Land Use Plan Amendment

DESERT RENEWABLE ENERGY CONSERVATION PLAN

DRECP

Land Use Plan Amendment to the California Desert Conservation Plan, Bishop Resource Management Plan, and Bakersfield Resource Management Plan

Prepared by the U.S. Bureau of Land Management | September 2016

NATIONAL SYSTEM OF PUBLIC LANDS
U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

Desert Renewable Energy Conservation Plan

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to the

California Desert Conservation Area Plan, Bishop Resource Management Plan, and Bakersfield Resource Management Plan

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Prepared by:

U.S. Bureau of Land Management

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APPENDICES

ACRONYMS AND ABBREVIATIONS

Acronym/Abbreviation	Definition
ACEC	Area of Critical Environmental Concern
AIM	Assessment, Inventory, and Monitoring
CAA	Clean Air Act
BBCS	Bird and Bat Conservation Strategy
BLM	Bureau of Land Management
CDCA	California Desert Conservation Area
CDFW	California Department of Fish and Wildlife
CDNCL (or NCL)	California Desert National Conservation Lands
CEC	California Energy Commission
CFR	Code of Federal Regulations
CH	critical habitat
CMA	Conservation and Management Action
COS	Condor Operations Strategy
CSLC	California State Lands Commission
CWA	Clean Water Act
DFA	Development Focus Area
DOD	Department of Defense
DOI	Department of Interior
DRECP	Desert Renewable Energy Conservation Plan
EA	Environmental Assessment
ECCMP	Environmental and Construction Compliance Monitoring Plan
EIR	Environmental Impact Report
EIS	Environmental Impact Statement
EO	Executive Order
ERMA	Extensive Recreation Management Areas
ESA	federal Endangered Species Act
FEMA	Federal Emergency Management Agency
FLPMA	Federal Land Policy and Management Act
FTHL	flat-tailed horned lizard
GPL	General Public Land
GIS	geographic information system
GTLF	Ground Transportation Linear Feature
GW	gigawatt
HCP	Habitat Conservation Plan
IBLA	Interior Board of Land Appeals
IFS	Individual Focus Species
IM	Instruction Memorandum

Acronym/Abbreviation	Definition
LUPA	Land Use Plan Amendment
MAMP	Monitoring and Adaptive Management Program
MUC	multiple-use class
MW	megawatt
MWR	minimization water rights
NA	not applicable
NAAQS	National Ambient Air Quality Standards
NCCP	Natural Community Conservation Plan
NECO	Northern and Eastern Colorado Desert Coordinated Management Plan
NEMO	Northern and Eastern Mojave Plan
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NHT	National Historic Trail
NLCS	National Landscape Conservation System
NOI	Notice of Intent
NRT	National Recreation Trails
NSHT	National Scenic and Historic Trails
OHP	Office of Historic Preservation
OHV	off-highway vehicle
PEIS	Programmatic Environmental Impact Statement
PFC	proper functioning conditions
PL	Public Law
PM_{10}	particulate matter less than or equal to 10 microns in diameter
$PM_{2.5}$	particulate matter less than or equal to 2.5 microns in diameter
PSSCRMP	Palm Springs South Coast Resource Management Plan
REAT	Renewable Energy Action Team
RMP	Resource Management Plan
RMS	Rangewide Management Strategy
ROD	Record of Decision
ROW	right-of-way
RPS	Renewables Portfolio Standard
SHPO	State Historic Preservation Officer
SO	Secretarial Order
SRMA	Special Recreation Management Area
U.S.C.	United States Code
USFWS	U.S. Fish and Wildlife Service
VPL	Variance Process Land
WMRNP	West Mojave Route Network Project
WSA	Wilderness Study Area

GLOSSARY OF TERMS

A

acquired lands. Lands in federal ownership that are not *public domain*[1] and that have been obtained by the government by purchase, exchange, donation, or condemnation. Acquired lands are normally dedicated to a specific use or uses.

acquisition. The activity of obtaining land and/or interest in land through purchase, exchange, donation, or condemnation.

activity. Authorized projects and management activities conducted on BLM-administered lands. Activities include actions approved by permit or other authorization as well as actions conducted by the BLM.

activity footprint. The area of long- and short-term ground disturbance associated with the pre-construction, construction, operation, implementation, maintenance, and decommissioning of an activity, including associated linear and non-linear components, such as staging areas, access routes and roads, gen-ties, pipelines, other utility lines, borrow pits, disposal areas, etc. May also be considered synonymous with project/activity site.

adaptive management. A process for assimilating new information, including, but not limited to, from monitoring and research, and assessing if adjustments to the DRECP BLM Land Use Plan Amendment (LUPA) Conservation and Management Actions (CMAs), etc., are needed. The Monitoring and Adaptive Management Program (MAMP) is the vehicle for structuring adaptive management in the LUPA and implementing actions deemed necessary, as needed.

Applicant. A public or private entity, or an individual, that applies to the BLM for a land use authorization or approval of activity.

Area of Critical Environmental Concern (ACEC). A BLM area within public lands where special management attention is required to protect and prevent irreparable damage to important historic, cultural, or scenic values, fish and wildlife resources or other natural systems of processes, or to protect life and safety from natural hazards. The ACECs are part of the LUPA conservation land allocations. Defined in Section 103(a) of the Federal

[1] **Public domain.** Vacant, unappropriated, and unreserved public lands, or public lands withdrawn by Executive Order 6910 of November 26, 1934, as amended, or Executive Order 6964 of February 5, 1935, as amended, and not otherwise withdrawn or reserved, or public lands within grazing districts established under Section 1 of the Act of June 28, 1934 (45 Stat. 1269), as amended, and not otherwise withdrawn or reserved.

Land Policy and Management Act (FLPMA) of 1976, as amended, and regulation 43 Code of Federal Regulations (CFR) 1601.0-5(a).

avoidance to the maximum extent practicable (as utilized in the LUPA CMAs). A standard identified in the LUPA CMAs and applied to implementation of activities. Under this standard, impacts to identified resources are not allowed unless there is no reasonable or practicable means of avoidance that is consistent with the basic objectives of the activity. Compensation for unavoidable impacts will be required, as specified in the CMAs. The term "maximum extent practicable" as used here in the DRECP LUPA is applicable only to its use in the CMAs; it does not apply to the term as it is used in the Endangered Species Act of 1973, as amended.

B

baseline monitoring. A type of monitoring in which a designated resource specialist that assembles an initial set of information or quantitative data, through an accepted protocol, for comparison or a control by which a determination can be made in the future as to whether change has occurred through events, actions, or time. Baseline monitoring may be appropriate in areas that have not been sufficiently surveyed or for which relevant data is otherwise lacking.

biological monitoring. Visual survey of an area conducted by a designated biologist to determine if a biological resource is present. Biological monitoring is commonly conducted on the sites of proposed projects. Biological monitoring conducted during the implementation of activities is used to implement LUPA CMAs that require construction setbacks or that require the designated biologist to move a biological resource out of harm's way.

BLM land (also known as BLM-managed lands, BLM-administered land, or public land). Land or interest in land owned by the United States and administered by the U.S. Secretary of the Interior through the Bureau of Land Management, without regard to how the United States acquired ownership.

BLM LUPA conservation designations (also known as BLM conservation lands, BLM conservation areas, or conservation allocations). Administrative designations that include California Desert National Conservation Land, ACEC, and Wildlife Allocation designations on BLM-administered land. BLM Wilderness Areas, Wilderness Study Areas, National Monuments, National Historic Trails, and Wild and Scenic River designations (existing and proposed) are included as part of the existing Legislatively and Legally Protected Areas (LLPAs). The BLM LUPA conservation designations were identified through the planning process.

BLM Special-Status Species (also known as Special-Status Species). Includes those plant and animal species that are (1) species listed as threatened or endangered, or proposed for listing under the Endangered Species Act of 1973, and (2) species requiring special management consideration to promote their conservation and reduce the likelihood and need for future listing under the Endangered Species Act, which are designated as sensitive by the BLM California State Director. All federal Endangered Species Act candidate species, and delisted species in the 5 years following delisting, are considered and will be conserved as species sensitive. The BLM California State Director has also conferred sensitive status on California State endangered, threatened, and candidate species, and rare plant species, on species with a California Rare Plant Rank of 1B on the Special Vascular Plants, Bryophytes, and Lichens List maintained by the California Department of Fish and Wildlife that are on BLM lands or affected by BLM actions and that are not already special-status plants by virtue of being federally listed or proposed (unless specifically excluded by the BLM California State Director on a case-by-case basis), and on certain other plants the BLM California State Director believes meet the definition of sensitive. See BLM Manual 6840, Special Status Species Policy, for more detail.

breeding habitat. Vegetation types or landscapes that contain elements required for the reproduction of wildlife Focus or BLM Special Status Species; for example, tree or canopy structure, vegetation composition, soil type, or hydrologic requirements.

C

California Department of Fish and Wildlife (CDFW) fully protected species. Any species identified in California Fish and Game Code Sections 3511, 4700, 4800, 5050 or 5515. Such species may not be taken or possessed at any time, and no licenses or permits may be issued for their take except under an approved Natural Community Conservation Plan (NCCP) or for collection for necessary scientific research.

California Desert Biological Conservation Framework Land Cover Map. A detailed map of vegetation types and other land covers for the DRECP Plan Area. The land cover map is a composite of fine-scale and medium-scale mapping organized hierarchically according to the National Vegetation Classification Standard, including general community groupings, vegetation types, and alliance-level mapping units.

California Desert Conservation Area (CDCA). As defined in Section 601 of the FLPMA, the CDCA is a 25-million-acre expanse of land in Southern California designated by Congress in 1976 through the FLPMA. About 10 million acres of the CDCA are administered by BLM under its CDCA Plan.

California Desert National Conservation Lands (CDNCL or NCL). The Approved LUPA identifies California Desert National Conservation Lands, in accordance with the Omnibus

Public Land Management Act of 2009 (Omnibus Act), which are nationally significant landscapes within the CDCA with outstanding cultural, ecological, and scientific values. The LUPA also establishes CMAs to conserve, protect, and restore these landscapes. The California Desert National Conservation Lands are a permanent addition to the National Landscape Conservation System, as per the direction to BLM in the Omnibus Act.

clearance survey. Survey for Focus and BLM Special Status Species conducted immediately prior to vegetation and/or ground disturbance from activities, as per the CMAs. Clearance surveys must be conducted throughout the LUPA Decision Area and in accordance with applicable species-specific CMAs and protocols, as approved by BLM and U.S. Fish and Wildlife Service (USFWS) and CDFW, if applicable , to detect and clear (i.e., remove, translocate) out of harm's way individuals of a species prior to disturbance.

compensation and compensatory mitigation. For the purposes of the DRECP LUPA, compensation and compensatory mitigation mean replacing or providing substitute resources or habitats by enhancing or restoring lands within appropriate BLM conservation and/or recreation designations, or acquiring and conserving lands from willing sellers.

conservation easement. A partial interest in land that can be transferred to a qualified land conservancy or government entity. The purpose is to conserve or protect the land. Conservation easements typically restrict allowable uses of the land by prohibiting development and sometimes restricting or requiring particular management activities. A conservation easement is legally binding for a specified term, which may be in perpetuity.

Conservation and Management Actions (CMAs). The specific set of avoidance, minimization, and compensation measures, and allowable and non-allowable actions for siting, design, pre-construction, construction, maintenance, implementation, operation, and decommissioning activities on BLM land. CMAs are required for 14 different resources and 7 land allocations.

conserve. The term "conserve" (or "conservation") as used in the DRECP LUPA applies to the protection and management of the multitude of resources and values BLM is managing with land allocations and CMAs in the DRECP LUPA, including but not limited to biological/ecological, cultural, recreation, and visual resources, including the conservation and recreation land allocations and their management, specific CMAs, and compensation actions such as restoration, enhancement, and land acquisition (e.g., fee title purchase from willing sellers). In the DRECP biological conservation strategy, this term is applied more narrowly to the protection and management of ecological processes, Focus and BLM Special Status Species, and vegetation types.

creosote bush rings. Rings of creosote bush (*Larrea tridentata*) that form over long periods of time. As a single creosote bush produces new branches at the periphery of its

crown, the branches in the center of the crown begin to die. Eventually a sterile area of bare ground occupies the center of the original shrub, and as the ring becomes larger the original shrub segments into several shrubs (satellites), forming a ring around the point where the original shrub originated. As more time goes by these rings become elliptical rather than circular. The satellite shrubs in a ring are the same genetically, attesting to the fact that they form a single clone originating from one original shrub. Vasek (1980) showed that some of these clones are several thousand years old. The largest known creosote ring is 20.5 feet in diameter and may be 11,700 years old.

Critical Habitat. Critical habitat is defined in Section 3(5)(A) of the Endangered Species Act of 1973 as (1) the specific areas within the geographical area occupied by a species, at the time it is listed in accordance with the Endangered Species Act, on which are found those physical or biological features essential to the conservation of the species, and which may require special management considerations or protection; and (2) specific areas outside the geographical area occupied by the species at the time it is listed, upon a determination that such areas are essential for the conservation of the species. Designated critical habitat is protected under Section 7(a)(2) of the Endangered Species Act, which requires federal agencies to ensure that any action they fund, authorize, or carry out is not likely to result in the destruction or adverse modification of critical habitat.

D

Desert Renewable Energy Conservation Plan (DRECP). An interagency planning effort of the REAT agencies addressing a biological conservation framework and renewable energy strategy for the California desert. The DRECP consists of the DRECP BLM LUPA (Phase I), and a Phase II addressing nonfederal lands.

designated biologist. A biologist who is approved as qualified by BLM, and USFWS and CDFW, as appropriate. A designated biologist is the person responsible for overseeing compliance with specific applicable LUPA biological CMAs.

Development Focus Areas (DFAs). Locations where renewable energy generation is an allowable use, incentivized, and could be streamlined for approval under the DRECP LUPA. The LUPA will only streamline and provide incentives for renewable energy activities sited in a DFA.

disposal. Conveyance of federal interest in public land to a nonfederal party through such actions as sale or exchange under various public land law authorities.

distributed generation. The 2011 Integrated Energy Policy Report published by the California Energy Commission (CEC) defines distributed generation as: "(1) fuels and

technologies accepted as renewable for purposes of the Renewable Portfolio Standard supplying power directly to a consumer" (CEC 2012).

DRECP Plan Area (as known as the interagency DRECP Plan Area or DRECP boundary). The Mojave and Colorado/Sonoran desert ecosystems in Southern California, with some map-based extractions primarily for the Coachella Valley Multiple Species Habitat Conservation Plan in Riverside County and the Tejon Ranch Tehachapi Uplands Multiple Species Habitat Conservation Plan in Kern County. This area does not include the lands in the LUPA Decision Area (see definition) in the CDCA but outside the DRECP boundary.

E

ecoregion subarea (also known as ecoregions or subareas). Planning and LUPA implementation units based on a consolidation of U.S. Department of Agriculture (USDA) ecoregion boundaries and U.S. Geological Survey Hydrologic Units. The DRECP LUPA contains 10 ecoregion subareas.

existing conservation areas. Areas where natural resources are substantially protected under existing federal or state law or other legal protections. Existing conservation areas are referred to on the maps and figures as Legislatively and Legally Protected Areas (LLPAs). These lands are assumed to be protected and managed for the benefit of Focus and BLM Special Status Species under existing management regimes.

existing transmission/utility corridors. Linear corridors on public lands designated through the West Wide Energy Corridor Programmatic Environmental Impact Statement, the CDCA Plan, or other Resource Management Plan as a preferred location for pipelines, transmission lines, and other linear infrastructure. Corridors are meant to minimize adverse impacts of these facilities and minimize the proliferation of rights-of-way across public lands.

Extensive Recreation Management Areas (ERMAs). BLM administrative units that require specific management consideration in order to address recreation use and demand. The ERMAs are managed to support and sustain the principal recreation activities and associated qualities and conditions. Recreation management actions within an ERMA are limited to only those of a custodial nature. Management of ERMA areas are commensurate with the management of other resources and resource uses.

F

federal lands. Land or interest in land owned and/or administered by the United States. Activities on federal lands in the LUPA Decision Area are administered by the Secretary of

the Interior through the BLM. Other federal lands administered by the Bureau of Reclamation, or BLM lands withdrawn by other agencies are not included in the definition of federal lands as used in the DRECP LUPA context.

Focus Species. Species whose conservation and management are provided for in the DRECP BLM LUPA.

foraging habitat. Vegetation types or landscapes that contain elements required for Focus and BLM Special Status wildlife species foraging; for example, particular vegetation consumed by Focus or BLM Special-Status wildlife species or habitat for species that are a primary source of Focus or BLM Special Status Species' diets.

G

General Public Lands (GPL). BLM-administered lands that do not have a specific land allocation or designation. These areas are available to renewable energy applications, but do not benefit from permit review streamlining or other incentives. Activities in these areas are required to follow the LUPA-wide CMAs, and the GPL specific CMAs. A land use plan amendment is needed to develop renewable energy and related activities in these areas.

geothermal project. Activities that involve the construction, operation, and maintenance of a facility that generates energy through steam from wells in geothermally active areas. Geothermal projects may include well sites, pipelines, towers, roads, pump or maintenance buildings, generators, transformers, and other supporting infrastructure. Geothermal activities on BLM land are authorized through the geothermal leasing program.

gigawatt (GW). Measure of energy equal to one billion watts. Used as a measure of instantaneous generation capacity.

gigawatt-hour (GWh). Measure of power equivalent to 10^9 watt hours. Used as a measure of energy production from generation facilities.

ground disturbance cap. Generally, a limitation on ground-disturbing activities in California Desert National Conservation Lands and ACECs. Expressed as a percentage of total BLM-managed California Desert National Conservation Lands and/or ACEC acreage, and cumulatively considers past, present, and future (proposed activity) ground disturbance. Baseline/existing (past plus present) ground disturbance would be determined using the most current imagery and knowledge at the time of an individual activity proposal. Specifically, the ground disturbance caps will be implemented as either a limitation or an objective triggering disturbance mitigation. The ground disturbance cap is a limitation on ground-disturbing activities within the California Desert National Conservation Lands and/or ACEC, and precludes approval of future ground-disturbing

activities if the ground disturbance condition of the California Desert National Conservation Lands and/or ACEC is below the designated ground disturbance cap. The ground disturbance cap functions as an objective, triggering a specific disturbance mitigation requirement if the ground disturbance condition of the California Desert National Conservation Lands and/or ACEC is at or above its designated cap. The disturbance mitigation requirement remains in effect until the unit drops below its specified cap, at which time the disturbance cap becomes a limitation. Refer to LUPA Section II.2.1, for the full implementation methodology. The methodology is repeated in Section II.2.2, and in CMAs NLCS-DIST-2 and ACEC-DIST-2.

ground disturbance mitigation (also known as disturbance mitigation). A discrete form of compensatory mitigation, unique to the ground disturbance cap implementation, and separate and distinct from other required mitigation in the DRECP LUPA. The disturbance mitigation requirement is triggered when the ground disturbance condition of the California Desert National Conservation Lands and/or ACEC is at or above its designated cap. The disturbance mitigation requirement remains in effect until the California Desert National Conservation Lands and/or ACEC drops below its designated cap. Refer to LUPA Section II.2.1 for the full ground disturbance cap implementation methodology. The methodology is repeated in Section II.2.2, and in CMAs NLCS-DIST-2 and ACEC-DIST-2.

ground-mounted distributed generation project. For purposes of DRECP LUPA, a solar power system of 20 megawatts (MW) or less consisting of solar modules held in place by racks or frames that are attached to ground-based mounting supports.

H

habitat assessment. As required in the LUPA-BIO CMAs. The DRECP land cover mapping and/or species model(s), updated mapping and species models, reconnaissance-level site visits, available aerial photography/imagery, and mapping of vegetation types and species' suitable habitat are all examples of the type of information that would be utilized during a habitat assessment. For all activities, a habitat assessment is required to assess site-specific vegetation types and Focus and BLM Special Status Species.

herd area. The areas on BLM land in which wild horses and burros were found when the Wild Free-Roaming Horses and Burros Act of 1971 was passed. These are the only areas BLM may manage horses by law.

Herd Management Area. A BLM land allocation. The areas within each herd area that BLM manages to sustain healthy and diverse wild horse and burro populations over the long term.

I

impervious and urban built-up land. Existing developed areas based on the DRECPland cover map.

J

Joshua tree woodlands. Evenly distributed with Joshua trees at ≥1% and *Juniperus* and/or *Pinus* spp. <1% absolute cover in the tree canopy (Thomas et al. 2004).

K

kilowatt (kW). Measure of energy equal to 1,000 watts.

L

land tenure actions. Jurisdictional or ownership changes in public lands. Tenure is derived from the Latin word "tenet" meaning "to hold." Thus, land tenure describes the way in which land is held. These adjustments are accomplished through such actions as disposal, acquisition, or withdrawal.

land use authorization. As used in this LUPA, a term to describe any authorization or instrument to occupy, develop, or use BLM land issued under various realty program authorities available to the BLM, including right-of-way grants, leases, permits, licenses, and easements. The term does not include renewable energy projects and their related ancillary facilities**.**

Land Use Plan Amendment (LUPA). The LUPA is a set of decisions that establishes management direction for BLM-administered land within an administrative area through amendment to existing land use plans. The DRECP BLM LUPA amends the following BLM land use and resource management plans (RMPs): CDCA Plan and its amendments: Western Mojave Plan (WEMO), Northern and Eastern Colorado Desert Coordinated Management Plan (NECO), and Northern and Eastern Mojave Plan (NEMO). The DRECP LUPA also amends portions of the Bishop RMP and the Bakersfield RMP. Described in Section 202 of the FLPMA of 1976, as amended, and in regulation 43 CFR 1600.

Legislatively and Legally Protected Areas (LLPAs). Existing protected lands, including: Wilderness Areas, National Monuments, National Parks, National Preserves, National Wildlife Refuges, California State Parks and Recreation Lands, CDFW Conservation Areas (Ecological Reserves and Wildlife Areas), CDFW areas, privately held conservation areas including mitigation/conservation banks approved by the USFWS and CDFW, land trust lands, Wilderness Study Areas, Wild and Scenic Rivers, and National Scenic and Historic Trails.

limited area. Under BLM's Trails and Travel Management program, an area restricted at certain times, in certain areas, or to certain vehicular use.

long-term impacts. Ground and/or vegetation disturbance that results in impacts lasting greater than 2 years.

LUPA Decision Area. The lands within the LUPA area for which the BLM has the authority to make land use and management decisions. This includes all BLM-administered lands within the interagency DRECP Plan Area, as well as BLM-administered lands within the CDCA outside of the interagency DRECP Plan Area. It excludes some LLPAs and all lands within 1 mile of the Colorado River, which are administered by the BLM-Arizona State Office.

LUPA Planning Area. All BLM-managed lands in the LUPA Decision Area, as well as all BLM managed LLPAs.

M

maximum extent practicable or feasible (as utilized in the LUPA CMAs). A standard identified in the LUPA CMAs and applied to implementation of activities. Under this standard, implementation of the CMA is required unless there is no reasonable or practicable means of doing so that is consistent with the basic objectives of the activity. The term "maximum extent practicable" as used here in the DRECP LUPA is applicable only to its use in the CMAs; it does not apply to the term as it is used in the Endangered Species Act of 1973.

megawatt (MW). Measure of energy equal to one million watts. Used as a measure of instantaneous generation capacity from a generation facility.

microphyll woodlands. Consist of drought-deciduous, small-leaved (microphyllus), mostly leguminous trees. Occurs in bajadas and washes where water availability is somewhat higher than the plains occupied by creosote bush and has been called the "riparian phase" of desert scrub (Webster and Bahre 2001). Composed of the following alliances: desert willow, mesquite, smoke tree, and the blue palo verde-ironwood.

Military Expansion Mitigation Lands (MEMLs). Lands conserved as mitigation for the expansion of Department of Defense installations and considered part of existing conservation areas under the DRECP BLM LUPA.

military lands. Department of Defense installations within the DRECP Plan Area.

minor incursion. Small-scale allowable impacts to sensitive resources, as per specific CMAs, that do not individually or cumulatively compromise the conservation objectives of

that resource or rise to a level of significance that warrants development and application of more rigorous CMAs or a DRECP LUPA amendment. Minor incursions may be allowed to prevent or minimize greater resource impacts from an alternative approach to the activity. Not all minor incursions are considered unavoidable impacts.

mitigation. As defined under both the National Environmental Policy Act (NEPA), mitigation includes: (a) avoiding the impact altogether by not taking a certain action or parts of an action; (b) minimizing impacts by limiting the degree or magnitude of the action and its implementation; (c) rectifying the impact by repairing, rehabilitating, or restoring the affected environment; (d) reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action; and (e) compensating for the impact by replacing or providing substitute resources or environments.

