridor nears Alpine, the frequency and density of residences increase.

Starting at Alpine and continuing west, the alignment traverses a mixed rural and suburban landscape that extends through Lakeside to Poway. The corridor itself is primarily on ridges and slopes above low- to moderate-density suburban development. It passes to the north of Moreno and Santee and south of Poway, where it reaches Sycamore Substation outside Marine Corps Air Station Miramar. The corridor does not pass through any highly urbanized areas.

III.11.5.1.2 Los Angeles Area

Renewable electricity from the DRECP area would be delivered into the Los Angeles area by way of Vincent Substation, which is south of the city of Palmdale in northern Los Angeles County. From the Vincent Substation, transmission lines could follow different paths. One would be along the existing Tehachapi Renewable Transmission Project (TRTP) Segment 11 corridor to the Mesa Substation in Monterey Park and the Lighthipe Substation near Paramount. Another path would be in the existing TRTP segments 6 and 7 corridors, located east of the TRTP Segment 11 corridor, then on to Mesa Substation.

Both the TRTP Segment 11 and TRTP segments 6 and 7 corridors traverse the rugged mountain terrain of the Angeles National Forest, from the Vincent Substation near Highway 14 to just north of I-210. Both corridors cross the Pacific Crest Trail. Land use in the Angeles National Forest is largely recreation, conservation, and resource protection. There are no occupied structures in the two corridors. TRTP Segment 11 skirts highly suburbanized Altadena on the north before exiting the Angeles National Forest near Eaton Canyon Park on the east side of Altadena. The corridor immediately enters the dense suburban development of the Pasadena area and communities to the south. TRTP segments 6 and 7 corridors leave USFS lands at Duarte, near the San Gabriel River. Within the Angeles National Forest, both routes cross steep mountainous terrain.

Upon leaving the Angeles National Forest, the corridors immediately enter and cross the dense suburban landscape of the I-201 and I-10 corridors. There is little transition between the undeveloped lands of the Angeles National Forest and the highly developed suburban and urban landscapes in the flatlands. The built environment is dominated by single-family residential properties and local streets. The TRTP segments 6 and 7 corridors follow the San Gabriel River before turning west near Highway 60 (Pomona Freeway) to the Mesa Substation. The existing corridors are used for open space and contain nursery and agricultural production. There is vehicle parking at some locations. South from Mesa Substation to Lighthipe Substation, a single transmission corridor continues through dense suburban development characterized by a mix of single-family and multi-family residential uses and commercial and light industrial development. The corridor right-of-way itself supports open space and agricultural uses. At the City of Commerce, the corridor passes through an extensive light industry and warehousing district. The corridor here is often used for parking and outdoor storage. The corridor continues south through residential and commercial/industrial areas to the Lighthipe Substation.

Another possible corridor is from Vincent Substation to the upgraded Los Angeles Department of Water and Power Station E Substation in North Hollywood. As with the two other 500 kV transmission corridors coming from Vincent Substation, this route would traverse the mountainous USFS lands of the Angeles National Forest before emerging into

urbanized greater Los Angeles north of I-210 near Big Tujunga Creek and Wash in Lake View Terrace. The existing right-of-way through the urban area supports open space and agricultural uses and passes through residential, commercial, and light industrial areas.

III.11.5.1.3 North Palm Springs–Riverside Area

Renewable energy from facilities in the DRECP area would flow to load centers through transmission lines that generally follow the I-10 corridor in Riverside County. Multiple 500 kV lines would be constructed in existing transmission corridors. A number of circuits would be required between some substations in existing corridors. The primary corridor would be from the Colorado River Substation within the DRECP area to the Devers, Rancho Vista, and Lugo substations. A second corridor would be between the Imperial Irrigation District's new Midway X Substation and Devers Substation. A third corridor would be between the Devers and Valley substations.

The Colorado River Substation to Lugo corridor passes through both undeveloped and developed land. The portion of the corridor along I-10 between Colorado River Substation and Devers Substation near Palm Springs is in the desert and characterized by flat outwash plains and rugged mountains. The corridor is in the Chuckwalla and Shavers valleys, which separate the Eagle Mountains to the north and the Orocopia and Chuckwalla mountains to the south. Existing transmission lines and gas pipelines parallel the highway. West of the DRECP area, the corridor includes the small communities of Desert Center and Chiriaco Summit on I-10. A civil airport is located at Chiriaco Summit. Joshua Tree National Park is north of I-10.