Mojave yucca rings. Rings of Mojave yucca (*Yucca schidigera*) that form in a similar manner as described for creosote bush rings (see definition). Mojave yucca reproduces sexually through the production of seed; vegetative reproduction is much more common and likely much more important to its persistence and spread (LaPre 1979; Gucker 2006). The species produces sprouts from short rhizomes that are close to parent stems (Gucker 2006). Rings form as the clonal growth proceeds outward from the original parent stem, and the central plant ages and dies (Gucker 2006). Mojave yucca rings can be as large as 20 feet in diameter and have up to 130 stems. Rings this large are thought to be at least 2,100 years old (mojavedesert.net 2013).

Monitoring and Adaptive Management Program (MAMP). A component of the DRECP BLM LUPA. The MAMP is the vehicle for structuring and reporting adaptive management.

N

National Landscape Conservation System (NLCS). In accordance with and as defined by Public Law 111-11 in the Omnibus Public Land Management Act of 2009 (PL 111-11), Sections 2002(a),(b)(1)(A–F), and (b)(2)(D), the NLCS is a BLM land use designation to conserve, protect, and restore nationally significant landscapes that have outstanding cultural, ecological, and scientific values for the benefit of current and future generations. Areas specially designated as part of the NLCS in PL 111-11 are Wilderness, Wilderness Study Areas, National Monuments, National Scenic Trails, National Historic Trails, and National and Wild and Scenic Rivers. These NLCS lands are part of the LLPAs in the DRECP LUPA. PL 111-11 also directed BLM to designate public land within the CDCA administered for conservation purposes as part of the NLCS. These lands are the **California Desert National Conservation Lands** and are part of the LUPA conservation designations. The California Desert National Conservation Lands designated in the DRECP LUPA are an addition to the other components of the NLCS. The

DRECP LUPA CMAs use the terms and acronyms,NLCS, CDNCL and NCL (National Conservation Lands) interchangeably.

nonfederal lands. Land owned by state agencies, local jurisdictions (e.g., cities or counties), non-governmental organizations, or private citizens, or otherwise not under federal ownership or management.

no surface occupancy. A fluid mineral leasing stipulation that prohibits occupancy or disturbance on all or part of the lease surface to protect special values of uses. Lessees may explore for or exploit the fluid minerals under leases restricted by this stipulation by using directional drilling from sites outside the no surface occupancy area. The no surface occupancy stipulation is used in CMAs relative to geothermal leasing on specific land allocations.

O

occupied habitat. Suitable habitat determined to be inhabited by a Focus or BLM Special Status Species based on the results of a habitat assessment and species-specific presence/absence or protocol surveys. This term is not applicable to wide-ranging large mammals with often poorly defined home ranges. For example, linkages may be typically unoccupied most of the time but nonetheless critical to population viability. In addition, the concept is not applicable to nomadic species, such as burro deer (*Odocoileus hemionus eremicus*), which opportunistically exploit flushes of new plant growth in response to unpredictable precipitation patterns. Thus, an area may not be used for many years because of a lack of summer thunderstorms, but then used heavily when it does rain in that area.

occurrences. Positive detections of specific wildlife or plant species or vegetation type in an area, resulting from protocol or presence/absence surveys, generally confirmed by a qualified biologist or botanist.

Open Off-Highway Vehicle (OHV) Lands. Designations on BLM-administered lands where motorized and non-motorized uses, including cross-country travel, is permitted (generally referred to as Open Areas or Designated Open OHV Areas). The LUPA has designated the open OHV Areas in the DRECP Plan Area as SRMAs.

Open OHV Lands – Imperial Sand Dunes. Open OHV Lands within the approved Imperial Sand Dunes Recreation Area Management Plan (ISDRA). These lands are within the DRECP LUPA planning area boundary, but are not part of the DRECP LUPA Decision Area. The DRECP LUPA does not result in any changes to the ISDRA.

P

pre-activity survey. Surveys conducted prior to project or activity site preparation and construction or implementation of an activity to determine presence and distribution of Focus and BLM Special Status Species, suitable habitat for these species, and/or vegetation types, as well as the need to implement applicable CMAs.

presence/absence survey. A survey conducted during the planning phase of a proposed activity to determine the presence/absence by a Focus or BLM Special Status Species, when a standard protocol survey for that species is not available, as specified in the species-specific CMAs or available from BLM, or USFWS or CDFW as approved for use by BLM. A presence/absence survey may replace a protocol survey in some other circumstances, depending on site conditions and/or timing of the survey (e.g., breeding season), with approval from BLM, in coordination with USFWS and CDFW, as appropriate.

Proposed LUPA. The Proposed LUPA was the BLM's preferred alternative in the Final Environmental Impact Statement (EIS). The Proposed LUPA and Final EIS built on the Draft LUPA and EIS, and incorporated the response to public comment on the Draft LUPA and EIS. The Proposed LUPA was protestable to the BLM Director, as outlined in the Dear Reader Letter that accompanied the Proposed LUPA and Final EIS.

protocol survey. Species-specific surveys that are conducted under a protocol that has been adopted by the USFWS and/or CDFW or is otherwise scientifically accepted for determining the occupancy or presence and absence of Focus and BLM Special Status Species. These surveys are required as specified in the species-specific CMAs in the LUPA.

public land. Land or interest in land owned by the United States and administered by the U.S. Secretary of the Interior through the Bureau of Land Management, without regard to how the United States acquired ownership, but not including (1) lands on the outer continental shelf and (2) lands held for the benefit of Indians, Aluets, and Eskimos.

public land, federal. Land or interest in land owned by the United States, and administered by a federal agency (see **federal lands**).

public land, nonfederal. Land or interest in land owned by the State of California, or the counties, typically administered by a state or local agency.

R

Renewable Energy Action Team (REAT) Agencies (also known as REAT Agencies or DRECP partner agencies). The DRECP REAT comprises representatives from the BLM, California Energy Commission (CEC), USFWS, and CDFW.

renewable energy project area. The total land area affected by a renewable energy activity, including the area directly and indirectly affected (equates to approximately 7.1 acres/MW forsolar development, 40 acres/MW for wind development, and 5 acres/MW forgeothermal development).

right-of-way avoidance area. An area that is to be avoided by, but may be available for, location of land use authorizations and non-renewable energy activities, if the authorization has special stipulations to meet planning goals and objectives for that area. If a land use authorization already exists in an avoidance area, a new authorization would be encouraged, and may be required, to collocate within the bounds of the existing use authorization.

right-of-way exclusion area. An area that is not available for land use authorizations under any conditions.

S

setback. A defined distance, usually expressed in feet or miles, from a resource feature (such as the edge of a vegetation type or an occupied nest) within which an activity would not occur; otherwise often referred to as a buffer. The purpose of the setback is to maintain the function and value of the resource features identified in the DRECP LUPA CMAs.

short-term impacts. Ground and/or vegetation impacts that result in effects lasting 2 years or less.

solar project. Activity that involves the construction, operation, maintenance and eventual decommissioning of a facility that generates energy from sunlight, including photovoltaic panels and thermal systems that convert the heat from sunlight into steam.Solar projects may include up to several acres of photovoltaic or mirror panel arrays, athermal tower, access roads, maintenance facilities, generators, foundations, and transformers, or other supporting infrastructure.

Special Recreation Management Area (SRMA). Designation on BLM-administered lands that are recognized and managed for their recreation opportunities, unique value and importance. SRMAs are high-priority areas for outdoor recreation as defined in the BLM Land Use Planning Handbook H-1601-1 (2005). It is a public lands unit identified in land use plans to direct recreation funding and personnel to manage for a specific set of recreation activities, experiences, opportunities and benefits. Both land use plan decisions and subsequent implementing actions for recreation in each SRMA are geared to a strategically identified primary market— destination, community, or undeveloped areas.

stressors. Physical, chemical, or biological factors (or conditions) that affect biological resources, including species or their suitable habitat, vegetation types, and/or important

ecosystem processes. The precise contribution of each stressor to a species' population may be uncertain, including which stressors have the greatest effect. In many cases stressors interact, and a combination of various stressors may affect a species.

suitable habitat. In general, Focus and BLM Special Status Species habitat consisting of land within a species range that has—in the case of wildlife, breeding and foraging habitat characteristics required by the species, or in the case of plants, vegetation and microhabitat characteristics—consistent with known or likely occurrences, as determined by the habitat assessment.

T

transmission lines. Linear facilities that move electricity from generating sites to electrical substations, and then on to the electrical distribution network. Transmission lines generally consist of: 1) *collector lines, or generator interconnection lines ("gen-tie" lines)* that connect generation projects to collector substations; 2) *connector lines* that connect lower voltage substations with higher voltage substations; and 3) *delivery lines* that support the long distance, bulk power transfer of electricity between generation centers and load centers, generally at high voltage.

transmission activity. Activities that involve the construction, operation, and maintenance of a transmission line, including step-up transformers, towers, and substations, but generally consisting of a linear type of disturbance.

transmission aligned. Renewable energy generation development that occurs in areas immediately adjacent, or in close proximity, to existing transmission facilities and/or approved designated utility corridors. Aligning renewable energy generation development with the existing approved utility corridors or lines (i.e. transmission system) is meant to minimize resource impacts by reducing the need for new, unplanned transmission infrastructure.

Transmission Technical Group (TTG). An independent technical advisory group, convened by the CEC, that assisted with transmission planning for the DRECP.

Travel Management Areas. On BLM-administered land, polygons or delineated areas where a rational approach has been taken to classify areas as open, closed, or limited, and which have an identified and/or designated network of roads, trails, ways, and/or other routes that provide for public access and travel across the LUPA Planning Area.

tribal lands. Those lands that constitute "Indian Country" within the meaning of Title 18 United States Code Section 1151.

U

unavoidable impacts to resources. Small-scale impacts to sensitive resources, as allowed per specific CMAs, that may occur even after such impacts have been avoided to the maximum extent practicable (see definition). Unavoidable impacts are limited to minor incursions (see definition), such as a necessary road or pipeline extension across a sensitive resource required to serve an activity.

V

valid existing rights. A documented, legal right or interest in the land that allows a person or entity to use said land for a specific purpose. Such rights include fee title ownership, mineral rights, rights-of-way, easements, permits, licenses, etc. Such rights may have been reserved, acquired, leased, granted, permitted, or otherwise authorized over time.

Variance Process Lands (VPL). These lands are potentially available for renewable energy development, but projects on Variance Process Lands have minimal streamlining and are not incentivized. Variance Process Lands have a specific set of CMAs. Project Applicants must demonstrate that a proposed activity on Variance Process Lands will avoid, minimize, and/or mitigate sensitive resources as per the CMAs, will be compatible with any underlying BLM land allocation, and per the CMAs be compatible with and not have an adverse effect on the LUPA design and DRECP strategies. Renewable energy applications in Variance Process Lands will follow the process described in the Western Solar Plan Record of Decision, Section B.5.

vegetation types (also referred to a desert vegetation types or communities and DRECP vegetation types). Vegetation types are defined as assemblages of vegetation of similar types and the plant and animal species that use those vegetation types as habitat. A vegetation type is generally characterized by its similarities and the natural ecological processes that dominate the type and give it its unique characteristics. Vegetation types are included as a key element of the DRECP conservation framework, and have specific CMAs. For the purposes of mapping and characterization in the DRECP, vegetation types are mapped within the National Vegetation Classification System hierarchy at the "group" level, which is finer- grained than the broad general community groupings but coarser than "alliances."

Visual Resource Management (VRM) Classes. BLM categories assigned to public lands based on scenic quality, sensitivity level, and distance zones. There are four classes, I–IV. Each class has an objective that prescribes the amount of change allowed in the characteristic landscape.

W

Wildlife Allocation. BLM conservation designation on BLM-administered lands where management emphasizes wildlife values, but the area does not contain the same sensitive values or management limitations as an ACEC.

wind project. An activity that involves the construction, operation, maintenance, and eventual decommissioning of a facility that generates energy from wind, using an array of turbines to capture and convert the wind energy to electricity. Wind projects may include up to several acres of turbines and foundations, access roads, maintenance facilities, generators, and transformers.

withdrawal. Removal or withholding of public lands by statute or secretarial order from the operation of some or all of the public land laws, such as from hard-rock mining or patent entry, in order to maintain other public values in the area. A withdrawal can also be used to reserve an area for a particular public purpose or program or to transfer jurisdiction over an area of public land from one federal department, bureau, or agency to another.

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I INTRODUCTION

The Bureau of Land Management (BLM) has prepared this Land Use Plan Amendment (LUPA)[2] to the California Desert Conservation Area (CDCA) Plan and Bishop and Bakersfield Resource Management Plans (RMPs) as part of the Desert Renewable Energy Conservation Plan (DRECP).

The DRECP has been developed as an interagency plan by the BLM, the U.S. Fish and Wildlife Service (USFWS), the California Energy Commission (CEC), and the California Department of Fish and Wildlife (CDFW, collectively known as the Renewable Energy Action Team (REAT or REAT Agencies) to (1) advance federal and state natural resource conservation goals and other federal land management goals; (2) meet the requirements of the federal Endangered Species Act, California Endangered Species Act, Natural Community Conservation Planning Act, and Federal Land Policy and Management Act (FLPMA); and (3) facilitate the timely and streamlined permitting of renewable energy projects, all in the Mojave and Colorado/Sonoran desert regions of Southern California.

The REAT Agencies collaborated throughout the planning process to coordinate efforts across jurisdictional boundaries. As explaining in the DRECP ROD, this LUPA represents the BLM's component of the Interagency DRECP.

I.1 Plan Area

As described in the DRECP ROD, the DRECP LUPA is a component of the Interagency DRECP. The Interagency DRECP Plan Area includes most of the CDCA and portions of the Bishop and Bakersfield RMPs (see Figure 1). This area includes lands in portions of Imperial, Inyo, Kern, Los Angeles, Riverside, San Bernardino, and San Diego Counties. The DRECP Plan Area covers approximately 22,585,000 acres, and encompasses the Mojave Desert and the Colorado/Sonoran Desert ecoregion subareas in California.

In addition to the DRECP Plan Area, the BLM LUPA Decision Area included BLM-managed lands outside of the DRECP Plan Area within the CDCA for specific amendments to the CDCA Plan, as outlined in the Approved LUPA (see Figure 2).

The BLM LUPA Decision Area does not include the Colorado River Corridor, which is under the management of the BLM–Arizona State Office, or the lands covered by the 2013 Imperial Sand Dunes Recreation Area Management Plan, although those lands are included on the maps and in the acreage figures because they are part of the CDCA. Although the entire DRECP Plan Area was used to develop the DRECP and is included throughout the

[2] In this document, the term LUPA applies both to the land use plan amendments to the CDCA Plan, and the Bishop and Bakersfield RMPs, and the identification of the California Desert National Conservation Lands.

Final EIS for analysis and illustrative purposes, the BLM LUPA will only apply to BLM-managed public lands. In total, the BLM LUPA Decision Area, depicted in Figures 1 and 2, includes BLM lands within the DRECP Plan Area plus the additional BLM lands covered by the CDCA Plan that are outside the DRECP Plan Area.

I.2 Purpose and Need

A number of federal and state laws and policies led the REAT Agencies to recognize the need for a landscape approach to renewable energy and conservation planning in the California desert, as detailed in Section I.1 above. This led the REAT Agencies to develop interagency objectives for the DRECP. To reflect the BLM's specific legislative, regulatory, and policy needs, the BLM developed a Purpose and Need for the LUPA. This Purpose and Need supports the Interagency Objectives, but also provides an independent justification for the BLM to undertake the DRECP LUPA.

I.2.1 Interagency Objectives

The interagency goal of the DRECP is to provide a streamlined process for the development of utility-scale renewable energy generation and transmission consistent with federal and state renewable energy targets and policies, while simultaneously providing for the long-term conservation and management of Special Status Species and vegetation types as well as other physical, cultural, scenic and social resources within the DRECP Plan Area through the use of with durable regulatory mechanisms.

DRECP Planning Area Boundary
CDCA Plan Boundary
County Boundary

Land Ownership

Federal Lands
- United States Bureau of Land Management
- United States Department of Defense
- United States Bureau of Reclamation
- United States Department of Agriculture
- United States Fish and Wildlife Service
- United States National Park Service

State Lands
- California Department of Fish and Wildlife
- California Department of Parks and Recreation
- California State Lands Commission
- Other State Lands

Other Lands
- Tribal Lands
- Local Agency
- Private

Nevada
Arizona
MEXICO
Pacific Ocean

Independence
Owens Valley
Inyo
Central Mojave
Tehachapi Mountains
Kern
California City
West Mojave
Lancaster
Los Angeles
Barstow
San Bernardino
Needles
Adelanto
Victorville
Lucerne Valley
Big Bear Lake
Twentynine Palms
Palm Springs
Palm Desert
Indio
Coachella
Riverside
East Riverside
Blythe
Chocolate Mountains
Imperial
San Diego
Calipatria
Imperial Valley
Brawley
Imperial
El Centro
Holtville
Calexico

266, 190, 127, 395, 58, 14, 138, 18, 247, 40, 95, 177, 10, 111, 86, 115, 8, 98

0 12.5 25 Miles

Sources: ESRI (2015); CEC (2013); BLM (2016); CDFW (2013); USFWS (2013)

FIGURE 1
DRECP Plan Area

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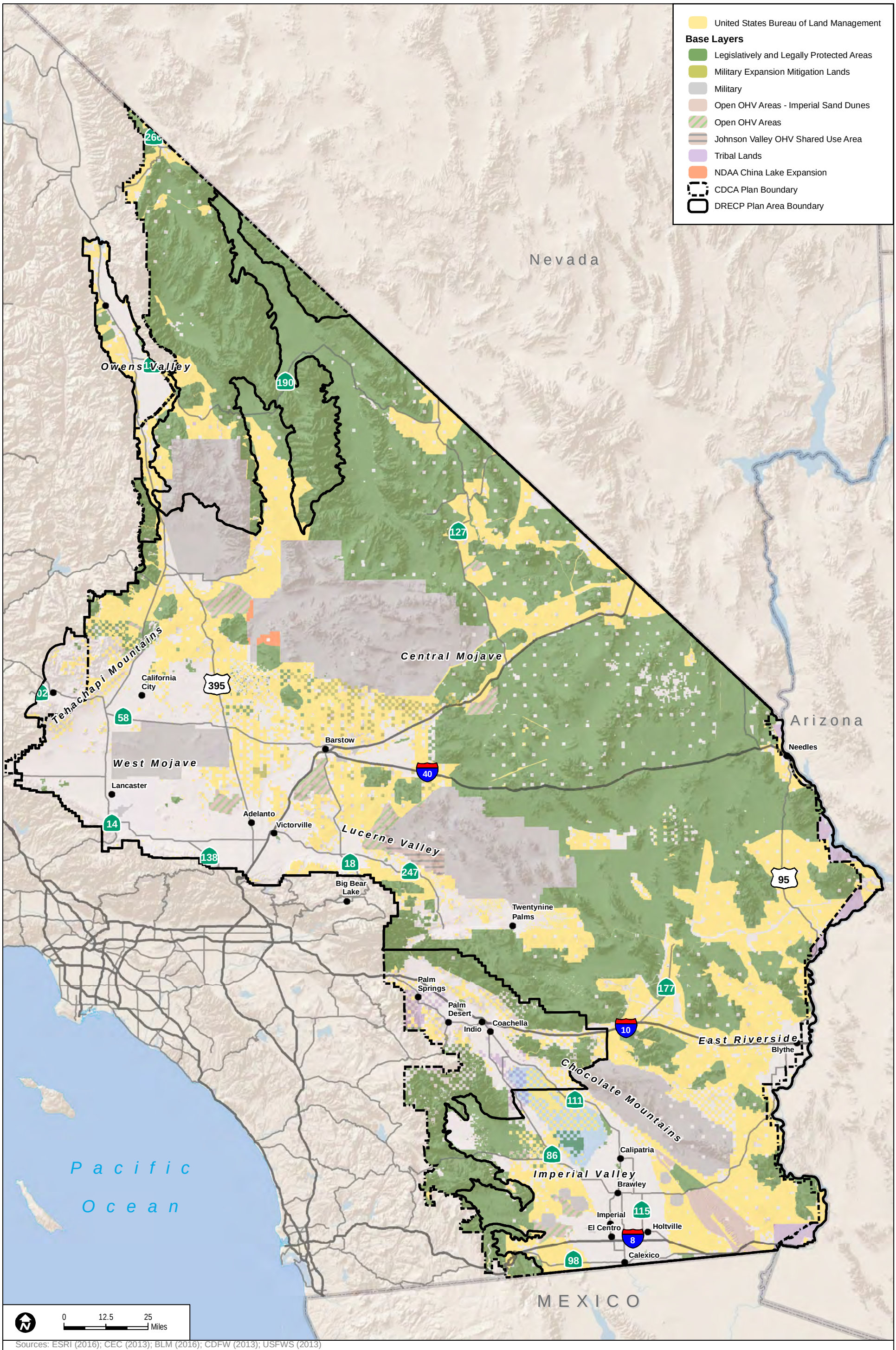

Sources: ESRI (2016); CEC (2013); BLM (2016); CDFW (2013); USFWS (2013)

FIGURE 2

DRECP LUPA Decision Area

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I.2.2 BLM LUPA Purpose and Need

The BLM must respond to the increasing demand for renewable energy development and transmission, driven in part by:

- The Energy Policy Act's goal of the BLM approving the development of at least 10,000 megawatts of renewable energy generation on public lands and the President's the more recent goal of approving an additional 10,000 megawatts on public land by 2020 (Executive Office of the President 2013).
- The Presidential Memorandum, issued May 17, 2013, directing federal agencies to modernize federal infrastructure review and permitting regulations, policies, and procedures. Among other best management practices, this memorandum directs federal agencies to:
    - Integrate project reviews among agencies with permitting responsibilities; ensure early coordination with other federal agencies, as well as with state, local, and tribal governments;
    - Strategically engage with, and conduct outreach to, stakeholders;
    - Employ project-planning processes and individual project designs that consider local and regional ecological planning goals;
    - Utilize landscape- level mitigation practices;
    - Promote the sharing of scientific and environmental data in open-data formats to minimize redundancy, facilitate informed project planning, and identify data gaps early in the review and permitting process; and,
    - Apply best environmental and cultural practices as set forth in existing statutes and policies.
- The Department of Interior's (DOI's) established national policy goals (Secretarial Order [SO] 3285 and SO 3285A1; DOI 2009) to identify and prioritize specific locations best suited for large-scale production of solar energy on public lands; encourage the production, development, and delivery of renewable energy as one of DOI's highest priorities; and work collaboratively with others to encourage the timely and responsible development of renewable energy and associated transmission while protecting the nation's water, wildlife, and other natural resources.

I.3 Planning Criteria

In accordance with BLM planning regulations (43 Code of Federal Regulations [CFR] 1610.4-2) for BLM-administered lands, the BLM developed planning criteria to help

guide data collection, alternatives formulation, and impact analysis. The following criteria define the decision space or "sideboards" that define the scope of the planning effort and are based on laws, regulations, and agency guidance, serving to keep the planning process focused.

- The Environmental Impact Statement (EIS) and land use plan amendments were completed in compliance with the Federal Land Policy and Management Act (FLPMA), Endangered Species Act (ESA), National Environmental Policy Act (NEPA), Omnibus Public Lands Management Act of 2009, National Historic Preservation Act of 1966, and all other applicable federal laws, proclamations, legislative designations, executive orders, court orders, and management policies of the BLM.
- The Desert Renewable Energy Conservation Plan (DRECP) and Land Use Plan Amendment (LUPA) were primarily driven by the need to accommodate renewable energy development and biological resource conservation. The effect of decisions on renewable energy and biological resource conservation affects other resources, uses, and values, including but not limited to physical, cultural, social, and scenic values, and uses such as land use authorizations, recreation, and mineral development within the DRECP area. In order to appropriately conserve these other resources and uses, decisions were made on these other resources to respond to the effect on them from renewable energy development and biological resource conservation. Planning decisions responded to changes in renewable energy and biological resource management.
- Resources, uses, and values not affected in any way by renewable energy and biological resource management were outside the scope of this LUPA. These resources, uses, and values will continue to be managed pursuant to the existing BLM land management plans, including the CDCA Plan of 1980 as amended, the Bakersfield Resource Management Plan (RMP), and Bishop RMP.
- The BLM will continue to manage resources and uses on BLM-administered lands by existing land use planning decisions unless specifically amended by this LUPA.
- The BLM land use plan and resource management plans, as amended, recognizes valid existing rights (e.g., mining claims).
- The BLM coordinated with local, state, tribal, and federal agencies during the EIS process to strive for consistency with existing plans and policies, to the extent consistent with federal law and the purposes of FLPMA. Pursuant to FLPMA, states are authorized to advise the Secretary of the Interior with respect to the development and revision of land use plans, guidelines, rules, and regulations for the public lands and with respect to such other land use matters as may be referred to them by the Secretary.

- The BLM decisions are consistent and compatible with the existing Lower Colorado River Multiple Species Conservation Program and the Coachella Valley Multiple Species Habitat Conservation Plan (HCP) and Natural Community Conservation Plan (NCCP), to the extent the HCP and NCCP are consistent with federal law and FLPMA.
- The BLM coordinated with tribal governments and will provide strategies for the protection of recognized traditional uses in the EIS process, consistent with other planning criteria and in accordance with the purpose and need for the DRECP.
- The BLM took into account appropriate protection and management of Special Status plant and animal species on BLM-administered lands in the EIS and engaged in all required consultation under federal law, including any take permits necessary under the Bald and Golden Eagle Protection Act.
- The BLM took into account appropriate protection and management of cultural resources on BLM-administered lands in the EIS and engaged in all required consultation.
- The BLM recognized Legislatively and Legally Protected Lands[3] managed by the BLM, and BLM decisions are consistent and compatible with the values for which the special designations were established.
- The BLM recognized in the EIS the specific niche occupied by public lands in the life of the communities that surround them or that are surrounded by them and in the nation as a whole.
- The BLM encouraged public participation throughout the process.
- Environmental protection; promotion of physical, cultural, social, and scenic values; and energy production are all desirable and necessary objectives of sound land management practices and were not considered mutually exclusive priorities.
- The BLM supported planning to provide renewable energy opportunities to help meet public consumptive uses that contribute to climate change.
- Under constitutional principles, federal law, and regulation, and through policy implemented over significant periods of time, BLM is responsible for managing public land resources, including species and species habitat on public land. The BLM's decision on the LUPA portion of the DRECP was not constrained or determined by any other agency's action, except as required by federal law, such as the ESA.

[3] Defined as "Existing protected lands, including Wilderness Areas, National Parks, National Preserves, National Wildlife Refuges, California State Parks and Recreation Lands, California Department of Fish and Wildlife (CDFW) Conservation Areas (Ecological Reserves and Wildlife Areas), CDFW areas, privately held conservation areas including mitigation/conservation banks approved by the Wildlife Agencies, land trust lands, Wilderness Study Areas, Wild and Scenic Rivers, and National Scenic and Historic Trails.

- As described earlier, however, the BLM coordinated with the other agencies and is directed by statute to consider other federal, state, local, and tribal programs and policies. The BLM has secured an ESA Section 7 biological opinion for its land use plan amendments.

I.4 Duration of the DRECP Land Use Plan Amendment

BLM regulations under 43 CFR 1610.5-5 do not specify a duration for LUPAs; therefore, the LUPAs approved as part of the DRECP will not expire and will remain in place until amended through future land use planning efforts as described in BLM regulations (43 CFR 1610). The BLM periodically evaluates land use plans to determine if new decisions are required through the plan amendment process (see BLM 2005, pp. 33–38). The plan amendment process is subject to NEPA and includes opportunities for participation by the public and other federal, state, and local agencies. The LUPAs approved as part of the DRECP could be amended in the future pursuant to changing conditions or law and policy as required by federal law and regulation, including FLPMA.

The public lands within the CDCA that comprise nationally significant landscapes with outstanding cultural, ecological, and scientific values that are administered by the BLM for conservation purposes as part of the NLCS, and will be managed to protect the values for which these lands were designated. The Omnibus Act provides for permanent inclusion of these lands in the NLCS, and therefore, can only be removed from the NLCS by an act of Congress. These lands cannot be removed from the NLCS through a land use plan amendment. While the lands themselves are permanently included in the NLCS, the CMAs remain subject to land use planning decisions, and may be changed through the land use plan amendment process, so long as those changes are consistent with the Omnibus Act and Secretarial Order 3308, which requires the BLM to ensure that National Conservation Lands are managed to protect the values for which they were designated.

BLM-authorized activities on public land must conform to the applicable land use plan. If the BLM receives an application for a project that does not conform to the land use plan, it may reject the application without additional analysis. If the BLM determines the proposal warrants further analysis, it must undertake a plan amendment, which includes a public process, as described in the land use planning regulations at 43 CFR 1610.2.

II APPROVED DRECP LAND USE PLAN AMENDMENT TO THE CDCA PLAN, BISHOP RMP, AND BAKERSFIELD RMP

The description of the DRECP Land Use Plan Amendment first provides an overview (Section II.1), followed by a description of the Ecological and Cultural Conservation and Recreation Designations (Section II.2). The Ecological and Cultural Conservation Designations include California Desert National Conservation Lands, Areas of Critical Environmental Concern (ACECs), and Wildlife Allocations. Recreation Designations include Special Recreation Management Areas (SRMAs) and Extensive Recreation Management Areas (ERMAs) in Section II.2.4. The Renewable Energy Activities, Policies, and Allocations are located in Section II.3. Resource-specific goals and objectives and Conservation and Management Actions (CMAs) for all land use designations are described in Section II.4, and amendments to the CDCA Plan in Section II.5. The Monitoring and Adaptive Planning Framework are in Section III. And lastly, the Implementation details can be found in Section IV.

II.1 Overview

The following provides an overview of the LUPA. The LUPA integrates renewable energy and resource conservation with other existing uses on BLM-managed land within the LUPA Decision Area.

The LUPA includes plan decisions necessary to adopt a conservation strategy and a streamlined process for the permitting of renewable energy and transmission development (called "renewable energy activities") on BLM-managed lands, while integrating other uses and resources. This is achieved through the designation of land use allocations for Ecological and Cultural Conservation, Recreation, and Development, and adopting CMAs for resources throughout the LUPA Decision Area. At the broadest level, the LUPA includes the following components defined below: Development Focus Areas (DFAs), Variance Process Lands (VPLs), General Public Lands, BLM Conservation Areas, and BLM Recreation Areas.

Development Focus Areas (DFAs) represent the areas within which the activities associated with solar, wind, and geothermal development, operation, and decommissioning will be allowed, streamlined and incentivized. Transmission development and operation will occur in previously designated corridors and other identified areas, both inside and outside the DFAs. Detailed descriptions of renewable energy activities for the LUPA are presented in Appendix D.

Variance Process Lands (VPLs) consist of variance lands from the Western Solar Plan that have undergone further screening and additional lands with moderate-to-low known ecological value and ambiguous known value for renewable energy. These lands are open for solar, wind, and geothermal energy applications under the BLM LUPA. However, all

solar, wind, and geothermal energy development applications have to follow a variance process before the BLM would determine whether to continue with processing them (see Section II.3.2.2 for details of the variance process). Applications in Variance Process Lands would not receive the incentives that apply to DFAs.

General Public Lands are BLM-administered lands that do not have a specific land allocation or designation, such as DFA, ACEC, SRMA, etc. These areas are open to renewable energy applications but do not benefit from the renewable energy streamlining or incentives.

BLM Conservation Areas. Under the LUPA, the following conservation designations are part of the DRECP Biological Conservation Strategy: National Landscape Conservation System (NLCS) (including California Desert National Conservation Lands, Wild and Scenic Rivers, and National Scenic and Historic Trails), ACECs, and Wildlife Allocations (see Section II.2 and Glossary of Terms for descriptions of these designations).

Recreation Management Areas. The LUPA includes two types of recreation management areas: SRMAs and ERMAs (see Section II.2.4 and Glossary of Terms for descriptions of these designations).

DRECP LUPA decisions only apply to BLM-managed public lands, also known as the DRECP LUPA Decision Area. LUPA decisions do not change management on lands outside of the BLM's jurisdiction.

As shown in Table 1, approximately 10,818,000 acres of BLM-administered lands occur within the LUPA Decision Area.

Table 1
DRECP LUPA Summary

LUPA Components	Acreage[1, 2]
DFAs	388,000
Variance Process Lands	40,000
LUPA Conservation Designations[3]	6,527,000
Recreation Designations[4]	3,595,000
General Public Lands	419,000
Total[5]	**10,818,000**

1 The following general rounding rules were applied to acreage values: values greater than 1,000 were rounded to nearest 1,000; values less than 1,000 and greater than 100 were rounded to the nearest 100; values of 100 or less were rounded to the nearest 10, and therefore totals may not sum due to rounding. In cases where subtotals are provided, the subtotals and the totals are individually rounded. The totals are not a sum of the rounded subtotals; therefore the subtotals may not sum to the total within the table.

2 Acres are BLM administered lands only

[3] Includes California Desert National Conservation Lands, ACECs, and Wildlife Allocations. A portion of this acreage overlaps Existing Conservation Areas and Recreation Designations.

[4] Includes SRMAs and ERMAs. A portion of this acreage overlaps Existing Conservation Areas and LUPA Conservation Designations

[5] Reflects the total acreage of BLM administered lands in the DRECP LUPA Decision Area; Total is not a sum of the LUPA components due to overlapping designations.

Table 2a summarizes the DRECP LUPA land allocations including the allocations in the Mojave Trails and Sand to Snow National Monuments, and Table 2b summarizes the DRECP LUPA land allocations excluding the allocations in the Mojave Trails and Sand to Snow National Monuments.

Table 2a
DRECP LUPA Allocations
Including Allocations in the Mojave Trails and Sand to Snow National Monuments

LUPA Allocations	Total Acreage[1, 2]
DFAs	388,000
Variance Process Lands	40,000
California Desert National Conservation Lands	3,956,000
ACEC	6,063,000[3]
Wildlife Allocation	18,000
SRMA	2,691,000[4]
ERMA	903,000[5]
General Public Lands	419,000
Total[6]	**10,818,000**

[1] The following general rounding rules were applied to acreage values: values greater than 1,000 were rounded to nearest 1,000; values less than 1,000 and greater than 100 were rounded to the nearest 100; values of 100 or less were rounded to the nearest 10, and therefore totals may not sum due to rounding. In cases where subtotals are provided, the subtotals and the totals are individually rounded. The totals are not a sum of the rounded subtotals; therefore the subtotals may not sum to the total within the table.

[2] Acres are BLM administered lands only

[3] ACEC acreage includes that which also overlaps with other land allocations, including the Mojave Trails National Monument, Sand to Snow National Monument, California Desert National Conservation Lands, Wilderness, Wilderness Study Areas, SRMAs and ERMAs.

[4] SRMA acreage includes that which overlaps with other land allocations, including the Mojave Trails National Monument, Sand to Snow National Monument, California Desert National Conservation Lands, and ACECs.

[5] ERMA acreage includes that which overlaps with other land allocations, including the Mojave Trails National Monument, California Desert National Conservation Lands, and ACECs.

[6] Reflects the total acreage of BLM administered lands in the DRECP LUPA Decision Area; Total is not a sum of the LUPA components due to overlapping designations.

Table 2b
DRECP LUPA Allocations
Excluding Acreage in the Mojave Trails and Sand to Snow National Monuments

LUPA Allocations	Total Acreage[1, 2]
DFAs	388,000
Variance Process Lands	40,000
California Desert National Conservation Lands	2,886,000
ACEC	4,863,000[3]
Wildlife Allocation	18,000
SRMA	2,133,000[4]
ERMA	450,000[5]
General Public Lands	419,000
Total[6]	**9,118,000**

1 The following general rounding rules were applied to acreage values: values greater than 1,000 were rounded to nearest 1,000; values less than 1,000 and greater than 100 were rounded to the nearest 100; values of 100 or less were rounded to the nearest 10, and therefore totals may not sum due to rounding. In cases where subtotals are provided, the subtotals and the totals are individually rounded. The totals are not a sum of the rounded subtotals; therefore the subtotals may not sum to the total within the table.

2 Acres are BLM administered lands only

3 ACEC acreage includes that which also overlaps with other land allocations, including California Desert National Conservation Lands, Wilderness, Wilderness Study Areas, SRMAs and ERMAs.

4 SRMA acreage includes that which overlaps with other land allocations, including, California Desert National Conservation Lands and ACECs.

5 ERMA acreage includes that which overlaps with other land allocations, including California Desert National Conservation Lands and ACECs.

6 Reflects the total acreage of BLM administered lands in the DRECP LUPA Decision Area minus the 1.3 million acres of the Mojave Trails and Sand to Snow National Monuments that overlap the DRECP LUPA allocations; Total is not a sum of the LUPA components due to overlapping designations.

Tables 3a and 3b display the DRECP LUPA land allocations and their respective acreages inside the Mojave Trails and Sand to Snow National Monuments.

Table 3a
DRECP LUPA Allocations
in the Mojave Trails National Monument

LUPA Allocations inside the Mojave Trails National Monument	Total Acreage[1, 2]
DFAs	—
Variance Process Lands	—
California Desert National Conservation Lands	1,027,000
ACEC	1,148,000
Wildlife Allocation	—
SRMA	466,000
ERMA	453,000

Table 3a
DRECP LUPA Allocations
in the Mojave Trails National Monument

LUPA Allocations inside the Mojave Trails National Monument	Total Acreage[1, 2]
General Public Lands	—
Total[3]	**1,602,000**

1 The following general rounding rules were applied to acreage values: values greater than 1,000 were rounded to nearest 1,000; values less than 1,000 and greater than 100 were rounded to the nearest 100; values of 100 or less were rounded to the nearest 10, and therefore totals may not sum due to rounding. In cases where subtotals are provided, the subtotals and the totals are individually rounded. The totals are not a sum of the rounded subtotals; therefore the subtotals may not sum to the total within the table.

2 Acres are BLM administered lands only

3 Reflects the total acreage of BLM administered lands in both DRECP LUPA Decision Area and the Mojave Trails National Monument; Total is not a sum of the LUPA components due to overlapping designations.

Table 3b
DRECP LUPA Allocations
in the Sand to Snow National Monument

LUPA Allocations inside the Sand to Snow National Monument	Total Acreage[1, 2]
DFAs	--
Variance Process Lands	--
California Desert National Conservation Lands	43,000
ACEC	51,000
Wildlife Allocation	--
SRMA	92,000
ERMA	--
General Public Lands	--
Total[3]	**99,000**

1 The following general rounding rules were applied to acreage values: values greater than 1,000 were rounded to nearest 1,000; values less than 1,000 and greater than 100 were rounded to the nearest 100; values of 100 or less were rounded to the nearest 10, and therefore totals may not sum due to rounding. In cases where subtotals are provided, the subtotals and the totals are individually rounded. The totals are not a sum of the rounded subtotals; therefore the subtotals may not sum to the total within the table.

2 Acres are BLM administered lands only

3 Reflects the total acreage of BLM administered lands in both DRECP LUPA Decision Area and the Sand to Snow National Monument; Total is not a sum of the LUPA components due to overlapping designations.

The following tables break out the LUPA land allocations by land use plan. The CDCA Plan information is displayed in two different tables: (1) all LUPA allocation acres, including those within the Mojave Trails and Sand to Snow National Monuments; and (2) LUPA allocation acres, minus the 1.3 million acres of overlap between the Mojave Trails and Sand to Snow National Monuments and the DRECP LUPA.

Table 4a
DRECP LUPA – CDCA Plan
Including Allocations in the Mojave Trails and Sand to Snow National Monuments

CDCA LUPA Allocations	Total Acreage[1, 2]
DFAs	388,000
Variance Process Lands	40,000
California Desert National Conservation Lands	3,956,000
ACEC	6,032,000[3]
Wildlife Allocation	--
SRMA	2,663,000[4]
ERMA	903,000[5]
General Public Lands	358,000
CDCA Total[6]	**10,664,000**

1 The following general rounding rules were applied to acreage values: values greater than 1,000 were rounded to nearest 1,000; values less than 1,000 and greater than 100 were rounded to the nearest 100; values of 100 or less were rounded to the nearest 10, and therefore totals may not sum due to rounding. In cases where subtotals are provided, the subtotals and the totals are individually rounded. The totals are not a sum of the rounded subtotals; therefore the subtotals may not sum to the total within the table.

2 Acres are BLM administered lands only

3 ACEC acreage includes that which also overlaps with other land allocations, including the Mojave Trails National Monument, Sand to Snow National Monument, California Desert National Conservation Lands, Wilderness, Wilderness Study Areas, SRMAs and ERMAs.

4 SRMA acreage includes that which overlaps with other land allocations, including the Mojave Trails National Monument, Sand to Snow National Monument, California Desert National Conservation Lands, and ACECs.

5 ERMA acreage includes that which overlaps with other land allocations, including the Mojave Trails National Monument, California Desert National Conservation Lands, and ACECs.

6 Reflects the total acreage of BLM administered lands in the CDCA portion of the DRECP LUPA Decision Area; Total is not a sum of the LUPA components due to overlapping designations.

Table 4b
DRECP LUPA – CDCA Plan
Excluding Acreage in the Mojave Trails and Sand to Snow National Monuments

CDCA LUPA Allocations	Total Acreage[1, 2]
DFAs	388,000
Variance Process Lands	40,000
California Desert National Conservation Lands	2,886,000
ACEC	4,833,000[3]
Wildlife Allocation	--
SRMA	2,104,000[4]
ERMA	450,000[5]
General Public Lands	358,000
CDCA Total[6]	**8,963,000**

1 The following general rounding rules were applied to acreage values: values greater than 1,000 were rounded to nearest 1,000; values less than 1,000 and greater than 100 were rounded to the nearest 100; values of 100 or less were rounded to

the nearest 10, and therefore totals may not sum due to rounding. In cases where subtotals are provided, the subtotals and the totals are individually rounded. The totals are not a sum of the rounded subtotals; therefore the subtotals may not sum to the total within the table.

2 Acres are BLM administered lands only

3 ACEC acreage includes that which also overlaps with other land allocations, including California Desert National Conservation Lands, Wilderness, Wilderness Study Areas, SRMAs and ERMAs.

4 SRMA acreage includes that which overlaps with other land allocations, including, California Desert National Conservation Lands and ACECs.

5 ERMA acreage includes that which overlaps with other land allocations, including California Desert National Conservation Lands and ACECs.

6 Reflects the total acreage of BLM administered lands in the CDCA portion of the DRECP LUPA Decision Area minus the 1.3 million acres of the Mojave Trails and Sand to Snow National Monuments that overlap the DRECP LUPA allocations; Total is not a sum of the LUPA components due to overlapping designations.

Table 5
DRECP LUPA – Bishop RMP

Bishop RMP LUPA Allocations	Total Acreage[1, 2]
DFAs	—
Variance Process Lands	—
California Desert National Conservation Lands	—
ACEC	29,000[3]
Wildlife Allocation	—
SRMA	29,000
ERMA	—
General Public Lands	61,000
Bishop RMP Total[4]	**135,000**

1 The following general rounding rules were applied to acreage values: values greater than 1,000 were rounded to nearest 1,000; values less than 1,000 and greater than 100 were rounded to the nearest 100; values of 100 or less were rounded to the nearest 10, and therefore totals may not sum due to rounding. In cases where subtotals are provided, the subtotals and the totals are individually rounded. The totals are not a sum of the rounded subtotals; therefore the subtotals may not sum to the total within the table.

2 Acres are BLM administered lands only

3 ACEC acreage includes that which also overlaps with other land allocations, including Wilderness Study Areas and SRMAs.

4 Reflects the total acreage of BLM administered lands in the Bishop RMP portion of the DRECP LUPA Decision Area; Total is not a sum of the LUPA components due to overlapping designations and acreage within existing conservation areas.

Table 6
DRECP LUPA – Bakersfield RMP

Bakersfield RMP LUPA Allocations	Total Acreage[1, 2]
DFAs	—
Variance Process Lands	—
California Desert National Conservation Lands	—
ACEC	1,500
Wildlife Allocation	18,000
SRMA	—
ERMA	—

Table 6
DRECP LUPA – Bakersfield RMP

Bakersfield RMP LUPA Allocations	Total Acreage[1, 2]
General Public Lands	—
Bakersfield RMP Total[3]	**20,000**

1 The following general rounding rules were applied to acreage values: values greater than 1,000 were rounded to nearest 1,000; values less than 1,000 and greater than 100 were rounded to the nearest 100; values of 100 or less were rounded to the nearest 10, and therefore totals may not sum due to rounding. In cases where subtotals are provided, the subtotals and the totals are individually rounded. The totals are not a sum of the rounded subtotals; therefore the subtotals may not sum to the total within the table.

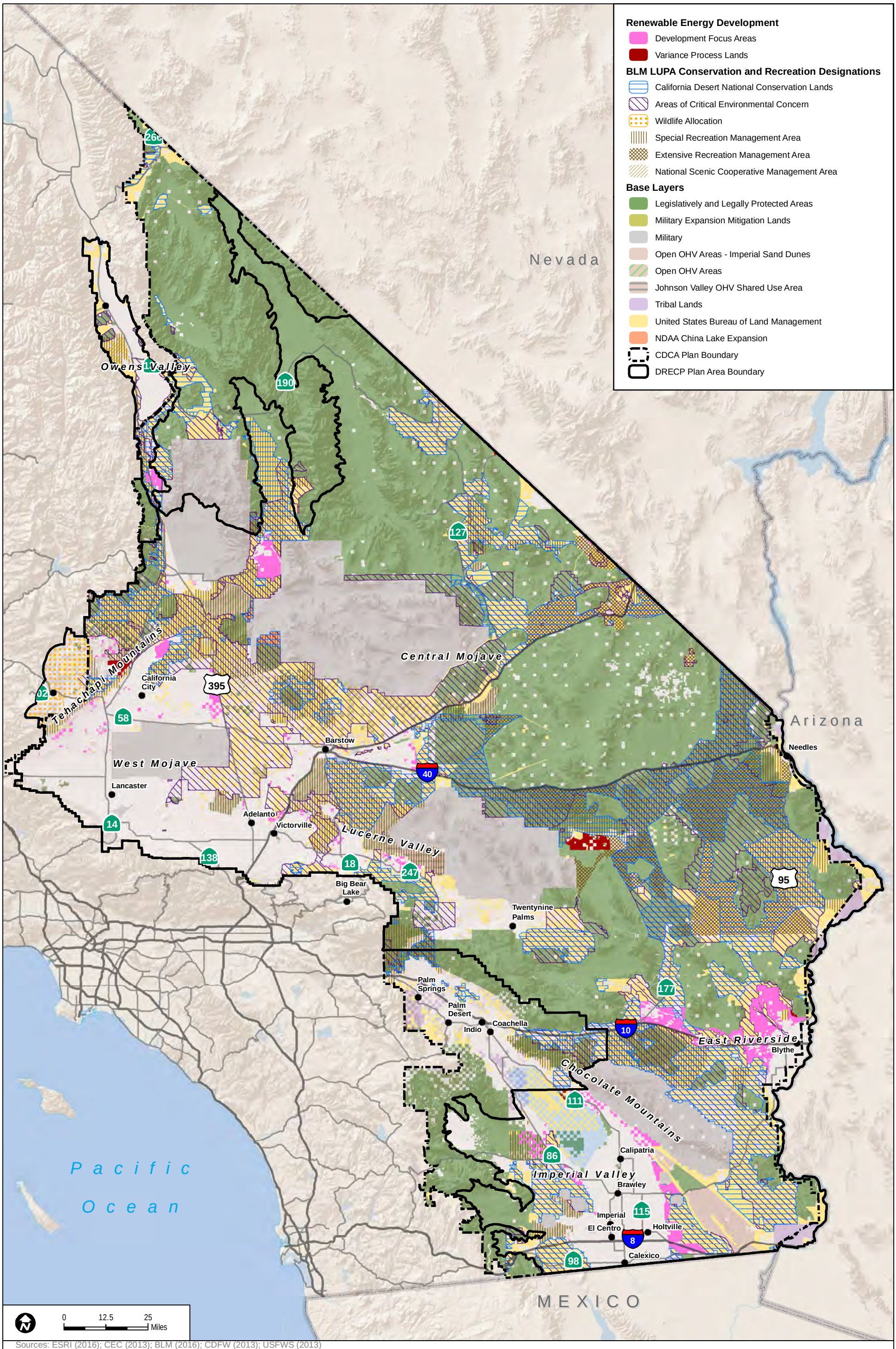
2 Acres are BLM administered lands only

3 Reflects the total acreage of BLM administered lands in the Bakersfield RMP portion of the DRECP LUPA Decision Area

Figure 3 provides the map of the major land allocations for the Approved LUPA. Figure 4, Figure 5, and Figure 6 provide maps of the Approved LUPA ecological and cultural conservation and recreation designations combined, ecological and cultural conservation designations alone, and recreation designations alone.