Continuing west, the transmission line corridor enters the Coachella Valley at Indio, near where I-10 and Highway 86 merge. The landscape remains a sparsely vegetated desert, but areas of extensive development are there as well. The transmission corridor into and out of Devers Substation is north of I-10, while most residential and commercial development in the area is in Palm Springs and other communities south of I-10. The corridor in this area passes through extensive wind farm development on BLM and private land in the Whitewater and San Gorgonio Pass areas. Farther west, the corridor continues through the pass north of developed areas in Cabazon, Banning, and Beaumont. The character of these communities is suburban residential with pockets of commercial, intermixed with pastureland. Development becomes increasingly frequent and denser as the corridor moves west.

The corridor then crosses to the south side of I-10 and enters The Badlands, a mountainous area between Redlands and Moreno Valley. The corridor in this area roughly parallels San Timoteo Canyon Road for part of its length. There are scattered agricultural and residential properties in this area, but much of the route is open space. Emerging from The Badlands

south of Loma Linda in San Bernardino County, the corridor continues west through a mixture of residential, commercial, and light industrial uses and passes over the Santa Ana River. At the city of Ontario, the corridor turns north through an industrial part of Rancho Cucamonga and continues parallel to I-15. Leaving the developed valley floor, the corridor crosses Lytle Creek and Cajon Wash. Continuing north and northeast, the corridor passes through this mountainous, sparsely populated area. The corridor turns northeast south of Cajon Junction and crosses the Pacific Crest Trail near Highway 138 before continuing to Lugo Substation near Hesperia.

The corridor from the new Imperial Irrigation District Midway X Substation in Imperial County to Devers Substation would also traverse sparsely populated desert. This corridor is east of the Salton Sea and continues through open country northwest to east of the Coachella Canal until it intersects the I-10 corridor east of Indio. After crossing I-10, the corridor continues west into Devers Substation.

From Devers Substation, the corridor to Valley Substation passes through wind farms in the area and crosses to the south side of I-10 before passing small residential areas near Cabazon and Banning. South of Beaumont, the corridor passes over the unpopulated lower elevations of the San Jacinto Mountains before descending into irrigated agricultural land between Gillman Springs Road and Ramona Expressway. After crossing the expressway, the corridor ascends into the hilly terrain of Lake View Mountains, which is primarily open space with some scattered residential properties. The corridor descends to open land and an area of mixed residential and agricultural uses before turning south of the community of Nuevo and reaching Valley Substation in Romoland.

Another potential corridor extends from Rancho Vista Substation in Rancho Cucamonga to Serrano Substation near Anaheim Hills. It would pass through industrial development east of I-15 before crossing into a mixed warehousing and agricultural area south of Highway 60. The route would pass along the north side of the residential community of Eastvale and continue east through a mix of residential and commercial land uses, agricultural areas, feedlots, and a golf course, before reaching the Chino Hills near Highway 71. The rolling Chino Hills are characterized by grassland and shrub vegetation, with no development. The corridor emerges from the hills in Yorba Linda and continues south across Yorba Linda Boulevard and Highway 91 along Deer Canyon Park. This area outside the corridor has dense suburban residential development. The corridor continues across the Anaheim Hills Golf Course and arrives at the Serrano Substation off Cannon Street, just south of Anaheim Hills.

III.11.5.1.4 Central Valley

The transmission corridor from Whirlwind Substation in the DRECP area crosses over the Tehachapi Mountains to the San Joaquin Valley south of Arvin, then continues north along the I-5 corridor connecting with the Midway, Gates, and Los Banos substations before ending at the Tesla Substation near Tracy.

Heading northwest from Whirlwind Substation, located near Rosamond, the corridor crosses the Pacific Crest Trail and enters the Tehachapi Mountains. The mountains are very sparsely populated, and there are no roads or residences in the corridor through them.

Upon reaching the San Joaquin Valley, the mountains transition immediately to irrigated agricultural land in the valley, with scattered farmsteads and outbuildings. Roads are widely spaced and in grid patterns typical of flat farmland. The transmission corridor continues through agricultural land and across local roads before crossing Highway 99 and turning north to parallel I-5 to the east. Near Rosedale, the corridor turns west to cross I-5 and continues northwest to Buttonwillow, where Midway Substation is located. From the substation, the corridor continues north through agricultural land and crosses to the east side of I-5 through cropland, orchards, and pasture. Approximately 15 miles north of Kettleman City, the corridor alignment again crosses to the west of I-5 and continues north in the rolling grassland foothills of the Coast Ranges. From Kettleman City north to the end of the corridor, I-5 essentially marks the boundary between agricultural land to the east and foothills to the west. Near Patterson, the corridor diverges northwest from I-5 to follow I-580 to the Tesla Substation west of Tracy, in the Altamont Pass.

III.11.5.2 Substations

Transmission lines carrying electricity from the DRECP area would tie into new or existing substations. In most cases, the substations would need to be upgraded to handle the additional load. This would require the installation of new equipment and structures. Depending upon the spare capacity or available space at a substation, changes could be required either within the existing fence line or outside the existing facility footprint.

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