In addition to the land use allocations listed above, the DRECP LUPA includes Goals and Objectives and CMAs for the following resources:

- Biological Resources
- Air Resources
- Climate Change and Adaption
- Comprehensive Trails and Travel Management
- Cultural Resources and Tribal Interest
- Lands and Realty
- Livestock Grazing
- Minerals
- Paleontology
- Recreation and Visitor Services
- Soil, Water, and Water-Dependent Resources
- Special Vegetation Features
- Vegetation
- Visual Resources Management
- Wild Horses and Burros
- Wilderness Characteristics



Sources: ESRI (2016); CEC (2013); BLM (2016); CDFW (2013); USFWS (2013)

FIGURE 3

DRECP LUPA Major Land Allocations

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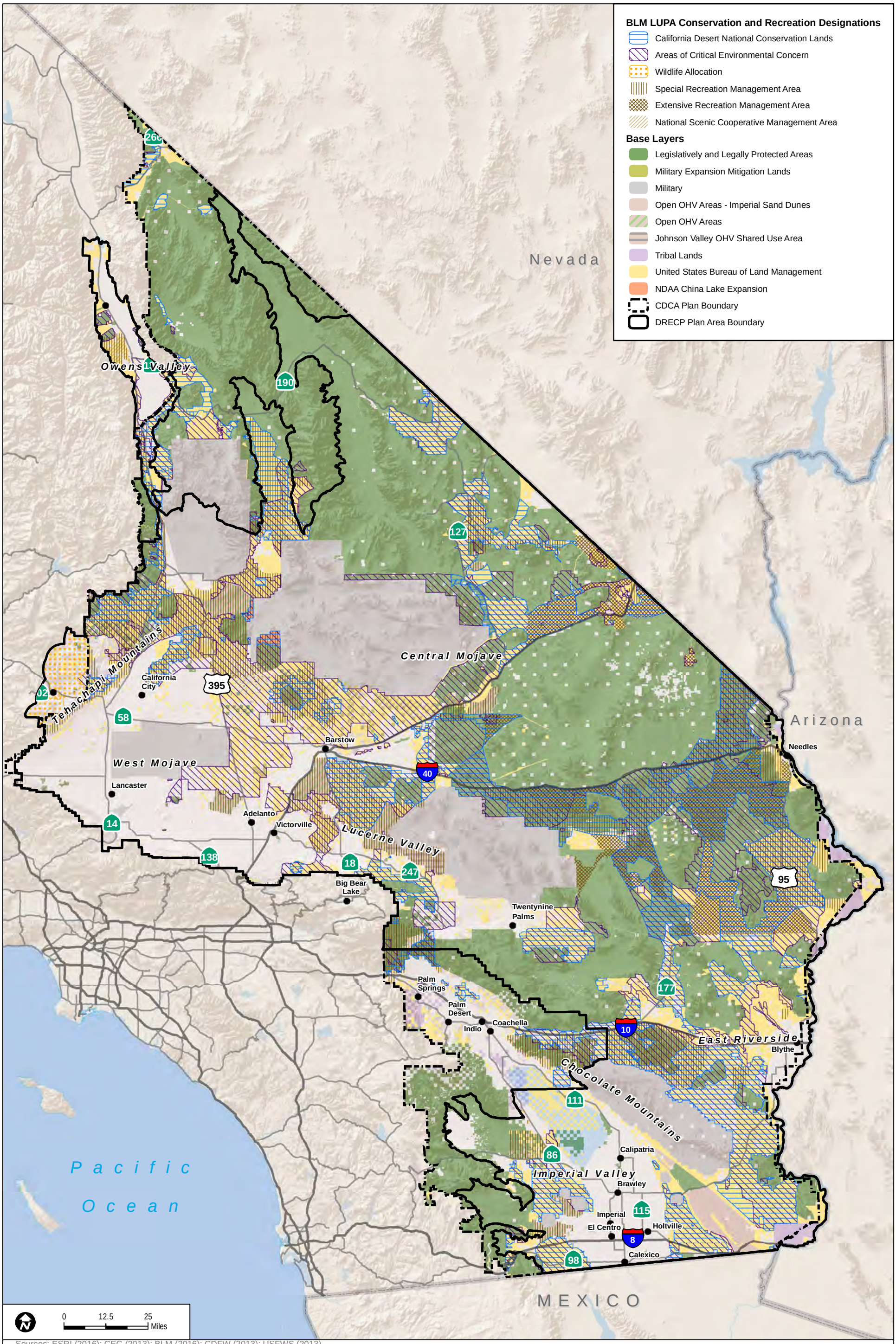

Sources: ESRI (2016); CEC (2013); BLM (2016); CDFW (2013); USFWS (2013)

FIGURE 4

DRECP LUPA Conservation and Recreation Designations

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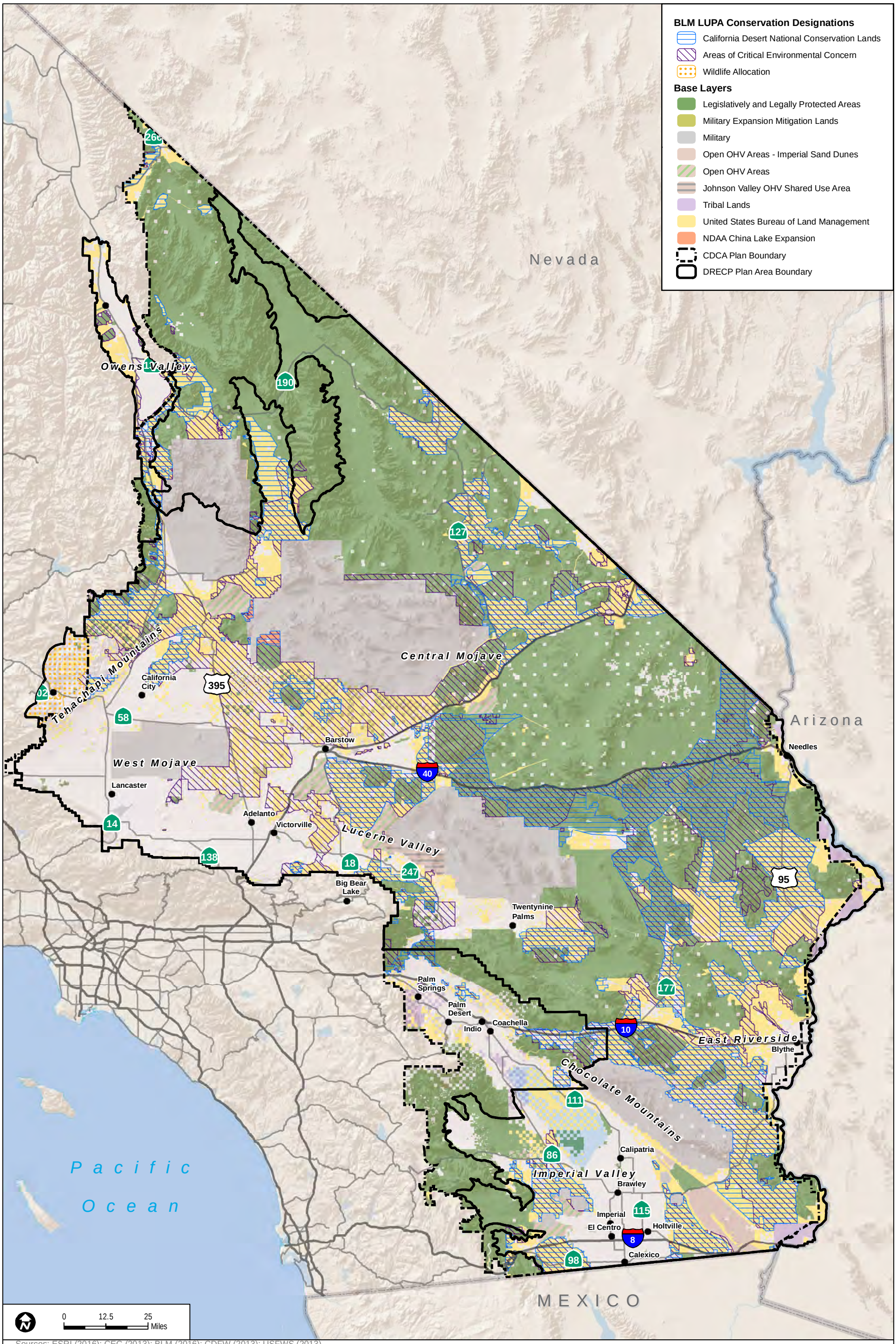

Sources: ESRI (2016); CEC (2013); BLM (2016); CDFW (2013); USFWS (2013)

FIGURE 5

DRECP LUPA Conservation Designations

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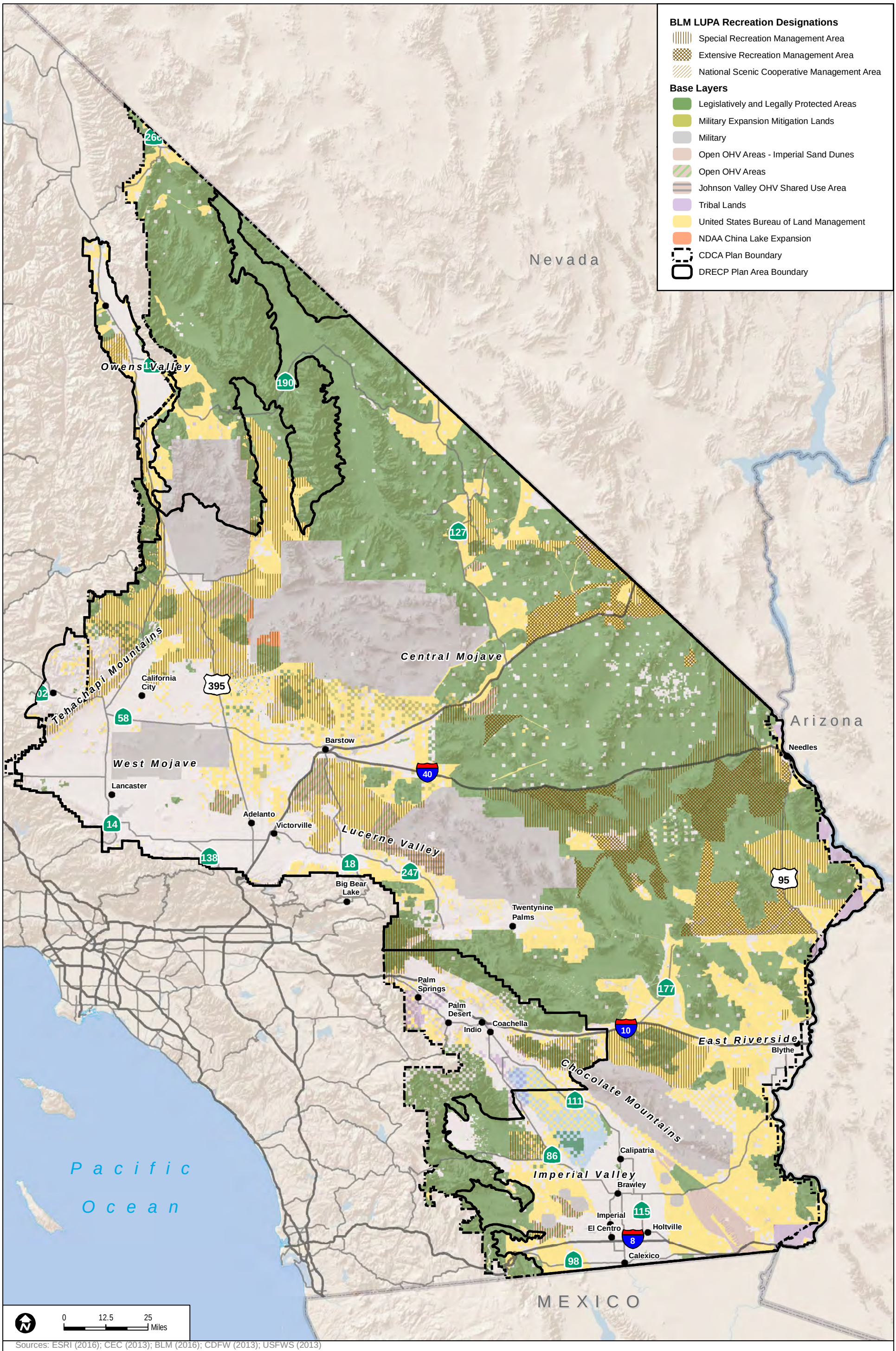

Sources: ESRI (2016); CEC (2013); BLM (2016); CDFW (2013); USFWS (2013)

FIGURE 6

DRECP LUPA Recreation Designations

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Land use plan decisions for public lands fall into two categories: desired outcomes (goals and objectives) and allowable uses (including restricted or prohibited) and actions anticipated to achieve desired outcomes (BLM 2005). In the DRECP LUPA, CMAs represent those management actions and allowable uses.

The DRECP LUPA also includes land use allocations to replace the multiple-use classes (MUCs) within the CDCA, and establishes Visual Resource Management (VRM) classes.

The BLM LUPA elements outside of the DRECP, but within the CDCA, consist of land use allocations to replace the MUCs, establishment of VRM Classes, and identification of National Conservation Lands. The DRECP LUPA does not otherwise amend any BLM Land Use Plan for areas outside the DRECP boundary.

The Approved LUPA does not modify existing energy corridors, including "corridors of concern" defined in the Section 368 Energy Corridors settlement agreement described in the DRECP LUPA Record of Decision.

II.2 Ecological and Cultural Conservation, and Recreation Designations

The DRECP Partner Agencies developed a Plan-wide conservation strategy developed through the Interagency planning process. This strategy was included in the Draft DRECP and EIR/EIS. This section represents the BLM LUPA components of that strategy. Components of the DRECP Conservation Strategy outside the jurisdiction of the BLM are not included here. This section also includes a description of the recreation designations.

The Interagency Conservation Strategy also included biological Conservation Management Actions (CMAs). Those CMAs have been incorporated into the LUPA as Goals and Objectives and CMAs below.

Table 7
BLM LUPA Conservation Allocations

BLM LUPA Conservation Allocation[3]	Acreage[1,2]
DRECP LUPA Decision Area	
California Desert National Conservation Lands	3,956,000
ACEC	6,063,000
Wildlife Allocation	18,000
Total	**6,527,000**
Conservation Allocations by Plan Amendment	
CDCA Plan	***6,478,000***
California Desert National Conservation Lands	3,956,000
ACECs	6,032,000

Table 7
BLM LUPA Conservation Allocations

BLM LUPA Conservation Allocation[3]	Acreage[1,2]
Wildlife Allocation	18,000
Bishop RMP	***29,000***
California Desert National Conservation Lands	—
ACECs	29,000
Wildlife Allocation	—
Bakersfield RMP	***20,000***
California Desert National Conservation Lands	—
ACECs	1,500
Wildlife Allocation	18,000

1 The following general rounding rules were applied to acreage values: values greater than 1,000 were rounded to nearest 1,000; values less than 1,000 and greater than 100 were rounded to the nearest 100; values of 100 or less were rounded to the nearest 10, and therefore totals may not sum due to rounding. In cases where subtotals are provided, the subtotals and the totals are individually rounded. The totals are not a sum of the rounded subtotals; therefore the subtotals may not sum to the total within the table.

2 Acres are BLM administered lands only

3 Includes acres that are within the Mojave Trails and Sand to Snow National Monuments and other existing conservation areas (e.g., Wilderness, WSA)

Table 8 uses the same acreage information as Table 7 above, but further enumerates the conservation allocations to display areas of overlapping allocations, and not.

Table 8
DRECP LUPA – Conservation Allocation Itemization

Conservation Allocations	Total Acreage[1, 2]
California Desert National Conservation Lands	3,956,000
California Desert National Conservation Lands only	*446,000*
California Desert National Conservation Lands – ACEC overlap	*3,510,000*
ACEC	6,063,000[3]
ACEC only	*2,552,000*
Wildlife Allocation	18,000
Total[4]	**6,527,000**

1 The following general rounding rules were applied to acreage values: values greater than 1,000 were rounded to nearest 1,000; values less than 1,000 and greater than 100 were rounded to the nearest 100; values of 100 or less were rounded to the nearest 10, and therefore totals may not sum due to rounding. In cases where subtotals are provided, the subtotals and the totals are individually rounded. The totals are not a sum of the rounded subtotals; therefore the subtotals may not sum to the total within the table.

2 Acres are BLM administered lands only

3 ACEC acreage includes that which also overlaps with other land allocations, including the Mojave Trails National Monument, Sand to Snow National Monument, California Desert National Conservation Lands, Wilderness, Wilderness Study Areas, SRMAs and ERMAs.

4 Reflects the total acreage of BLM administered lands in the DRECP LUPA conservation allocations.

II.2.1 California Desert National Conservation Lands and National Scenic and Historic Trails

Public Law 111-11, the Omnibus Public Lands Management Act of 2009, formally established the NLCS, which is made up BLM-managed nationally significant landscapes with outstanding ecological, cultural and scientific values, and is managed to conserve, protect and restore these values.

Public Law 111-11 states that public land within the CDCA administered by the BLM for conservation purposes is a component of the NLCS. Throughout this document, components identified for inclusion in the NLCS as lands within the CDCA administered for conservation purposes will be referred to as the California Desert National Conservation Lands, CDNCL or NCL. The BLM considered all public lands within the CDCA boundary. The BLM did not consider public lands managed by the Bishop and Bakersfield Field Offices, which are not part of the CDCA, and therefore not included in Public Law 111-11.

Of the 10.8 million acres of BLM-administered public lands within the CDCA, approximately 3.9 million acres represent other components of the NLCS, as identified by the Omnibus Act. These include Wilderness, Wilderness Study Areas, Wild and Scenic Rivers, National Scenic and Historic Trails, the Santa Rosa and San Jacinto Mountains National Monument and other congressional designations, to include the Mountain Pass Dinosaur-Trackway and the Desert Lilly Sanctuary.

Identification of the California Desert National Conservation Lands through the DRECP Record of Decision and Approved LUPA does not alter, and is in addition to, the existing components of the NLCS. The DRECP does not alter the management of these areas.

The Approved LUPA identifies 3,956,000 acres of California Desert National Conservation Lands on BLM-administered lands within the DRECP Decision Area (excluding other components of the National Landscape Conservation System)

The California Desert National Conservation Lands will be managed using CMAs, including a 1% ground disturbance cap and the ACEC ground disturbance caps as a conservation delivery mechanism. The following describes how the ground disturbance caps will be managed and implemented for California Desert National Conservation Lands.

Managing Ground Disturbance in California Desert National Conservation Lands and Implementation of the Ground Disturbance Cap:

The following measures describe how the ground disturbance caps will be used, managed and implemented in order to accrue the conservation benefits for California Desert National Conservation Lands, and ACECs, where ground disturbance caps are applied. This information is repeated in the ACEC allocation section, and in the NLCS and ACEC CMAs .

Much of the LUPA Decision Area is below target levels (i.e., caps) of ground disturbance, but existing ground disturbance in parts of the LUPA Decision Area are above the target levels. The targeted ground disturbance levels were established as surrogates for thresholds of sensitivity for desert ecosystems, species, and cultural resources. The ground disturbance caps in the California Desert National Conservation Lands are 1.0%. In the ACECs, which through much of the LUPA are subunits of the larger California Desert National Conservation Lands, the ground disturbance caps range from 0.1% to 1.0%. Refer to Appendix B, ACEC Special Unit Management Plans.

Generally, the ground disturbance cap is a limitation on ground-disturbing activities in California Desert National Conservation Lands and ACECs and is expressed as a percentage of total BLM managed California Desert National Conservation Lands and/or ACEC acreage, and cumulatively considers past, present, and future (proposed activity) ground disturbance. Baseline/existing (past plus present) ground disturbance would be determined using the most current imagery and knowledge at the time of an individual activity proposal.

Ground Disturbance Cap Implementation:

Specifically, the ground disturbance cap would be implemented as a limitation and objective using the following process:

- **Limitation:** If the ground disturbance condition of the California Desert National Conservation Lands and/or ACEC is below the designated ground disturbance cap (see calculation method), the ground disturbance cap is a limitation on ground-disturbing activities within the California Desert National Conservation Lands and/or ACEC, and precludes approval of future discretionary ground disturbing activities (see exceptions below) above the cap.
- **Objective, triggering disturbance mitigation:** If the ground disturbance condition of the California Desert National Conservation Lands and/or ACEC is at or above its designated cap, the cap functions as an objective, triggering the specific ground disturbance mitigation requirement. Ground disturbance mitigation is unique to ground disturbance cap implementation and a discrete form of compensatory mitigation, separate from other required mitigation in the DRECP LUPA (see Glossary of Terms). The ground disturbance mitigation requirement remains in effect for all (see exceptions below) activities until which time the California Desert National Conservation Lands and/or ACEC drops below the cap, at which time the cap becomes a limitation and the ground disturbance mitigation is no longer a requirement. If ground disturbance mitigation opportunities do not exist in a unit (see below for "unit" of measurement), ground disturbing activities (see exceptions below) will not be allowed in that unit until which time opportunities for ground

disturbance mitigation in the unit become available (see types and forms of ground disturbance mitigation below) or the unit recovers and drops below the cap.

- Actions necessary to control the immediate impacts of an emergency that are urgently needed to reduce the risk to life, property, or important natural, cultural, or historic resources, in accordance with 43 Code of Federal Regulations (CFR) 46.150, are an exception to the ground disturbance cap limitation, objective and ground disturbance mitigation requirements. Ground disturbance from emergency actions will count in the ground disturbance calculation for other activities, and also be available for ground disturbance mitigation opportunities and restoration, as appropriate.

Calculating Ground Disturbance:

Ground disturbance will be calculated on BLM managed land at the time of an individual proposal, by BLM for a BLM initiated action or by a third party for an activity needing BLM approval or authorization, for analysis in the activity-specific National Environmental Policy Act (NEPA) document. Once BLM approves/accepts or conducts a calculation for a California Desert National Conservation Lands and/or ACEC, that calculation is considered the baseline of past and present disturbance and is valid for 12 months, and can be used by other proposed activities in the same unit. Ground disturbances, that meet the criteria below, would be added into the calculation for the 12 month period without having to revisit the entire calculation After a 12 month period has passed and a proposed action triggers the disturbance calculation, BLM will examine the existing ground disturbance calculation to determine: 1) if the calculation is still reliable, in which case add in any additional disturbance that has occurred since that calculation; or 2) if the disturbance must be recalculated in its entirety. Once completed for a specific activity, the ground disturbance calculation may be used throughout the activity's environmental analysis. However, the BLM may recalculate the affected unit(s) or portions of the unit(s) if it determines such recalculation is necessary for the BLM's environmental analysis.

Unit of measurement: When calculating the ground disturbance, it is necessary to identify the appropriate unit level at which the disturbance will be calculated. For ground disturbing activities that occur within the California Desert National Conservation Lands, the ground disturbance will be calculated at the smallest unit level. Within an ACEC, the disturbance calculation will be based on the ACEC unit boundary, or the boundary of the disturbance cap area(s), whichever area is smaller. If there is overlap between California Desert National Conservation Lands and an ACEC, the calculation will take place based on the smallest unit. If an activity/project overlaps two or more smaller units, the cap will be calculated, individually, for all affected units.

Ground disturbance includes: The calculation shall include existing ground disturbance in addition to the estimated ground disturbance from the proposed activity (future) determined at the time of the individual proposal:

- Authorized/approved ground disturbing activities – built and not yet built
- BLM identified routes – all routes, trails, etc., authorized and unauthorized, identified in the Ground Transportation Linear Feature (GTLF) and/or other BLM route network database (i.e., BLM local databases that contain the best available data on routes and trails, replacement for GTLF, etc.), following applicable BLM standards and policy for identification of routes (authorized and unauthorized)
- Assumptions may be used to identify the percentage/degree/area/etc. of ground disturbance for a specific authorized/approved activity or activity-type based on:
    - Activity-specific environmental analysis, such as NEPA or ESA Section 7 Biological Assessment
    - Known and documented patterns of ground disturbance
- Other documented site-specific factors that limit or play a role in ground disturbance, such as topography, geography, hydrology (e.g. desert washes obliterating authorized routes on a regular basis), historical and predicted patterns of use Any unauthorized disturbance that can be seen at a 1:10,000 scale using the best available aerial imagery
- Ground disturbance from wildfire, animals, or other disturbances that can be seen at a 1:10,000 scale using the best available aerial imagery
- Historic Route 66 maintenance - potential ground disturbance estimates:
    - As part of the ground disturbance calculation, the potential disturbance associated with estimated operations related to the maintenance of Historic Route 66 will automatically be included in the ground disturbance calculation as existing ground disturbance for the units specified below, until which time these estimated acres are no longer necessary due to approved operations:
        - South Amboy-Mojave California Desert National Conservation Lands 221 acres
        - Bristol Mountains ACEC 92 acres
        - Chemehuevi ACEC 43 acres
        - Pisgah ACEC 86 acres
- Through a collaborative effort, the BLM has participated in the development of a Corridor Management Plan for Historic Route 66 in California. While specific details of the maintenance of this historic route are not detailed in the plan, as a managing

party, it is important for BLM to provide a foundation for the future maintenance needs of the Historic Route 66, as conducted by San Bernardino County. To accomplish this it is necessary to account for the potential salable mineral uses in several of the conservation allocations within the LUPA Decision Area along Route 66 for the acquisition and stockpiling of soils, gravels, and rock. Based on the information provided by San Bernardino County in 2015, including acquisition/stockpiling location and anticipated size, BLM calculated the potential area of ground disturbance within the South Amboy-Mojave California Desert National Conservation Land unit and the Bristol Mountain, Chemehuevi and Pisgah ACECs along Historic Route 66. The estimated ground disturbance acreage includes disturbance associated with potential access to the locations if no current access exists.

- The estimated ground disturbance acres for maintenance of Historic Route 66 in the before mentioned conservation units is not approval of these activities by BLM. Activities associated with the management and maintenance of Historic Route 66 on BLM administered land will follow all applicable laws, regulations and policies.

Exceptions to the Disturbance Calculation:

- Actions necessary to control the immediate impacts of an emergency that are urgently needed to reduce the risk to life, property, or important natural, cultural, or historic resources, in accordance with 43 CFR 46.150, will not be required to conduct a disturbance calculation. If the actions are ground disturbing, that disturbance will count towards the disturbance cap when next calculated for non-emergency activities.
- Actions that are authorized under a Department of Interior (DOI) or BLM NEPA Categorical Exclusion will not be required to conduct a disturbance calculation; however, these actions are not exempt from the disturbance mitigation requirement if a unit is at or above its cap. Although the BLM is not required to calculate the disturbance cap before approving an activity under a Categorical Exclusion, if the BLM knows an area is at or exceeding the cap, the disturbance mitigation requirements would apply to that activity.
- BLM authorized/approved research or restoration activities that are designed or intended to promote and enhance the nationally significant values for which the California Desert National Conservation Land was designated.
- Actions that are entirely within the footprint of an existing authorized/approved site of ground disturbance that is within the calculation above.
- Livestock grazing permit renewals (however, water developments or other range improvements requiring an Environmental Assessment or Environmental

Impact Statement would be subject to the disturbance calculation and any mitigation requirements).

Ground Disturbance Mitigation:

The purpose of ground disturbance mitigation (disturbance mitigation) is to allow actions to occur in California Desert National Conservation Lands and/or ACEC that is at or above its designated disturbance cap(s), while at the same time providing a restoration mechanism that will, over time, improve the condition of the unit(s) and take them below their cap. Disturbance mitigation is compensatory. Disturbance mitigation is unique to ground disturbance cap implementation and a discrete form of compensatory mitigation, separate from other required mitigation in the DRECP (see Glossary of Terms).

Disturbance mitigation may only be used for ground disturbance that is otherwise allowed by the LUPA and consistent with the purposes for which the California Desert National Conservation Lands and/or ACEC was designated. Areas used for disturbance mitigation are still considered disturbed until which time they meet the "Ground Disturbance Recovery" criteria in the section below.

Unit for implementing disturbance mitigation: The appropriate unit level for implementing disturbance mitigation is the same as that used for calculating ground disturbance. For ground disturbing activities that occur within the California Desert National Conservation Lands, the ground disturbance will be mitigated at the smallest unit level. Within an ACEC, the disturbance mitigation will be required within the ACEC unit boundary, or the boundary of the disturbance cap area(s), whichever area is smaller. If there is overlap between California Desert National Conservation Lands and an ACEC, the disturbance mitigation will take place in the smallest unit. If an activity/project overlaps two or more smaller units, disturbance mitigation will be required for all units that are at or over their specified disturbance cap.

No disturbance mitigation required: If the calculated ground disturbance for the unit(s) is under the cap:

- No disturbance mitigation required; use activity design features to minimize new ground disturbance and help stay below cap.

Disturbance mitigation required: If the calculated ground disturbance is at or above the unit(s) cap, disturbance mitigation is required:

- Use activity design features to minimize new ground disturbance to the extent practicable.

- For the portion of the proposed activity that is located on land within an area previously disturbed by an authorized/approved action that has been terminated the required disturbance mitigation ratio is 1.5 (1½):1.
- For the portion of the proposed activity that is located on undisturbed land or land disturbed by unauthorized activities, the required disturbance mitigation ratio is 3:1.
- Although the BLM is not required to calculate the ground disturbance cap before approving/authorizing an activity under a Categorical Exclusion, if the BLM knows an area is at or exceeding the cap, the disturbance mitigation requirements would apply to that activity.
- In the rare circumstance where the BLM authorizes activities on areas restored (e.g., as disturbance or other forms of mitigation), the required disturbance mitigation ratio requirement is doubled, that is, 3:1 or 6:1, respectively.
- If disturbance mitigation opportunities do not exist in a unit, ground-disturbing activities (see exceptions below) will not be allowed in that unit until which time opportunities for disturbance mitigation in the unit become available (see types and forms of disturbance mitigation below) or the unit recovers and drops below the cap.

Exceptions to the Disturbance Mitigation Requirement:

- Any portion of the proposed activity that is located on land previously disturbed by an existing, valid authorized/approved action.
- Livestock grazing permit renewals (however, water developments or other range improvements requiring an Environmental Assessment or Environmental Impact Statement would be subject to the disturbance calculation and any mitigation requirements).
- Land use authorization assignments and renewals with no change in use.
- BLM authorized/approved activities that are designed and implemented to reduce existing ground disturbance, such as ecological, cultural, or habitat restoration or enhancement activities.
- Non-discretionary actions, where BLM has no authority to require compensatory mitigation.

Types and Forms of Disturbance Mitigation:

- Restoration of previously disturbed BLM lands within the boundary of the specific California Desert National Conservation Lands and/or ACEC unit(s) being impacted.
- Acquisition of undisturbed lands within the boundary of the specific California Desert National Conservation Lands and/or ACEC unit being impacted.

- Ground disturbance mitigation can be "nested" (i.e., combined) with other resource mitigation requirements, when appropriate. For example, a parcel restored for desert tortoise habitat mitigation may also satisfy the disturbance mitigation requirement if the parcel is within the appropriate unit of California Desert National Conservation Lands, ACEC boundary, or smaller disturbance cap unit.

Ground Disturbance Recovery

In general, California Desert National Conservation Lands and/or ACEC ground disturbance recovery will be determined during the decadal ground disturbance threshold ecoregion trend monitoring assessments (see below, and Monitoring and Adaptive Management). California Desert National Conservation Lands and/or ACEC recovery may be assessed at intermediate intervals, in between the decadal assessments, at BLM's discretion based on adequate funding and staffing. Between the decadal assessments, BLM will assume disturbed areas and units (same as used for calculations and mitigation) are not yet recovered until data is presented and BLM determines the area meets one of the two criteria below:

- Field verification that disturbed area(s) are dominated by the establishment of native shrubs, as appropriate for the site, and demonstrated function of ecological processes (e.g., water flow, soil stability).
- Ground disturbance can no longer be seen at the 1:10,000 scale using the best available aerial imagery.

Areas within California Desert National Conservation Lands and/or ACEC(s) may be determined recovered by BLM at any time, once one of the two criteria above are met, prior to the entire unit (of calculation and mitigation) being determined recovered. Areas determined recovered by BLM would be removed from the [next] ground disturbance calculation for that unit.

Ground Disturbance Threshold Ecoregion Trend Monitoring (also refer to Monitoring and Adaptive Management)

To monitor the overall general condition and ground disturbance trend of the California Desert National Conservation Lands and ACECs, one ecoregion per year, on a continual rotating basis, will be assessed in relation to a 1% ground disturbance threshold. This monitoring and assessment will begin one year after the signing of the DRECP LUPA Record of Decision (ROD). The ecoregion(s) within the West Mojave Plan Trails and Travel Management Plan (WMRNP) will be monitored and assessed no sooner than 5 years after the signing of the DRECP LUPA ROD. The BLM California State Director will determine the order of the ecoregional trend monitoring.

The results of the trend monitoring, in combination with other pertinent ecological and cultural data, may trigger the adaptive management process, relative to changes, up or down, of the ground disturbance caps, ground disturbance mitigation requirements, or ground disturbance mitigation ratios (see Monitoring and Adaptive Management).

Ground Disturbance Threshold Ecoregion Adaptive Management – Response (also refer to Monitoring and Adaptive Management)

The adaptive management framework is specific in relation to the response to the ground disturbance threshold ecoregion monitoring. At no time should the changes made through adaptive management compromise the nationally significant ecological, cultural or scientific values for which a California Desert National Conservation Lands unit was designated, the relevant and important values for which an ACEC was designated, or the overall DRECP LUPA biological and cultural conservation design and strategy.

The monitoring results show the total ground disturbance within the ecoregion is at or below the 1% threshold/cap. The best available data (e.g., species demographic changes, suitable habitat availability, etc.) indicates or illustrates that the resource most sensitive to ground disturbance in that ecoregion for which it was conserved (i.e., biological or cultural) are:

- Trending flat or improving – No changes in management response, no adaptive management, may be needed.
- Declining – Adaptive management is needed, including possible reduction of the disturbance caps in all or portions of the ecoregion, increases in required ground disturbance mitigation, changes to resource specific CMAs, or other management actions to further limit the effects of ground disturbance.

The monitoring results show the total ground disturbance within the ecoregion exceeds the 1% threshold/cap. The best available data (e.g., species demographic changes, suitable habitat availability, etc.) indicates or illustrates that the resource most sensitive to ground disturbance in that ecoregion for which it was conserved (i.e., biological or cultural) are:

- Improving – Then adaptive management may be considered, including increase in the ground disturbance cap in all or portions of the ecoregion, or decrease in the required disturbance mitigation.
- Trending flat or declining – Adaptive management is needed, including possible reduction of the disturbance caps in all or portions of the ecoregion, increases in required disturbance mitigation, changes to resource specific CMAs, or other management actions to further limit the effects of ground disturbance.

II.2.1.1 Description of California Desert National Conservation Lands

The vast landscapes of the CDCA have been divided into ecoregions, also referred to as subareas, that encompass similar physiography and ecological values. Each of these subareas includes a unique combination of specific ecological, cultural and scientific values. The subarea description and maps designate what landscapes and values will be included in the California Desert National Conservation Lands. Within each subarea, the BLM identified nationally significant landscapes that have outstanding cultural, ecological, and scientific values. Those values are identified in Appendix A of this LUPA and summarized below:

- **Basin and Range Subarea**: This subarea extends from the Nevada state line west to the Sierra Nevada Mountain Range, approximately 85 miles east to west at its widest, and 130 miles north to south. Elevations range from 1,000 to 12,000 feet; mountains rise abruptly from the desert floor, so that even across short distances, plant communities vary greatly. These include Joshua tree woodland, sagebrush steppe, pinyon-juniper woodland, and cottonwood/willow riparian vegetation and the White-Inyo Mountain Range, unique alpine vegetation and subalpine bristlecone and limber pine woodlands. The south end of the subarea gradually transitions to Mojave Desert vegetation dominated by creosote bus and white bursage. Streams, springs, and riparian areas serve as oases in the harsh arid environment. The Approved LUPA identifies 377,000 acres of California Desert National Conservation Lands in the Basin and Range Subarea.
- **Coachella Valley**: The Coachella Valley forms the north half of the Salton Sea Trough, the large basin for ancient Lake Cahuilla. The valley extends northwest to southeast for approximately 45 miles from the southeast San Bernardino Mountains to the Salton Sea, and is about 15 miles wide along most of the its length. The broad, low-lying valley floor, featuring the Coachella Dunes, compromises the westernmost limits of the Sonoran Desert at the Santa Rosa and San Jacinto mountains. Other mountain ranges bounding the valley are the Little San Bernardino Mountains to the north and the Chocolate Mountains on the east. Watersheds from the mountain ranges drain into the Salton Sea. The San Andreas Fault crosses the valley from the Chocolate Mountains in the southeast corner and along the centerline of the Little San Bernardino Mountains. Along the San Andreas Fault and subsidiary faults, desert palm oases appear where tectonic movements allow artesian water to surface from deep in the earth. The Approved LUPA identifies 72,000 acres of California Desert National Conservation Lands in the Coachella Valley Subarea.
- **Colorado Desert:** The Colorado Desert is the western extension of the Sonoran Desert, hotter and drier than parts to the east. Bounded on the east by the Colorado River, it reaches across southeastern California to meet the transition zone with the Mojave Desert in the northwest. Watersheds from several mountain ranges drain

into the Colorado River. Diverse, intact habitats in this subarea include upland shrub scrub dominated by creosote, saltbrush species, brittle brush, cacti, and ephedra. Dunes such as the Palen Dunes, Rice Dunes, and Chuckwalla Dunes provide habitat for sand-dependent plant species. Subsurface moisture in desert washes supports stands of microphyll plant species. Subsurface moisture in desert washes supports stands of microphyll woodlands with old-growth stands of blue paloverde and ironwood. Springs provide the only permanent water sources in the subarea away from the Colorado River. The Approved LUPA identifies 768,000 acres of California Desert National Conservation Lands in the Colorado Desert Subarea.

- **Kingston-Amargosa:** The Kingston-Amargosa subarea is marked by permanent flowing water and wetlands within one of the driest desert regions on the continent. It includes a broad range of habitat types supporting diverse plant and wildlife species including many Special Status Species; and several narrowly endemic species, some of which may be new to science. Public lands provide critical habitat connections between a number of designated BLM Wilderness Areas such as the Kingston Range, Nopah Range and Funeral Mountains, as well as Death Valley National Park, and the Mojave National Preserve. The Approved LUPA identifies 433,000 acres of California Desert National Conservation Lands in the Kingston-Amargosa Subarea.
- **Lake Cahuilla:** The Lake Cahuilla subarea includes a picturesque mix of scenic physical features surrounding the Imperial Valley. This valley, which is the site of ancient Lake Cahuilla and now includes the Salton Sea, is one of the lowest on Earth. Sonoran Desert habitats share the valley with agricultural, urban and other private lands that are mostly below sea level and bounded by canals that divert Colorado River water from the All-American Canal along the US-Mexico border. Forty feet above sea level is the ancient Lake Cahuilla shoreline, which marks the transition to the natural landforms and landscapes of the valley. The public lands surrounding the basin are characterized by rugged desert mountains, visible remnant shorelines of ancient Lake Cahuilla, and the Coyote Mountains and Yuha Desert with their eroded mudhills and extensive marine fossil deposits. The Approved LUPA identifies 428,000 acres of California Desert National Conservation Lands in the Lake Cahuilla Subarea.
- **Mojave and Silurian Valley:** The Mojave and Silurian Valley subarea lies within the east and central Mojave Desert, with Barstow just outside its southwest corner; from there it extends beyond Soda Lake in the east and the Salt Creek Hills to the northeast. It includes the alluvial plain of the Silurian Valley, from where the Amargosa River drains it on the north, south to the South Avawatz Mountains. Water and wind erosion, and the subsequent deposition of sediments across the landscape, strongly shape the major landforms: very gently to moderately sloping

alluvial fans and nearly level basin floors, with a few protruding hills. The broad valley floors have areas of sand dunes, some steeply sloping; and dry lake beds, with large playas at Soda Lake, Silver Lake, and Silurian Lake. Scattered, isolated mountain blocks are mostly less than 1,000 feet in elevation but range to over 5,250 feet. The Approved LUPA identifies 271,000 acres of California Desert National Conservation Lands in the Mojave and Silurian Valley Subarea.

- **Pinto, Lucerne Valley, and Eastern Slopes**: Lands of this subarea span diverse landscapes of the south-central Mojave Desert and the San Bernardino Mountains, from 1,000 feet to over 6,000 feet in elevation. The subarea includes most of Joshua Tree National Park, the north and east facing slopes of the San Bernardino Mountains, and desert ranges of the southern Mojave Desert. The subarea's central portion includes the vast Twentynine Palms Marine Corps Air Ground Combat Center and the growing communities of the Morongo Basin and Lucerne Valley. These are essentially surrounded by public lands that are important to maintaining a variety of sensitive natural resources. The Approved LUPA identifies 296,000 acres of California Desert National Conservation Lands in the Pinto, Lucerne Valley, and Eastern Slopes Subarea.
- **Piute Valley and Sacramento Mountains:** The remote Piute Valley and Sacramento Mountains subarea spans the transition zone between the Mojave and Sonoran Deserts. With some of the most intact and scenic landscapes in the California deserts, the subarea encompasses visual extremes: many distinct rugged mountain ranges, each with its own character; large washes, steep canyons, and expansive piedmont plains. The vistas of the Piute Valley provide a nearly 360-degree panorama of mountains; and the grand-scale Chemehuevi Wash system, with washes within washes, collects the flash flood waters from mountains to the west en route to the Colorado River. Needles, the largest city in the subarea, in located in the Mohave Valley straddling the California, Arizona and Nevada borders at the southern edge of the Mojave Desert, on the western banks of the Colorado River. Communities just outside the subarea include Bullhead City, Lake Havasu City, and Parker in Arizona, and Laughlin in Nevada. Las Vegas is 110 miles to the north. Interstate 40 and U.S. Highway 95 are the conduits for bringing visitors to the subarea. The Approved LUPA identifies 417,000 acres of California Desert National Conservation Lands in the Piute Valley and Sacramento Mountains subarea.
- **South Mojave-Amboy:** This central part of the Mojave Desert encompasses some of the most iconic features of the CDCA. The Old Woman and Providence Mountains provide a dramatic backdrop to the intervening valleys and mountain ranges. The subarea includes some of the most diverse geologic features of the Mojave Desert, such as volcanic cinder cones and lava flows, limestone formations, and some of the tallest sand dunes in the nation. The Marble Mountain Range contains one of the

classic Cambrian trilobite fossil sites of the United States. A large portion of the Mojave National Preserve is located in the northern part of the subarea, and historic U.S. Route 66 extends across the entire subarea. The Approved LUPA identifies 638,000 acres of California Desert National Conservation Lands in the South Mojave-Amboy subarea.

- **Western Desert and Eastern Slope:** Elevations within the Western Desert and Eastern Slope subarea vary from about 2,000 feet to more than 8,000 feet. Mountains rise abruptly from the desert floor, creating dramatic changes in climatic conditions over short distances. The area's great diversity of vegetation communities reflects these changes in moisture and temperature. With increasing elevation, the area transitions from Mojave Desert creosote scrub through Joshua tree woodland to pinyon/juniper and oak/pine assemblages. Joshua trees may be found in close association with singleleaf pinyon pine, juniper, gray pine, Jeffrey pine, and canyon live oak, blending Mojave and Sierran associations and resulting in a high level of biodiversity. When the area has received sufficient moisture, colorful wildflower displays are some of the most spectacular in the West Mojave Desert. The Approved LUPA identifies 200,000 acres of California Desert National Conservation Lands in the Western Desert and Eastern Slope subarea.

II.2.1.2 National Scenic and Historic Trails

Congress designates National Trails and the Secretary of the Interior or Agriculture is responsible to assign an agency with National Trail administration responsibility. After Congressional designation, the BLM conducts an inventory of designated trails under FLPMA and National Trails System Act authorities; addresses the National Trail Management through the land use planning process, including the establishment of the National Trail Management Corridor; and manages and monitors the National Trail in coordination with the National Trail administering agency, tribes, other agencies, partners, and interested parties.

The DRECP will make decisions for three National Trails (Pacific Crest National Scenic Trail, Old Spanish National Historic Trail and the Juan Bautista de Anza National Historic Trail) to designate the National Trail Management Corridors and management actions to safeguard the nature and purposes for the national trail designation. The corridors will provide for quality outdoor recreation potential and for the conservation and enjoyment of the nationally significant, scenic, historic, natural or cultural qualities of the areas through which the National Scenic and Historic Trails may pass. Goals and Objectives and CMAs for the National Trails are included in following sections.

II.2.2 Areas of Critical Environmental Concern

The LUPA includes 127 ACECs, totaling approximately 6,063,000 acres on BLM-administered lands within the DRECP decision area. Required elements of the ACECs (Name, Location, and Size; Description of Value, Resource System, or Hazard; and Provision for Special Management Attention) and maps of each unit are included in the ACEC Special Unit Management Plans in Appendix B. The Ecological and Cultural Conservation CMAs apply to all ACECs, as do the LUPA-wide CMAs. Management specific to a particular ACEC, including its ground disturbance caps, are found in its Special Unit Management Plan in Appendix B.

The proposed management activities in the Special Unit Management Plans for ACECs (Appendix B) may require implementation decisions based on site-specific analysis. In some cases, the BLM has already conducted the necessary site-specific NEPA analysis as part of the DRECP planning effort, or through a prior or parallel analysis. In those cases, those decisions are carried forward in the Special Unit Management Plan. For any new management actions, the BLM will conduct site-specific NEPA prior to implementing those actions. The management actions listed in the DRECP LUPA, including the Special Unit Management Plans, are not an exclusive list, and, through monitoring, evaluation and adaptive management, the BLM may identify additional actions needed to manage the values for which California Desert National Conservation Lands were identified, or an ACEC was designated.

In some situations, ACECs are designated within California Desert National Conservation Lands. These ACECs provide the special management and delivery mechanism where that management is necessary to achieve the overarching conservation goals for the nationally significant ecological, cultural, and scientific values of the California Desert National Conservation Lands. Management decisions within these ACECs will take into account the larger landscape that makes up the California Desert National Conservation Lands that the ACEC falls within.

The ACECs will be managed using CMAs, and ACEC specific disturbance caps, which range from 0.1% to 1.0%. The following describes how the ground disturbance caps will be managed and implemented for ACECs and California Desert National Conservation Lands.

Managing Ground Disturbance in ACEC and Implementation of the Ground Disturbance Cap

The following measures describe how the ground disturbance caps will be used, managed and implemented in order to accrue the conservation benefits for California Desert National Conservation Lands, and ACECs, where ground disturbance caps are applied. This information is repeated in the California Desert National Conservation Lands section above,

and in the NLCS and ACEC CMAs. Much of the LUPA Decision Area is below target levels (i.e., caps) of ground disturbance, but existing ground disturbance in parts of the LUPA Decision Area are above the target levels. The targeted ground disturbance levels were established as surrogates for thresholds of sensitivity for desert ecosystems, species, and cultural resources. In the ACECs, which through much of the LUPA are subunits of the larger California Desert National Conservation Lands, the ground disturbance caps range from 0.1% to 1.0%. Refer to Appendix B, ACEC Special Unit Management Plans.

Generally, the ground disturbance cap is a limitation on ground-disturbing activities in California Desert National Conservation Lands and ACECs and is expressed as a percentage of total BLM managed California Desert National Conservation Lands and/or ACEC acreage, and cumulatively considers past, present, and future (proposed activity) ground disturbance. Baseline/existing (past plus present) ground disturbance would be determined using the most current imagery and knowledge at the time of an individual activity proposal.

Ground Disturbance Cap Implementation:

Specifically, the ground disturbance cap would be implemented as a limitation and objective using the following process:

- **Limitation:** If the ground disturbance condition of the ACEC is below the designated ground disturbance cap (see calculation method), the ground disturbance cap is a limitation on ground-disturbing activities within the California Desert National Conservation Lands and/or ACEC, and precludes approval of future discretionary ground disturbing activities (see exceptions below) above the cap.
- **Objective, triggering disturbance mitigation:** If the ground disturbance condition of the ACEC is at or above its designated cap, the cap functions as an objective, triggering the specific ground disturbance mitigation requirement. Ground disturbance mitigation is unique to ground disturbance cap implementation and a discrete form of compensatory mitigation, separate from other required mitigation in the DRECP LUPA (see Glossary of Terms). The ground disturbance mitigation requirement remains in effect for all (see exceptions below) activities until which time the ACEC drops below the cap, at which time the cap becomes a limitation and the ground disturbance mitigation is no longer a requirement. If ground disturbance mitigation opportunities do not exist in a unit (see below for "unit" of measurement), ground disturbing activities (see exceptions below) will not be allowed in that unit until which time opportunities for ground disturbance mitigation in the unit become available (see types and forms of ground disturbance mitigation below) or the unit recovers and drops below the cap.

- Actions necessary to control the immediate impacts of an emergency that are urgently needed to reduce the risk to life, property, or important natural, cultural, or historic resources, in accordance with 43 Code of Federal Regulations (CFR) 46.150, are an exception to the ground disturbance cap limitation, objective and ground disturbance mitigation requirements. Ground disturbance from emergency actions will count in the ground disturbance calculation for other activities, and also be available for ground disturbance mitigation opportunities and restoration, as appropriate.

Calculating Ground Disturbance:

Ground disturbance will be calculated on BLM managed land at the time of an individual proposal, by BLM for a BLM initiated action or by a third party for an activity needing BLM approval or authorization, for analysis in the activity-specific National Environmental Policy Act (NEPA) document. Once BLM approves/accepts or conducts a calculation for a ACEC, that calculation is considered the baseline of past and present disturbance and is valid for 12 months, and can be used by other proposed activities in the same unit. Ground disturbances, that meet the criteria below, would be added into the calculation for the 12 month period without having to revisit the entire calculation. After a 12 month period has passed and a proposed action triggers the disturbance calculation, BLM will examine the existing ground disturbance calculation to determine: 1) if the calculation is still reliable, in which case add in any additional disturbance that has occurred since that calculation; or 2) if the disturbance must be recalculated in its entirety. Once completed for a specific activity, the ground disturbance calculation may be used throughout the activity's environmental analysis. However, the BLM may recalculate the affected unit(s) or portions of the unit(s) if it determines such recalculation is necessary for the BLM's environmental analysis.

Unit of measurement: When calculating the ground disturbance, it is necessary to identify the appropriate unit level at which the disturbance will be calculated. For ground disturbing activities that occur within an ACEC, the disturbance calculation will be based on the ACEC unit boundary, or the boundary of the disturbance cap area(s), whichever area is smaller. If there is overlap between California Desert National Conservation Lands and an ACEC, the calculation will take place based on the smallest unit. If an activity/project overlaps two or more smaller units, the cap will be calculated, individually, for all affected units.

Ground disturbance includes: The calculation shall include existing ground disturbance in addition to the estimated ground disturbance from the proposed activity (future) determined at the time of the individual proposal:

- Authorized/approved ground disturbing activities – built and not yet built

- BLM identified routes – all routes, trails, etc., authorized and unauthorized, identified in the Ground Transportation Linear Feature (GTLF) and/or other BLM route network database (i.e., BLM local databases that contain the best available data on routes and trails, replacement for GTLF, etc.), following applicable BLM standards and policy for identification of routes (authorized and unauthorized)
- Assumptions may be used to identify the percentage/degree/area/etc. of ground disturbance for a specific authorized/approved activity or activity-type based on:
    - Activity-specific environmental analysis, such as NEPA or ESA Section 7 Biological Assessment
    - Known and documented patterns of ground disturbance
    - Other documented site-specific factors that limit or play a role in ground disturbance, such as topography, geography, hydrology (e.g. desert washes obliterating authorized routes on a regular basis), historical and predicted patterns of use
- Any unauthorized disturbance that can be seen at a 1:10,000 scale using the best available aerial imagery
- Ground disturbance from wildfire, animals, or other disturbances that can be seen at a 1:10,000 scale using the best available aerial imagery
- Historic Route 66 maintenance - potential ground disturbance estimates:
    - As part of the ground disturbance calculation, the potential disturbance associated with estimated operations related to the maintenance of Historic Route 66 will automatically be included in the ground disturbance calculation as existing ground disturbance for the units specified below, until which time these estimated acres are no longer necessary due to approved operations:
        - South Amboy-Mojave California Desert National Conservation Lands 221 acres
        - Bristol Mountains ACEC 92 acres
        - Chemehuevi ACEC 43 acres
        - Pisgah ACEC 86 acres
- Through a collaborative effort, the BLM has participated in the development of a Corridor Management Plan for Historic Route 66 in California. While specific details of the maintenance of this historic route are not detailed in the plan, as a managing party, it is important for BLM to provide a foundation for the future maintenance needs of the Historic Route 66, as conducted by San Bernardino County. To accomplish this it is necessary to account for the potential salable mineral uses in

several of the conservation allocations within the LUPA Decision Area along Route 66 for the acquisition and stockpiling of soils, gravels, and rock. Based on the information provided by San Bernardino County in 2015, including acquisition/stockpiling location and anticipated size, BLM calculated the potential area of ground disturbance within the South Amboy-Mojave California Desert National Conservation Land unit and the Bristol Mountain, Chemehuevi and Pisgah ACECs along Historic Route 66. The estimated ground disturbance acreage includes disturbance associated with potential access to the locations if no current access exists.

- The estimated ground disturbance acres for maintenance of Historic Route 66 in the before mentioned conservation units is not approval of these activities by BLM. Activities associated with the management and maintenance of Historic Route 66 on BLM administered land will follow all applicable laws, regulations and policies.

Exceptions to the Disturbance Calculation:

- Actions necessary to control the immediate impacts of an emergency that are urgently needed to reduce the risk to life, property, or important natural, cultural, or historic resources, in accordance with 43 CFR 46.150, will not be required to conduct a disturbance calculation. If the actions are ground disturbing, that disturbance will count towards the disturbance cap when next calculated for non-emergency activities.
- Actions that are authorized under a Department of Interior (DOI) or BLM NEPA Categorical Exclusion will not be required to conduct a disturbance calculation; however, these actions are not exempt from the disturbance mitigation requirement if a unit is at or above its cap. Although the BLM is not required to calculate the disturbance cap before approving an activity under a Categorical Exclusion, if the BLM knows an area is at or exceeding the cap, the disturbance mitigation requirements would apply to that activity.
- BLM authorized/approved research or restoration activities that are designed or intended to promote and enhance the relevant and important values for which the ACEC was designated.
- Actions that are entirely within the footprint of an existing authorized/approved site of ground disturbance that is within the calculation above.
- Livestock grazing permit renewals (however, water developments or other range improvements requiring an Environmental Assessment or Environmental Impact Statement would be subject to the disturbance calculation and any mitigation requirements).

Ground Disturbance Mitigation:

The purpose of ground disturbance mitigation (disturbance mitigation) is to allow actions to occur in California Desert National Conservation Lands and/or ACEC that is at or above its designated disturbance cap(s), while at the same time providing a restoration mechanism that will, over time, improve the condition of the unit(s) and take them below their cap. Disturbance mitigation is compensatory. Disturbance mitigation is unique to ground disturbance cap implementation and a discrete form of compensatory mitigation, separate from other required mitigation in the DRECP (see Glossary of Terms).

Disturbance mitigation may only be used for ground disturbance that is otherwise allowed by the LUPA and consistent with the purposes for which the California Desert National Conservation Lands and/or ACEC was designated. Areas used for disturbance mitigation are still considered disturbed until which time they meet the "Ground Disturbance Recovery" criteria in the section below.

Unit for implementing disturbance mitigation: The appropriate unit level for implementing disturbance mitigation is the same as that used for calculating ground disturbance. For ground disturbing activities that occur within an ACEC, the disturbance mitigation will be required within the ACEC unit boundary, or the boundary of the disturbance cap area(s), whichever area is smaller. If there is overlap between California Desert National Conservation Lands and an ACEC, the disturbance mitigation will take place in the smallest unit. If an activity/project overlaps two or more smaller units, disturbance mitigation will be required for all units that are at or over their specified disturbance cap.

No disturbance mitigation required: If the calculated ground disturbance for the unit(s) is under the cap:

- No disturbance mitigation required; use activity design features to minimize new ground disturbance and help stay below cap.

Disturbance mitigation required: If the calculated ground disturbance is at or above the unit(s) cap, disturbance mitigation is required:

- Use activity design features to minimize new ground disturbance to the extent practicable.
- For the portion of the proposed activity that is located on land within an area previously disturbed by an authorized/approved action that has been terminated the required disturbance mitigation ratio is 1.5 (1½):1.

- For the portion of the proposed activity that is located on undisturbed land or land disturbed by unauthorized activities, the required disturbance mitigation ratio is 3:1.
- Although the BLM is not required to calculate the ground disturbance cap before approving/authorizing an activity under a Categorical Exclusion, if the BLM knows an area is at or exceeding the cap, the disturbance mitigation requirements would apply to that activity.
- In the rare circumstance where the BLM authorizes activities on areas restored (e.g., as disturbance or other forms of mitigation), the required disturbance mitigation ratio requirement is doubled, that is, 3:1 or 6:1, respectively.
- If disturbance mitigation opportunities do not exist in a unit, ground-disturbing activities (see exceptions below) will not be allowed in that unit until which time opportunities for disturbance mitigation in the unit become available (see types and forms of disturbance mitigation below) or the unit recovers and drops below the cap.

Exceptions to the Disturbance Mitigation Requirement:

- Any portion of the proposed activity that is located on land previously disturbed by an existing, valid authorized/approved action.
- Livestock grazing permit renewals (however, water developments or other range improvements requiring an Environmental Assessment or Environmental Impact Statement would be subject to the disturbance calculation and any mitigation requirements).
- Land use authorization assignments and renewals with no change in use.
- BLM authorized/approved activities that are designed and implemented to reduce existing ground disturbance, such as ecological, cultural, or habitat restoration or enhancement activities.
- Non-discretionary actions, where BLM has no authority to require compensatory mitigation.

Types and Forms of Disturbance Mitigation:

- Restoration of previously disturbed BLM lands within the boundary of the specific ACEC unit(s) being impacted.
- Acquisition of undisturbed lands within the boundary of the specific ACEC unit being impacted.
- Ground disturbance mitigation can be "nested" (i.e., combined) with other resource mitigation requirements, when appropriate. For example, a parcel restored for desert tortoise habitat mitigation may also satisfy the disturbance mitigation

requirement if the parcel is within the appropriate unit of California Desert National Conservation Lands, ACEC boundary, or smaller disturbance cap unit.

Ground Disturbance Recovery

In general, California Desert National Conservation Lands and/or ACEC ground disturbance recovery will be determined during the decadal ground disturbance threshold ecoregion trend monitoring assessments (see below, and Monitoring and Adaptive Management). California Desert National Conservation Lands and/or ACEC recovery may be assessed at intermediate intervals, in between the decadal assessments, at BLM's discretion based on adequate funding and staffing. Between the decadal assessments, BLM will assume disturbed areas and units (same as used for calculations and mitigation) are not yet recovered until data is presented and BLM determines the area meets one of the two criteria below:

- Field verification that disturbed area(s) are dominated by the establishment of native shrubs, as appropriate for the site, and demonstrated function of ecological processes (e.g., water flow, soil stability).
- Ground disturbance can no longer be seen at the 1:10,000 scale using the best available aerial imagery.

Areas within California Desert National Conservation Lands and/or ACEC(s) may be determined recovered by BLM at any time, once one of the two criteria above are met, prior to the entire unit (of calculation and mitigation) being determined recovered. Areas determined recovered by BLM would be removed from the [next] ground disturbance calculation for that unit.

Ground Disturbance Threshold Ecoregion Trend Monitoring (also refer to Monitoring and Adaptive Management)

To monitor the overall general condition and ground disturbance trend of the California Desert National Conservation Lands and ACECs, one ecoregion per year, on a continual rotating basis, will be assessed in relation to a 1% ground disturbance threshold. This monitoring and assessment will begin one year after the signing of the DRECP LUPA ROD. The ecoregion(s) within the WMRNP will be monitored and assessed no sooner than 5 years after the signing of the DRECP LUPA ROD. The BLM California State Director will determine the order of the ecoregional trend monitoring.

The results of the trend monitoring, in combination with other pertinent ecological and cultural data, may trigger the adaptive management process, relative to changes, up or down, of the ground disturbance caps, ground disturbance mitigation requirements, or ground disturbance mitigation ratios (see Monitoring and Adaptive Management).

Ground Disturbance Threshold Ecoregion Adaptive Management – Response (also refer to Monitoring and Adaptive Management)

The adaptive management framework is specific in relation to the response to the ground disturbance threshold ecoregion monitoring. At no time should the changes made through adaptive management compromise the nationally significant ecological, cultural or scientific values for which a California Desert National Conservation Lands unit was designated, the relevant and important values for which an ACEC was designated, or the overall DRECP LUPA biological and cultural conservation design and strategy.

The monitoring results show the total ground disturbance within the ecoregion is at or below the 1% threshold/cap. The best available data (e.g., species demographic changes, suitable habitat availability, etc.) indicates or illustrates that the resource most sensitive to ground disturbance in that ecoregion for which it was conserved (i.e., biological or cultural) are:

- Trending flat or improving – No changes in management response, no adaptive management, may be needed.
- Declining – Adaptive management is needed, including possible reduction of the disturbance caps in all or portions of the ecoregion, increases in required ground disturbance mitigation, changes to resource specific CMAs, or other management actions to further limit the effects of ground disturbance.

The monitoring results show the total ground disturbance within the ecoregion exceeds the 1% threshold/cap. The best available data (e.g., species demographic changes, suitable habitat availability, etc.) indicates or illustrates that the resource most sensitive to ground disturbance in that ecoregion for which it was conserved (i.e., biological or cultural) are:

- Improving – Then adaptive management may be considered, including increase in the ground disturbance cap in all or portions of the ecoregion, or decrease in the required disturbance mitigation.
- Trending flat or declining – Adaptive management is needed, including possible reduction of the disturbance caps in all or portions of the ecoregion, increases in required disturbance mitigation, changes to resource specific CMAs, or other management actions to further limit the effects of ground disturbance.

II.2.3 Wildlife Allocations

Wildlife resources are an important value managed by the BLM. BLM lands provide habitats for a variety of plant and animal species. Wildlife Allocation is a land use designation wherein the management of the lands identified emphasize protection and enhancement of these important plant and animal habitats. The Wildlife Allocation

Designation does not eliminate other existing land uses. New activities or modifications of existing land uses within these areas must be compatible with and not contrary to the wildlife values or the protection and enhancement of wildlife and plant habitat. Authorized officers will make a finding that any decision in these areas is consistent with these values.

The DRECP LUPA includes approximately 18,000 acres of Wildlife Allocations on BLM-administered lands, all within the Bakersfield RMP area. The LUPA contains specific CMAs for the Wildlife Allocations.

II.2.4 Recreation Management Areas

II.2.4.1 Special Recreation Management Areas

SRMAs are public lands units identified in land use plans to direct recreation funding and personnel to fulfill commitments made to provide specific structured recreation opportunities (i.e., activity, experience, and benefit opportunities). Both land use plan decisions and subsequent implementing action for recreation in each SRMA are geared to a strategically identified primary market – destination, community, or undeveloped areas. SRMAs are designated throughout the LUPA Decision Area, including as an overlapping land allocation on all existing "open" and "limited" use OHV areas.

The DRECP LUPA includes 31 SRMAs within the DRECP area, totaling approximately 2,691,000 acres on BLM-administered lands. See Figure 6 for the recreation designations for the Approved LUPA. Descriptions, maps, and management actions for each SRMA are included SRMA Special Unit Management Plans in Appendix C.

II.2.4.2 Extensive Recreation Management Areas

ERMAs recognize existing recreation use, demand, or recreation and visitor services program investments and are managed to sustain principal recreation activities and associated qualities and conditions of the ERMA, commensurate management with other resources and resource use. ERMAs are designated in the geographic area managed by the BLM Needles Field Office in the CDCA and include approximately 903,000 acres.

Table 9 displays the LUPA wide acres in recreation allocations, and by the individual land use plans.

Table 9
BLM LUPA Recreation Allocations

BLM LUPA Recreation Allocations[3]	Acreage[1,2]
DRECP LUPA Decision Area	
SRMA	2,691,000
ERMA	903,000
Total	**3,595,000**

Table 9
BLM LUPA Recreation Allocations

BLM LUPA Recreation Allocations[3]	Acreage[1,2]
Recreation allocations by Plan Amendment	
CDCA	***3,566,000***
SRMA	2,663,000
ERMA	903,000
Bishop RMP	***29,000***
SRMA	29,000
ERMA	—
Bakersfield RMP	**—**
SRMA	—
ERMA	—

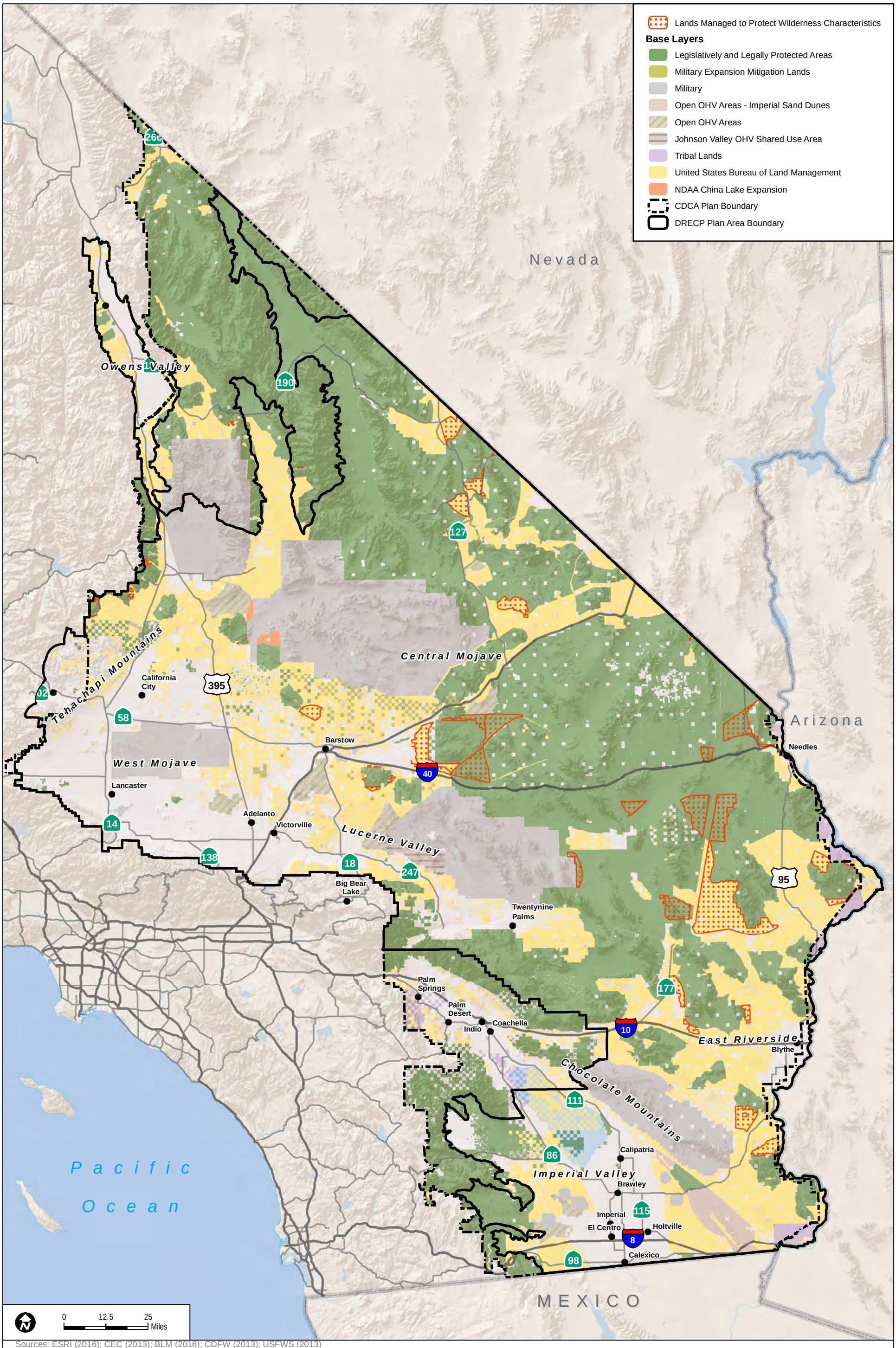
[1] The following general rounding rules were applied to acreage values: values greater than 1,000 were rounded to nearest 1,000; values less than 1,000 and greater than 100 were rounded to the nearest 100; values of 100 or less were rounded to the nearest 10, and therefore totals may not sum due to rounding. In cases where subtotals are provided, the subtotals and the totals are individually rounded. The totals are not a sum of the rounded subtotals; therefore the subtotals may not sum to the total within the table.

[2] Acres are BLM administered lands only

[3] Includes acres that are within the Mojave Trails and Sand to Snow National Monuments and other conservation areas (California Desert National Conservation Lands, ACECs, etc.)

II.2.5 Lands Managed to Protect Wilderness Characteristics

There are approximately 546,000 acres of lands managed to protect wilderness characteristics in the DRECP LUPA. These lands are identified, and managed for these characteristics, and are detailed in the CMAs. Inventories not yet completed fall within the jurisdiction of the BLM Palm Springs and Ridgecrest Field Offices, as of the signing of the DRECP LUPA ROD. At the completion of these inventories, the BLM will propose lands to be managed to protect wilderness characteristics through a plan amendment. Included is the map of the lands managed to protect wilderness characteristics for the DRECP LUPA. The LUPA contains CMAs for lands that have wilderness characteristics but are not being managed for those characteristics, including those lands inventoried after the DRECP LUPA ROD. Figure 7 provides the map of the lands managed to protect wilderness characteristics.



Sources: ESRI (2016); CEC (2013); BLM (2016); CDFW (2013); USFWS (2013)

FIGURE 7

DRECP LUPA Lands Managed to Protect Wilderness Characteristics

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II.3 Description of Renewable Energy Activities, Policies, and Allocations

On BLM-administered lands, the BLM LUPA addresses renewable energy and transmission siting, construction, operation, and decommissioning activities, and conservation activities. The following summarizes the renewable energy generation, transmission, and conservation related activities that are likely to occur on BLM-managed public lands. More detail can be found in Appendix D, and in the Proposed LUPA and Final EIS.

In the LUPA, renewable energy-related activities are incentivized and streamlined in DFAs, allowed in Variance Process Lands, and considered in General Public Lands with a plan amendment. Generation development is focused in the West Mojave, Imperial Valley, East Riverside and around Barstow, with smaller areas in the southern portion of Owens Valley. Figure 8 provides the map of the renewable energy designations (i.e., DFAs and Variance Process Lands).

Table 10 provides a DFA acreage summary by ecoregion subarea.

Table 10
BLM LUPA Development Focus Areas by Ecoregion Subarea

Ecoregion Subarea	DFA Acreage[1,2]
Basin and Range	49,000
Colorado Desert	148,000
Kingston-Amargosa	600
Lake Cahuilla	110,000
Mojave and Silurian Valley	3,000
Pinto Lucerne Valley and Eastern Slopes	21,000
South Mojave-Amboy	5,000
West Desert and Eastern Slopes	52,000
Total	**388,000**

1 The following general rounding rules were applied to acreage values: values greater than 1,000 were rounded to nearest 1,000; values less than 1,000 and greater than 100 were rounded to the nearest 100; values of 100 or less were rounded to the nearest 10, and therefore totals may not sum due to rounding. In cases where subtotals are provided, the subtotals and the totals are individually rounded. The totals are not a sum of the rounded subtotals; therefore the subtotals may not sum to the total within the table.

2 Acres are BLM administered lands only

The distribution of different generation technologies varies depends on underlying factors that affect each technology. The method used to estimate the distribution of generation impacts across the DRECP Plan Area simultaneously accounts for the area available to each technology, potential interactions between technologies, and variation in the relative development potential of different DFAs. Refer to in the Proposed LUPA and Final EIS Appendix F for more detail. In the following section, each technology is briefly discussed,

with more detail provided in Appendix D. Table 11 includes a summary of the DFAs by county by technology type. The technology type listed indicates what technologies are assumed feasible in the DFA. If multiple technologies are listed that indicates that more than one renewable energy technology could be feasible in that DFA. DFAs suitable for solar only are the most common in most counties. DFAs suitable for solar and wind are most common in Riverside and San Bernardino counties. Geothermal resources are only known in Imperial and Inyo counties. Unless noted otherwise, DFAs are available for all three technologies. Table 11 includes a summary of the DFAs by county and technology type.

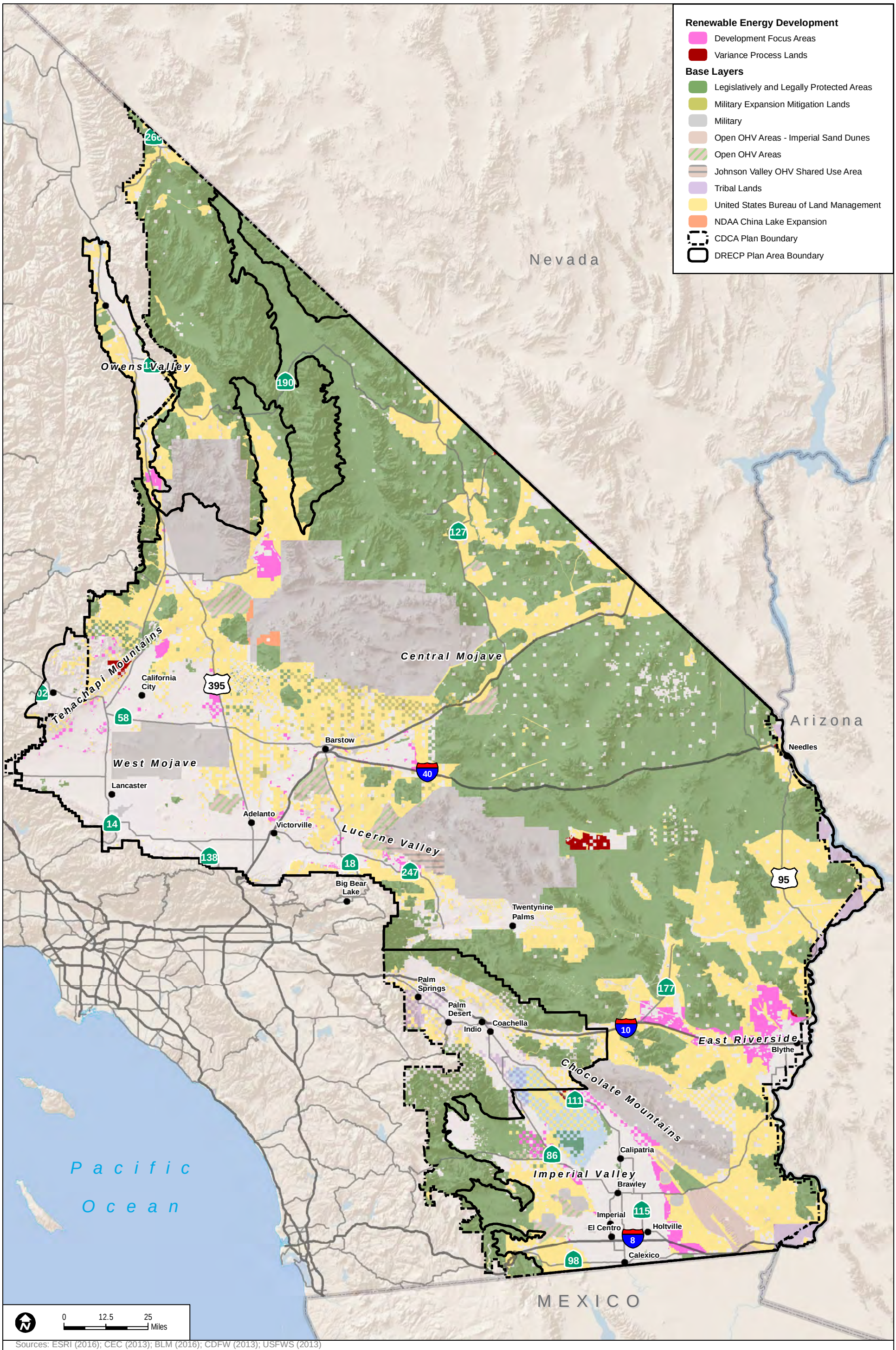
Table 11
DRECP LUPA Development Focus Areas by County by Technology Type

Technology Type Category by County	DFA Acreage[1,2]
Imperial	***110,000***
Solar, Wind, and Geothermal	35,000
Solar and Geothermal	15,000
Geothermal	60,000
Inyo	***13,000***
Solar, Wind, and Geothermal	2,000
Solar and Geothermal	3,000
Geothermal	9,000
Kern	***29,000***
Solar, Wind, and Geothermal	29,000
Los Angeles	***200***
Solar, Wind, and Geothermal	200
Riverside	***148,000***
Solar, Wind, and Geothermal	148,000
San Bernardino	***88,000***
Solar, Wind, and Geothermal	88,000
San Diego	**—**
Total	**388,000**

Notes: See Chapter I.3 and Appendix F of the Draft DRECP and EIR/EIS for detailed descriptions of the methodology used to identify the acreage amounts listed in this table.

[1] The following general rounding rules were applied to acreage values: values greater than 1,000 were rounded to nearest 1,000; values less than 1,000 and greater than 100 were rounded to the nearest 100; values of 100 or less were rounded to the nearest 10, and therefore totals may not sum due to rounding. In cases where subtotals are provided, the subtotals and the totals are individually rounded. The totals are not a sum of the rounded subtotals; therefore the subtotals may not sum to the total within the table.

[2] Acres are BLM administered lands only



Sources: ESRI (2016); CEC (2013); BLM (2016); CDFW (2013); USFWS (2013)

FIGURE 8

DRECP LUPA Renewable Energy Designations

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Table 12 includes a summary of the DFAs by plan amendment by technology type. The CDCA Plan is the only plan area that contains DFAs. The technology type listed indicates what technologies are assumed feasible in the DFA. If multiple technologies are listed that indicates that more than one renewable energy technology could be feasible in those DFA. Geothermal resources are only known in Imperial and Inyo counties. Unless noted otherwise, DFAs are available for all three technologies.

Table 12
DRECP LUPA Development Focus Areas by Plan Amendment by Technology Type

Technology Type by Plan Amendment	DFA Acreage[1,2]
CDCA	***388,000***
Solar, Wind, and Geothermal	302,000
Solar and Geothermal	18,000
Geothermal	69,000
Bishop RMP	**—**
Bakersfield RMP	**—**
Total	**388,000**

[1] The following general rounding rules were applied to acreage values: values greater than 1,000 were rounded to nearest 1,000; values less than 1,000 and greater than 100 were rounded to the nearest 100; values of 100 or less were rounded to the nearest 10, and therefore totals may not sum due to rounding. In cases where subtotals are provided, the subtotals and the totals are individually rounded. The totals are not a sum of the rounded subtotals; therefore the subtotals may not sum to the total within the table.

[2] Acres are BLM administered lands only

II.3.1 Description of Renewable Energy Technologies

The Proposed LUPA in the Final EIS included a detailed description of renewable energy technologies (i.e., solar, wind, and geothermal) (see Appendix D). The Proposed LUPA and Final EIS also includes a programmatic description of the environmental effects of these technologies, including construction, operations and maintenance, and decommissioning, on public lands, within the DFAs and VPLs. During its NEPA analysis for future renewable energy development in DFAs and VPLs, the BLM will tier to this analysis, as appropriate, in order to streamline the project-level review. Under NEPA, "tiering" refers to the coverage of general matters in broader environmental impact statements with subsequent narrower environmental analysis, incorporating by reference the general discussions and concentrating solely on the issues specific to the analysis subsequently prepared (40 CFR 1508.28).

Given the rapid advancements in renewable energy technologies, future renewable energy development may differ from the current technologies described in Appendix D and analyzed in the Final EIS while the LUPA is in effect. When processing future land use authorizations for renewable energy that differ from the technologies analyzed, the BLM

will evaluate the adequacy of the existing analysis, and may require analysis beyond that necessary for tiering to the programmatic document.

II.3.2 Renewable Energy Plan Decisions and Policies

II.3.2.1 Development Incentives in DFAs

Through the DRECP, the BLM is adopting a variety of incentives to steer future renewable energy development to the DFAs. As noted in the table below, other incentives would require changes in BLM regulations and policies. These incentives would only apply if those changes are adopted. These incentives include those described in the BLM's Western Solar Plan for utility-scale solar development in the Solar Energy Zones (SEZs), with some modifications. Under the Approved LUPA, these incentives apply to solar, wind, and geothermal development in DFAs, as authorized by regulation and policy. Unless mentioned below, the BLM will apply its current regulations and policies when processing right-of-way (ROW) applications or geothermal actions in DFAs (e.g., compliance with the National Historic Preservation Act will be conducted in accordance with 36 CFR Part 800 and IM 2013-20, or its successor).

The proposed incentives and their applicability to the different energy technologies are contained in Table 13.

Table 13
DRECP Incentives for Renewable Energy Development within Development Focus Areas on BLM-Administered Land[1]

Development Focus Area Incentive	Solar	Wind	Geothermal
Facilitate Streamlined Permitting			
The BLM will commit to adhere internally to strict schedules (consistent with applicable laws)*	Yes	Yes	Yes
The DOI will undertake interagency coordination to expedite service and provide priority processing to projects in DFAs*	Yes	Yes	Yes
The BLM will maintain RECOs as long as needed to assist with efficient authorization of projects in DFAs*	Yes	Yes	Yes
The BLM may establish a competitive process for DFAs consistent with existing regulations or through new rulemaking[2]*	Yes	Yes, with measures to protect initial investment of testing	No; already established in federal regulations at 43 CFR subpart 3203
Prioritize development in DFAs, particularly in areas with high energy generation potential and low resource conflicts.*	Yes	Yes	Yes
The BLM will prioritize development in DFAs. This includes having a single point of contact per project and adopting internal procedures to ensure accountability to schedules and quality.*	Yes	Yes	Yes
The BLM will tier project-level NEPA analysis to the DRECP EIS for renewable energy projects in DFAs.*	Yes	Yes	Yes
The BLM will coordinate with DOD on potential applications for solar power towers and wind in DFAs identified by DOD as high or moderate risk to testing and training before accepting applications.*	Yes	Yes	NA
The BLM will integrate planned transmission corridor improvements developed by the Transmission Technical Group.*	Yes	Yes	Yes
Improve and Facilitate Mitigation			
The DRECP defines mitigation requirements to simplify and improve the mitigation process and increase permit efficiencies and financial predictability for developers.	Yes	Yes	Yes

Table 13
DRECP Incentives for Renewable Energy Development within Development Focus Areas on BLM-Administered Land[1]

Development Focus Area Incentive	Solar	Wind	Geothermal
The BLM will develop and utilize appropriate tools to efficiently implement mitigation (Tools may include applicant and third-party implementation, and mitigation deposit accounts, such as the REAT-NFWF Mitigation Account.	Yes	Yes	Yes
The BLM will utilize the USFWS Region 8 golden eagle framework guidance, or most up to date document, as a means to facilitate the potential for streamlining future Bald and Golden Eagle Protection Act permitting in the DFAs.	Yes	Yes	Yes
The BLM will utilize the analysis in the DRECP's ESA Section 7 consultation documents, and any other applicable DRECP documents, when considering project-level authorizations in DFAs.	Yes	Yes	Yes
Facilitate Permitting of Needed Transmission			
The BLM will commit staff and prioritize projects that provide needed transmission to the DFAs.*	Yes	Yes	Yes
The BLM will prioritize transmission associated with DFAs, and will tier transmission NEPA to DRECP documents to the greatest extent practicable. *	Yes	Yes	Yes
Provide Economic Incentives			
Projects will require lower cost recovery in DFAs because of upfront data collection and environmental review.*	Yes	Yes	NA—Cost recovery does not apply to geothermal leasing.
Projects will have a longer phase-in period for rental payments in DFAs.*	Yes	Yes, as permitted by BLM regulation and policy.	No—Geothermal Lease rental requirements are addressed in 43 CFR Subpart 3211.
The BLM will charge fixed megawatt capacity fee rental payment for the life of the project in DFAs.*	Yes	Yes, as permitted by BLM regulation and policy.	No—Lease Royalty rates for leases issued after August 8, 2005 were established in the 2005 Energy Policy Act, and are incorporated into federal regulations at 43 CFR 3211.17.

Table 13
DRECP Incentives for Renewable Energy Development within Development Focus Areas on BLM-Administered Land[1]

Development Focus Area Incentive	Solar	Wind	Geothermal
The BLM will charge limited base acreage rental payments in DFAs.*	Yes	Yes, as permitted by BLM regulation and policy.	No—Geothermal Lease rental requirements are addressed in 43 CFR Subpart 3211.
The BLM will restructure bonding requirements in DFAs (e.g., a fixed or standard bond per acre).*	Yes	Yes, as permitted by BLM regulation and policy.	No—general geothermal bond requirements are addressed in 43 CFR Subpart 3214. Additional bond requirements specific to exploration activities are addressed in subpart 3251.15; drilling operations, Section 3261.18; and utilization operations, Section 3271.12 and Section 3273.19.
The BLM will offer 30-year fixed term lease with fixed rental fee in DFAs.*	Yes	Yes, as permitted by BLM regulation and policy.	No—geothermal lease terms are addressed in 43 CFR subpart 3207
Development in DFAs should result in less administrative oversight and less need for administrative costs and processing time.*	Yes	Yes	Yes—within requirements in 43 CFR 3211.
Lands in DFAs would only be sold or exchanged if BLM determines the disposal would either facilitate renewable energy development or would not preclude such development.			
Incentive for Multiple Technology			
DFAs where solar, wind, and/or geothermal can operate in the same area at the same time will be identified to facilitate the most efficient use of resources and space.	Yes	Yes	Yes

Table 13
DRECP Incentives for Renewable Energy Development within Development Focus Areas on BLM-Administered Land[1]

Development Focus Area Incentive	Solar	Wind	Geothermal
The mitigation/compensation requirements can be proportionally split between the two or three types of renewable energy projects sited on the same piece of ground and will not be additive.	Yes	Yes	Yes
To the extent practicable, surveys and assessments for wildlife or plant species and cultural resources will be combined or consolidated to address a dual or triple technology site.	Yes	Yes	Yes
Dual or triple technology projects can use a single NEPA document to analyze the project.	Yes	Yes	Yes

Notes:

[1] Incentives marked with an asterisk (*) would be implemented through BLM Policy or Regulation and are not part of the Land Use Plan Amendment.

[2] The BLM may establish a competitive process for DFAs where appropriate under existing regulations at 43 CFR 2804.23. New regulations are also being prepared, as described in the ROD, as an implementation action from the Western Solar Plan, to facilitate a competitive leasing process for both solar and wind energy development in designated leasing areas (which would include DFAs).

II.3.2.2 Variance Process Lands

Variance Process Lands identified in the DRECP are based on the variance area concept introduced in the BLM's Western Solar Plan. The Western Solar Plan defines a variance area as "an area that may be available for utility-scale solar energy ROW with special stipulations or considerations." The BLM identified all lands outside of exclusion areas and SEZs as variance areas for utility-scale solar energy development.

The Western Solar Plan allows applications in variance areas to be processed on a case-by-case basis, but applicants have the responsibility to demonstrate that proposed projects will avoid, minimize, and/or mitigate, as necessary, sensitive resources, and will be compatible with state and local plans (BLM and DOE 2012, Section 2.2.2.3).

Areas in the DRECP identified as Variance Process Lands consist of:

1. A subset of the variance lands identified in the Western Solar Plan. The BLM applied the same screening criteria as the Solar Programmatic EIS (PEIS) using new, updated and finer scale data. Additional screening criteria specific to the resources in the Land Use Plans were also applied to exclude additional lands to further reduce potential resource conflicts and incorporate new information into decision making. This process reduced the number of acres of variance lands compared to those designated in the Western Solar Plan. A list of the Western Solar Plan screening criteria that had new, updated or finer scale data employed and the additional Land Use Plan specific screening criteria appears in Table 14.
2. Additional lands that, based on current information, have moderate to low ecological value and ambiguous value for renewable energy.

Table 14
Solar PEIS ROD Variance Land Screening Criteria with New, Updated, or Finer Scale Data and Land Use Plan Specific Screening Criteria Used to Identify Variance Process Lands

- DFAs – applications in DFAs will not be subject to the variance process.
- Interagency biological reserve envelope
- Lands included in new and expanded ACECs and National Conservation Lands.
- All designated and proposed critical habitat areas for species protected under the Endangered Species Act of 1973 (as amended).
- All areas with BLM inventoried wilderness characteristics.
- Developed recreational facilities, special-use permit recreation sites, all designated OHV-open areas, all SRMAs, and all Long-Term Visitor Areas identified in the DRECP LUPA.
- All areas where the BLM has made a commitment to state agency partners and other entities to manage sensitive species habitat.
- All Desert Tortoise translocation sites identified in applicable land use plans, project-level mitigation

Table 14
Solar PEIS ROD Variance Land Screening Criteria with New, Updated, or Finer Scale Data and Land Use Plan Specific Screening Criteria Used to Identify Variance Process Lands

plans or ESA Section 7 Biological Opinions.

- All wildlife migratory and movement corridors identified in applicable land use plans.
- All Big Game Winter Ranges identified in applicable land use plans, such as mule deer area in the Bishop RMP.
- Lands Classified as Visual Resource Management (VRM) Class I or II in the applicable action alternatives.
- National Historic and Natural Landmarks identified in applicable land use plans and identified in the applicable action alternatives.
- Lands within the boundaries of properties listed in the National Register of Historic Places.
- Designated Wild and Scenic River segments, and river segments determined to be eligible or suitable for Wild and Scenic River status identified in applicable land use plans, including any associated protective corridors identified in the Wild and Scenic River designation or proposal.
- Lands within a solar, wind or geothermal energy development application area found to be inappropriate for energy development through an environmental review process and ROD/CDCA Plan Amendment.
- All lands within the Mojave Trails National Monument and Sand to Snow National Monument and all conservation lands acquired outside of the Monuments through donations or use of Land and Water Conservation Funds.
- Variance land parcels smaller than 280 acres and/or not capable of being combined with other BLM variance parcels or non-BLM lands in DFAs to reach the 280-acre minimum size.[1]
- Narrow stringers on spur roads between existing or proposed areas conserved or specially managed.
- The area around ancient pluvial lake basins that contain Late-Pleistocene and Holocene shorelines, the exclusion areas to be determined based on the hydrologic history of the particular pluvial lake and to include a 500-meter buffer extending out from the highest strandline dating to the time of human occupation.
- Known archaeological sites.
- Areas within the viewshed of National Historic Sites.
- Areas within five miles of the centerline of National Scenic and Historic Trail Corridors.
- All microphyll woodlands.
- Lands within 0.25 miles of any surface water source or riparian areas (seeps, springs, lakes, ponds, streams, perennial rivers, and streams).
- Wild Horse or Burro Herd Management Areas.

Note:

[1] 280 acres is the size of two utility-scale solar projects (20 MW as per CEC) at approximately 7 acres per MW.

Variance Process Lands would be available for solar, wind, and/or geothermal development. Applications for solar, wind, and/or geothermal projects of any size in Variance Process Lands will follow the variance process described in Section B.5 of Appendix B of the Western Solar Plan. The process includes public outreach, interagency coordination, and consideration of environmental factors prior to the NEPA process. In addition to the factors to be considered listed in Appendix B.5 of the

Western Solar Plan, the BLM will also consider the following criteria in making a variance determination on these lands:

- Compatibility of the application with the land designation in which the Variance Process Lands reside (for example, if the Variance Process Lands overlap with a SRMA).
- Compatibility of the application with other high value resources such as minerals.

After completing the steps outlined in Section B.5 of the Western Solar Plan, the BLM will determine whether to reject or continue processing the application. If the BLM rejects an application, that decision must be made with regard for the public interest and be supported by reasoned analysis and an adequate administrative record. Denial of an application constitutes "final agency action" and is therefore subject to administrative appeals to the Interior Board of Land Appeals (IBLA).

If the BLM does not reject the application, it will begin the NEPA process. The BLM retains its authority to approve, deny, or approve with modifications, the application.

II.3.2.3 General Public Lands

Within the DRECP Plan Area there are BLM-administered lands that do not have a specific land allocation or designation associated with energy development, conservation, or recreation. These lands are not needed to fulfill the DRECP biological conservation or renewable energy strategy. While renewable energy applications will be prioritized first in DFAs and second in VPLs, renewable energy applications that conform to certain Conservation and Management Actions will also be considered in General Public Lands (GPL) (see Section II.4.2.10). Applications within the CDCA, Bishop RMP and Bakersfield RMP will continue to require a Plan Amendment. The BLM has determined that, in appropriate circumstances, it can rely on the broad discretion it has under FLPMA to deny right-of-way applications without completing the NEPA process. Consistent with 43 CFR 1610.5(a) and 43 CFR 2804.26(a)(1), the BLM could deny renewable energy applications that do not conform to the land use plan, including the LUPA-wide CMAs and the CMAs specific GPLs described in Sections II.4.2.1 and II.4.2.10, respectively. Such decisions must be supported by reasoned analysis and an adequate administrative record. For all actions not covered by LUPA-wide or GPL CMAs, existing land use plan decisions continue to apply.

II.3.2.4 Existing Projects and Applications on BLM-Administered Land

Solar, Wind and Geothermal Projects on BLM land authorized prior to issuance of the DRECP ROD: This LUPA does not affect solar, wind, and geothermal projects authorized prior to the approval of the ROD. Authorized projects are those for which the BLM has offered and the applicant has accepted a ROW grant.

Projects proposed on BLM lands that are not authorized prior to issuance of the DRECP ROD: Some solar or wind applications were already being evaluated through ongoing, project-specific analysis and decision processes that were not be completed before the DRECP ROD was signed (see Table 15). The land use plan decisions made in the DRECP ROD will not affect project applications if they meet either of the following criteria:

1. A project that is proposed in a BLM SEZ and that is considered a "pending project" under the Solar PEIS ROD (the project application was filed before June 30, 2009).
2. A project with a Draft EIS or Environmental Assessment (EA) published no later than November 26, 2014 (60 days after release of the Draft EIS for the DRECP) provided the final project-level NEPA document includes:
    a. Analysis using the best available information at the time of publication, including data developed in support of DRECP conservation and recreation strategies, and
    b. Analysis describing the relationship between the project and the DRECP conservation and recreation strategies.

Amendments to project applications or authorized projects that meet either of the criteria listed above will not be subject to the land use decisions of the DRECP, provided that the amendment either (1) does not change the boundaries of the proposed project ROW, or (2) is related to avoiding resource or land conflicts, adapting the project to third-party-owned infrastructure constraints, or using or designating translocation or mitigation lands.

Table 15
BLM Solar and Wind Applications with Draft EIS Within 60 Days of DRECP Draft EIS

Application	Serial Number	Solar/ Wind	Current Status	In SEZ?
EDF Maverick (formally BrightSource Palen)	CACA 48810	Solar	Final EIS published 5/13/11; Supplemental Draft EIS published 7/26/13	Yes

The applications listed above published a Draft EIS before November 26, 2014. Additional California BLM first-in-line solar applications within a Solar Energy Zone are shown in Table 16.

Table 16
Additional California BLM First-in-Line Solar Applications within a Solar Energy Zone

Application	Serial Number	Solar/Wind	Current Status
First Solar Desert Quartzite	CACA 49397	Solar	NOI Published 3/6/15
Recurrent Crimson Solar	CACA 51967	Solar	Pre-NOI

In addition to applications that reach the Draft EIS milestone within 60 days of the DRECP's Draft EIS, applications in a SEZ that are considered "pending projects" under the Western Solar Plan would not be subject to the DRECP land use plan decisions. The list above includes additional solar applications in the Riverside East and Imperial East SEZs filed before June 30, 2009.

If a solar or wind ROW grant approved under these provisions is terminated, the BLM will consider amending its land use plan to be consistent with the land use plan for lands surrounding the ROW area. The BLM will consider the goals and objectives of the DRECP when processing future applications in areas where ROWs approved under these provisions are terminated.

All other solar and wind applications that do not meet the criteria described in this section would be subject to the decisions of the DRECP.

II.4 Goals, Objectives, and Conservation and Management Actions

II.4.1 Goals and Objectives

BLM land use plans identify desired outcomes expressed in terms of specific goals and objectives. The BLM Land Use Planning Handbook defines goals as broad statements of desired outcomes. Objectives identify specific desired outcomes for resources. This section outlines the goals and objectives for the DRECP LUPA. These goals and objectives are in addition to the goals and objectives already identified in the CDCA Plan and Bishop and Bakersfield RMPs.

The DRECP LUPA does not contain goals and objectives for all resources. Where the DRECP LUPA is silent on a resource, the goals and objectives in the existing plans continue to apply.

II.4.1.1 Biological Resources

The primary biological resources goals of the DRECP LUPA are landscape and habitat connectivity, ecosystem and ecological function, and species conservation. The BLM believes these three primary goals are essential for management of biological resources consistent with FLPMA and the Endangered Species Act, and other pertinent federal statues, regulations and policies. The overarching connectivity and ecological goal is to provide a connected, landscape-scale system of conservation lands consisting of a mosaic of large habitat blocks of constituent vegetative types/communities that maintains ecological integrity, ecosystem function and biological diversity and

that allows adaptation to changing conditions, and includes temperature and precipitation gradients, elevation gradients, and a diversity of geological facets to accommodate species range contractions and expansions in response to climate change. The overarching, interconnected, species conservation goal is to protect, manage, and contribute to recovery of viable populations of Focus and BLM Special Status Species throughout the species' distribution in the DRECP LUPA Decision Area, including conserving sufficient habitat and resources to assist these species in adapting to environmental fluctuations and to provide habitat connectivity that facilitates population movement and genetic exchange among populations.

Landscape and Habitat Connectivity

Goal 1:

- As part of a desert-wide landscape design, on BLM land provide a mosaic of vegetative types with habitat linkages that is adaptive to changing conditions and includes temperature and precipitation gradients, elevation gradients, and a diversity of geological facets that provide for movement and gene flow and accommodate range shifts and expansions in response to climate change.
    - **Objective 1.1:** Conserve focus and BLM Special Status Species habitat, vegetation types, and ecological processes of the Mojave and Sonoran deserts in each ecoregional subarea in the BLM LUPA Decision Area.
    - **Objective 1.2:** Design landscape linkage corridors to be 3 miles wide where feasible, and at least 1.2 miles wide where a greater width is not feasible.
    - Within BLM's authority, provide for wildlife crossings (underpasses and land bridges, if feasible) of appropriate size to allow wildlife movement corridors. Underpasses or bridges must be designed with behavioral attributes considered, so as to avoid population sink effects and mortalities. The use of fencing, or other structures, may be essential to direct movement and dispersal towards crossing structures.
    - **Objective 1.3:** Protect and maintain the permeability of landscape connections between neighboring mountain ranges to allow passage of resident wildlife by protecting key movement corridors or reducing barriers to movement within intermountain connections, including:
        - Chuckwalla-Little Chuckwalla-Palen connections
        - Bristol-Marble-Ship-Old Woman connections
        - Old Woman-Turtle-Whipple connections
        - Bullion-Sheephole-Coxcomb connections

- Clark-Mesquite-Kingston connections
- Big Maria-Little Maria-McCoy connections
- Soda-Avawatz-Ord-Funeral connections
- Clark-Mesquite-Kingston-Nopah-Funeral connections
- Rosa-Vallecitos-Coyote connections
- Panamint-Argus connection
- Palo Verde-Mule-Little Chuckwalla connections
- Palo Verde-Mule-McCoy connections
- Chuckwalla-Eagle-Coxcomb connections
- Eagle-Granite-Palen-Little Maria connections
- Granite-Iron-Old Woman connections
- Big Maria-Little Maria-Turtle connections
- Northeast slope of the San Bernardino Mountains between Arrastre Creek and Furnace Canyon, including Arctic and Cushenbury canyons, Terrace and Jacoby springs, along Nelson Ridge.

- **Objective 1.4:** Conserve unique landscape features, important landforms, and rare or unique vegetation types identified within the BLM Decision Area, including:
  - Desert riparian and wetland resources in the planning area, including riparian habitat (including microphyll woodlands), desert playas, and seeps/springs
  - Areas of dense Joshua Tree woodland
  - Areas with unique geological activity and/or paleontological interest
  - Rare vegetation type alliances

Ecological Processes

Goal 2:

- Promote ecological processes in the BLM Decision Area that sustain vegetation types and focus and BLM Special Status Species and their habitat.
  - **Objective 2.1:** Maintain natural surface- and ground-water processes in the planning area, including runoff regimes, percolation, storage, and recharge that serve to maintain vegetation types and Focus and BLM Special Status

Species habitat, including riparian, playa, seeps/springs, and desert wash resource elements.

- **Objective 2.2:** Maintain hydrogeomorphic processes that create habitat diversity, channel bank habitat and regeneration sites (through sediment transport, incision, and sand/silt deposition) for plants and wildlife, including single-thread channels, compound channels, and distributary networks located on alluvial fans.
  - Protect streams and washes, wetlands, and seasonal wetlands in all watersheds in the planning area.
  - Restore natural flow stream morphology at modified sites that are not in proper functioning condition.
- **Objective 2.3:** Conserve floodplain groundwater recharge, input of organic matter, and sediment deposition in the floodplain. Maintain floodplain and flood terrace fluvial processes and protect natural floodplain inundation zones to the 100-year flood plain by insuring ponding or other recharge mechanisms.
- **Objective 2.4:** Conserve undeveloped and natural areas within the watersheds of important riverine and drainage systems.
- **Objective 2.5:** Maintain or reestablish a fire regime that supports vegetation types and Focus and BLM Special Status Species.
- **Objective 2.6:** Minimize or prevent new infestations and, where feasible in target areas, decrease from existing conditions invasive plant species that negatively affect vegetation types and Focus and BLM Special Status Species. Target invasive plant species include tamarisk (*Tamarix* spp.), Sahara mustard (*Brassica tournefortii*), African mustard (*Malcolmia africana*), arundo or giant reed (*Arundo donax*), Russian thistle (*Salsola* spp.), and non-native grasses.
- **Objective 2.7:** Conserve the geomorphic (fluvial, alluvial, and Aeolian) processes associated with sand dune formation and the sand transport corridors between the sand dunes and their sand sources.
- **Objective 2.8:** Conserve or increase protective management to prevent structures capable of obstructing sand movement, within sand transport areas.

Agassiz's Desert Tortoise – *Gopherus agassizii*

Goal 3 – Desert Tortoise Conservation Areas:

- Within each desert tortoise recovery unit (USFWS 2011), on BLM land within the LUPA Decision Area, maintain well-distributed populations through a network of conservation lands that provide sufficient contiguous size and configuration to provide long-term population viability, connectivity, growth in recovery unit population size, and increases in recovery unit population distribution.
    - **Objective 3.1 (Tortoise Conservation Areas):** Maintain no net loss in the quantity of conserved desert tortoise habitat, on BLM land in the LUPA Decision Area, within each Tortoise Conservation Area in support of long-term desert tortoise population viability (Recovery Criterion 3 in the Desert Tortoise 2011 Recovery Plan).
    - **Objective 3.2 (Tortoise Conservation Areas):** Contribute to increasing rates of population change (λ) for desert tortoises (i.e., $\lambda>1$) over at least 25 years (a single tortoise generation).
    - **Objective 3.3 (Tortoise Conservation Areas):** Increase in the distribution of desert tortoises throughout each Tortoise Conservation Area, on BLM land within the LUPA Decision Area over at least 25 years (i.e., ψ [occupancy] >0) (Recovery Criterion 2 in the Desert Tortoise 2011 Recovery Plan).
    - **Objective 3.4 (Tortoise Conservation Areas):** Augment Tortoise Conservation Areas, such as Ord-Rodman, with conservation designations, implementation of the CMAs, restoration and acquisition of high value contiguous habitat to satisfy population viability parameters in the Recovery Plan.

Goal 4 - Desert Tortoise Linkages:

- Maintain functional linkages between Tortoise Conservation Areas to provide for long-term genetic exchange, demographic stability, and population viability within Tortoise Conservation Areas. Emphasize inclusion of high value contiguous habitats pursuant to Nussear et al. (2009) and minimization and avoidance of disturbance in habitat with high desert tortoise habitat potential.
    - **Objective 4.1 (Desert Tortoise Linkages):** Protect, manage, restore and acquire desert tortoise habitat within the following linkages with special emphasis placed on areas of high habitat potential and areas identified as integral to the establishment and protection of a viable linkage network. Ensure the long-term connectivity of Tortoise Conservation

Areas by maintaining desert tortoise habitat that is of sufficient size and contiguity for maintenance of viable populations within each linkage.

- Ord-Rodman to Superior-Cronese to Mojave National Preserve
- Superior-Cronese to Mojave National Preserve to Shadow Valley to Death Valley National Park Linkage
- Joshua Tree National Park and Pinto Mountains to Chemehuevi Linkage

- **Objective 4.2 (Desert Tortoise Linkages):** Protect, maintain, manage, restore and acquire all remaining desert tortoise habitat within severely compromised linkages, specifically the following:
  - Ivanpah Valley Linkage
  - Chemehuevi to Chuckwalla Linkage
  - Pinto Wash Linkage
- **Objective 4.3 (Desert Tortoise Linkages):** Protect and manage intact habitat on BLM land within the following linkages to enhance the population viability of the Ord-Rodman Tortoise Conservation Area.
  - Ord-Rodman to Joshua Tree Linkage
  - Fremont Kramer to Ord-Rodman Linkage

II.4.1.2 Comprehensive Trails and Travel Management

Travel and transportation are an integral part of virtually every activity that occurs on public lands, including recreation, livestock grazing, and wildlife management, commodity resources management, ROWs to private inholdings, and public land management and monitoring. Comprehensive Travel and Transportation Management is the planning, management, and administration of motorized and non-motorized roads, primitive roads, and trails to ensure that public access, natural resources, and regulatory needs are considered. Two of the BLM's greatest management challenges are providing reasonable and varied routes for access to public lands and providing areas for a variety of motorized and non-motorized recreation, various landscapes, user interests, equipment options, weather conditions, transportation infrastructure, and resource constraints all must be considered.

Goals and Objectives

The DRECP LUPA does not amend existing goals and objectives in the current land use plans. In addition to those goals and objectives, the DRECP includes the following goals and objectives:

- Provide reasonable, safe, and environmentally sound access for visitors, local residents, licensed and permitted activities, and property owners through

coordination and collaboration on travel systems with other agencies, state and local governments and interested stakeholders.

- Through current and future Travel and Transportation Management Plans, provide a network of roads, primitive roads, and trails that serves the transportation needs for commercial, recreational, and casual uses of public lands while providing appropriate protection of natural and cultural resources. Designate Roads, Primitive Roads, and Trails to meet the regional goals and objectives:
    - Maintain a network of roads, primitive roads, and trails to protect sensitive resources and provide for an acceptable level of health and safety given the type of use
    - Utilize the latest best management practices for the construction, reconstruction or maintenance and adopts new best management practices as they emerge
    - Utilize route designations as developed in existing, and future, Travel Management Plans, including, but not limited to, CDCA, Northern and Eastern Mojave Desert Management Plan (NEMO), Western Colorado Desert (WECO), WEMO Plans; and the Bakersfield and Bishop RMPs
- Protect road, primitive road and trail access to SRMAs, ERMAs, OHV Open Areas, Level 1, 2, and 3 Recreation Facilities, Points of Interest as identified on Desert Access Guides and other Recreation Guides, and authorized mineral use. (See also Section II.4.2.1.10.)

II.4.1.3 Cultural Resources and Tribal Interests

The management of cultural resources on BLM land is done in compliance with several federal laws, including the Antiquities Act of 1906; the National Historic Preservation Act of 1966, as amended; the NEPA of 1969; Executive Order (EO) 11593 "Protection and Enhancement of the Cultural Environment"; the FLPMA; the American Indian Religious Freedom Act of 1978; the Archaeological Resource Protection Act of 1979; the Native American Graves Protection and Repatriation Act of 1990; EO 13007, "Indian Sacred Sites"; and EO 13287, "Preserve America." Cultural resources are administered via the multiple-use mandate of FLPMA in six categories; scientific use, conservation, traditional use, public use, or experimental use. To balance this multiple-use mandate with the various compliance requirements, the BLM may impose safeguards against incompatible land and resource uses through withdrawals, stipulations on leases and permits, design requirements, and similar measures. These measures are developed and recommended by an appropriately staffed interdisciplinary team in accordance with policies described in the BLM Manual, Sections 8100 through 8170, and consistent with the statewide protocol with the California State Historical Preservation Office (SHPO) (BLM 2014a) and other guidelines from the SHPO. This section provides the proposed general goals, objectives, and

action items for the DRECP LUPA to manage cultural resources within the LUPA Decision Area consistent with these various requirements. Some individual units (SRMA, ACEC, and National Conservation Lands) also have additional specific and/or more restrictive cultural resource rules described in those sections.

Goals and Objectives

The DRECP LUPA does not amend goals and objectives in the land use plans prior to the DRECP LUPA, it adds to them. The DRECP LUPA adds the following goals and objectives:

Goals

- Identify, preserve, and protect significant cultural resources so that they are available for appropriate uses by present and future generations.
- Give full consideration to cultural resources in land use planning and management decisions by integrating cultural resources into a regional framework of information.
- Broaden the archaeological and historical knowledge of the DRECP through inventory efforts and the use of existing data to identify the full spectrum of cultural resources in the DRECP.
- Seek to reduce imminent threats to cultural resources and resolve potential conflicts from natural or human-caused deterioration, or potential conflict with other resource uses.
- Enhance public understanding and appreciation of cultural resources.
- Seek to increase public involvement in the monitoring and protection of cultural resources.
- Give full consideration to Native American knowledge and values in land use planning and management decisions, consistent with statute, regulation and policy.
- Take into account Native American values and concerns about places of religious and cultural importance to Native Americans in land use planning and management decisions, consistent with statute, regulation and policy.

Objectives

- Ensure management of cultural resources is consistent with agency responsibilities provided in Section 110 of the National Historic Preservation Act.
- Ensure federal actions that may affect historic properties are properly reviewed and considered consistent with the requirements of Section 106 of the National Historic Preservation Act.

- Ensure confidentiality of information about sensitive cultural resources consistent with Section 304 of the National Historic Preservation Act and Section 9 of the Archaeological Resources Protection Act.
- Manage evaluated cultural resources and those forecast to occur in the decision area within one or more of six cultural use allocations: scientific use; conserve for future use; traditional use; public use; experimental use; or discharged from use, as described in the BLM 8100 Manual.
- Cultural resources geographic information system (GIS) data, including site locations and inventories, will be maintained and updated by each BLM field office cultural resource specialist according to established BLM standards in a cultural resource geodatabase.
- The cultural resources GIS data will be available to analyze known and predicted site sensitivity across the DRECP.
- Provide and encourage educational outreach, heritage tourism opportunities, and site stewardship programs that involve the public through partnerships and other means.
- Facilitate cultural resources research opportunities to contribute to the understanding of the ways humans have used and influenced natural systems and processes.
- BLM actions and authorizations will minimize inadvertent impacts on cultural resources including places of traditional cultural and religious importance to Native Americans.

In addition to the plan wide goals and objectives, the following goals and objectives apply to public lands in the California Desert National Conservation Lands and ACECs.

Goals

- Ensure that management actions in non-cultural resource ACECs do not conflict with appropriate management of cultural resources in ACECs.
- Ensure that management actions for cultural resource ACECs are sufficiently tailored to address the unique circumstances of each individual ACEC.

Objectives

- Establish baseline resource information by identifying and documenting cultural resources.
- Identify threats to cultural resources.
- Monitor and protect resources.

II.4.1.4 Lands and Realty

The DRECP LUPA does not amend existing goals and objectives in the pre-DRECP LUPA land use plans, it adds to them. The DRECP LUPA adds the following goals and objectives:

- Continue implementing a land exchange program with the State of California, to be utilized for the dual purposes of renewable energy development and land conservation.
- Identify BLM lands available for disposal in each land classification.
- Apply limitations to the development of large-scale ROWs in areas identified for conservation (conservation areas and SRMAs).
- Continue to acquire land and/or interest in land for conservation purposes in the DRECP Plan Area.

II.4.1.5 Minerals

The lands within the DRECP contain a vast array of minerals that are vital to the local and national economy. Precious metals such as gold and silver abound in many areas, while Rare Earth Elements, critical components to an ever expanding electronic world, are found principally in just one small area near Mountain Pass. Dry lake beds within the DRECP contain borates and other minerals that help drive the industrial engine of this country. High grade limestone for cement and fillers, and sand and gravel deposits, while fairly ubiquitous, literally form the very foundation of civilization. In this light, it is important that we have access to these resources for now and future generations to come.

Goals and Objectives

The DRECP LUPA does not amend existing goals and objectives in the pre-DRECP LUPA land use plans, it adds to them. The DRECP LUPA adds the following goals and objectives:

- Support the national need for a reliable and sustainable domestic mineral and energy supply.
- Support responsible mining and energy development operations necessary for California's infrastructure, commerce and economic well-being.

II.4.1.6 National Scenic and Historic Trails

Goals

- Maintain the Pacific Crest Trail corridor to provide an opportunity to experience and reflect upon the wide variety of scenic, cultural, historic, and physiographic setting characteristics of the Pacific Crest Trail and adjacent lands.

- Preserve and protect the historical remains and historical settings of the Old Spanish and Juan Batista De Anza Trails and their associated historic sites for scientific study, conservation of cultural values, and for public use and enjoyment.

Objectives

- Avoid activities incompatible with trail purposes, and do not authorize activities that substantially interfere with the nature and purposes of the National Scenic and Historic Trails (NSHT).
- Maintain and enhance the significant qualities of high-potential National Historic Trail (NHT) route segments and sites as defined in the National Trails System Act. Avoid adverse effects (as defined in the National Historic Preservation Act and the BLM/SHPO CA State Protocol) upon intact NHT segments, their settings, and associated sites.
- Protect remnants, traces, graves, campsites, landmarks, artifacts, and other remains associated with the NHTs to enhance historical research and public use and enjoyment.
- Safeguard the nature and purposes; and conserve, protect, and restore the NSHT resources, qualities, values, and associated settings and the primary use or uses.
- Provide for quality outdoor recreation potential and for the conservation and enjoyment of the nationally significant scenic, historic, natural, or cultural qualities of the areas through which the NSHT may pass.
- Conserve, protect, and restore the NSHT resources, qualities, values, and associated settings and the primary use or uses; provide premier trail visitor experiences for public benefit.
- Where transmission corridors parallel NSHT, placement and design must be performed in a manner that minimizes adverse impacts on National Trail visual settings.
- Coordinate and collaborate on the management of the NSHT with the National Park Service, U.S. Forest Service, Pacific Crest Trail Association, the Old Spanish Trail Association, Anza Trail Foundation, and other partners to safeguard the nature and purposes of each National Trail, and maintain the scenic character and qualities of the trails.

II.4.1.7 National Recreation Trails

- Provide continued support for National Recreation Trails, to recognize exemplary trails of local and regional significance pursuant to the National Trails System Act of 1968. While National Scenic and National Historic Trails may only be designated by an act of Congress, National Recreation Trails may be designated by the Secretary of

Interior or delegated officer through a standardized procession including a recommendation and nomination by the BLM.

- Support the goals of the National Recreation Trails (NRT) program to promote the use and care of existing trails and stimulate the development of new trails to create a national network of trails and realize the vision of "Trails for All Americans."

II.4.1.8 Paleontology

Paleontological resources found on public lands are recognized by BLM as constituting a fragile and nonrenewable scientific record of the history of life on earth and represent an important component of America's natural heritage. BLM manages paleontological resources under the following laws, regulations and policies: BLM Manual 8270, Paleontological Resources Management; BLM Handbook 8270-1, General Procedural Guidance for Paleontological Resources Management; the FLPMA; NEPA; Secretarial Order 3104; the Federal Cave Resources Protection Act of 1988; Archaeological Resources Protection Act of 1979; Antiquities Act of 1906; and other various laws and regulations. This section provides the proposed goals, objectives, and action items for the DRECP LUPA to manage paleontological resources within the BLM's jurisdiction in the DRECP LUPA consistent with these various requirements. Some individual units (SRMA, ACEC, California Desert National Conservation Lands) also have additional resource specific and/or more restrictive paleontological resource rules described in those sections.

Goals and Objectives

The DRECP LUPA does not amend existing goals and objectives in the pre-DRECP LUPA land use plans, it adds to them. The DRECP LUPA adds the following goals and objectives:

Goals

- Ensure that paleontological resources are given full consideration in land use planning and in management decisions.
- Preserve and protect a representative sample of the full array of the paleontological resources in the DRECP.
- Protect and conserve significant paleontological resources as they are discovered on public lands.
- Manage paleontological resources in ways that prioritize research needs, facilitate educational and recreational needs, and protect important sites.
- Develop specific objectives and management actions for fossil localities, when paleontological resources are discovered in the Planning Area.

Objectives

- Identify sensitive paleontological localities to aid in the project review and design process.
- Develop interpretive materials to correspond with recreational uses to educate public about protecting paleontological resources and avoiding disturbance of sensitive paleontological localities.

II.4.1.9 Recreation and Visitor Services

Visitation to the Planning Area is associated with motorized camping, OHV recreation, hunting, hiking, wildflower and wildlife viewing, bird watching, photography, and commercial uses. As such, the majority of public lands within the Planning Area have recreation opportunities that can be appropriately managed while conserving natural, biological, and cultural resources as prescribed by the BLM's multiple-use mission and planning documents.

This recreation and visitor services blueprint (based on the BLM National Recreation and Visitor Services program) for the future also sets three primary goals for the BLM recreation program:

1. Improve access to appropriate recreation opportunities on BLM-managed lands.
2. Ensure a quality experience and enjoyment of natural, biological, and cultural resources on BLM-managed lands.
3. Provide for and receive fair value in recreation.

To meet the specific needs and changing demands of recreation visitors and changes in BLM recreation management, a BLM California-specific Recreation and Visitor Services Strategy was completed in 2008 (BLM 2008a). The strategy outlined a framework with specific goals, objectives, and actions to be implemented. The three primary goals of the document were designed to increase public land stewardship through consistent and coordinated management of the BLM California recreation program in order to achieve the best possible balance of recreational uses and land health standards statewide.

The three primary goals are to:

1. Set a framework for achieving sustainable experiences and quality of life outcomes for individuals, communities, and the environment.
2. Sustain diversity, distinctive character, and capacity of BLM recreation settings.
3. Increase the economic stability and sustainability of the BLM California recreation program.

The seven main objectives for BLM recreation management in California are to:

1. Manage for recreation experiences and quality of life.
2. Encourage sustainable travel/tourism collaborations.
3. Fair value and return through fees and commercial services.
4. Establish a comprehensive approach to travel management.
5. Public health and safety and improve accessibility.
6. Enhance and expand visitor services.
7. Encourage and sustain collaborative partnerships.

Goals and Objectives

- **Special Recreation Management Areas (SRMA).** Protect SRMAs for their unique/special recreation values. Manage SRMAs for their targeted recreation activities, experiences and benefits. Maintain (and where possible enhance) the recreation setting characteristics – physical components of remoteness, naturalness and facilities; social components of contact, group size and evidence of use; and operational components of access, visitor services and management controls (refer to recreation setting characteristics matrix). Refer to the individual SRMA Special Unit Management Plans for SRMA/Recreation Management Zone specific objectives, management actions, and allowable uses.
- **Extensive Recreation Management Area (ERMA).** Support and sustain the principal recreation activities and associated qualities and conditions of the ERMA. Manage ERMAs to address the recreation use, demand, or recreation and visitor services program investments. Refer to the individual ERMA documents for ERMA specific objectives, management actions, and allowable uses.
- Manage lands not designated as SRMAs or ERMAs to meet recreation and visitor services and resource stewardship needs as identified in field office RMPs. Recreation activities may occur and recreation facilities may exist in these areas.
- **Designated OHV Open Areas.** Protect vehicle access and OHV opportunities as specified in Recreation Area Management Plans and Travel and Transportation Management Plans.
- **Developed Recreation Facilities (BLM FAMS data).** Protect and manage developed recreation facilities within the Planning Area.
    - ***Level 1*** = high value: Campgrounds, Long-Term Visitor Areas, Visitor Contact Facilities, Day Use areas, Watchable Wildlife areas, OHV Open Areas, etc.

- ***Level 2*** = moderate value: Recreational Trailheads for motorized/non-motorized activities, Parking staging areas
- ***Level 3*** = lower value: Individual developments—Kiosks, etc.

- Manage the remainder of the non-SRMA resource area within the Planning Area to provide for a variety of dispersed recreation opportunities. Emphasize primitive, semi primitive motorized, semi primitive non-motorized and roaded natural experiences. Maintain and enhance semi-primitive and other physical settings by providing compatible recreation opportunities within those settings. Manage visitor use to conform with semi-primitive and other physical settings. Recreation management may include developing trails for hiking, mountain biking and horseback riding; providing OHV use opportunities; designating scenic byways; interpreting natural and cultural resources; and establishing an environmental education program.
- Enhance recreation experiences provided to the public through a well-managed Special Recreation Permit program. The Special Recreation Permit program promotes a broad spectrum of recreational experiences that are appropriate to the recreation management setting.

Goals and Objectives Specific to the Bishop RMP

- Manage the Alabama Hills National Scenic Cooperative Management Area to conserve, protect, and enhance for the benefit and enjoyment of present and future generations the nationally significant scenic, cultural, recreational, geological, educational, biological, and scientific resources of the Alabama Hills.

II.4.1.10 Soil, Water, and Water-Dependent Resources

The DRECP Planning Area contains many soil types, as might be expected in a zone which spans the transition from low desert to rocky desert mountains. Diverse soil types are the result of diversity in parent material, relief, climate, living organisms, and age of the soils. It is important to maximize and maintain functional biological and physical characteristics of these soils. Soil types of key concern, some that are unique to these desert environments, include sand dunes, desert pavements, carbonate soils, gypsum-containing soils, saline and alkali soils, hydric soils of wetland habitats, and highly erosive soils.

While the CDCA Plan discussed soils in Chapter 6 and in Appendix XI of the accompanying Final EIS, neither document established goals for soil resources. Instead, standard BMPs are currently used to protect soil resources. Among the reference guides listing these BMPs is the BLM (2007) publication *Surface Operating Standards and Guidelines for Oil and Gas Exploration and Development*, commonly referred to as the Gold Book, last updated in 2007.

Water is a scarce resource across the DRECP Planning Area. Consumptive use by renewable energy projects is generally necessary, with applications including dust control, cleaning of project components, and cooling. These uses, however, may compete with the needs of natural resources such as vegetation, animals, aesthetics, and other existing users. The primary goal for surface water management is to ensure that waters continue to perform key hydrologic and biogeochemical functions that safeguard water quality and quantity. The primary goal for groundwater management is to maintain safe yield conditions, avoiding the creation or exacerbation of overdraft conditions.

Surface waters in the DRECP Planning Area can be divided into watersheds, or portions of the landscape that collect runoff from the surface, concentrate it into channels, and conduct the resulting flow to a definable location. Many watersheds within the Southern California desert are endorheic; that is, they do not have outlets, but drain internally toward their centers, typically onto dry lake beds called "playas." The most famous of these is Death Valley, which drains to a playa at Badwater. Groundwater basins are defined by aquifers (underground rock formations saturated with water) which may or may not correlate to the surface water watersheds. Aquifers also generally have a flow direction and can be characterized by calculations similar to those used for surface flow. Key surface water resources in the Planning Area include the Mojave River, the Amargosa River, ephemeral waterways, and hundreds of springs and seeps. The Colorado River is also a critical water source for most of Southern California, and pumping from its tributary groundwater basins within the DRECP Plan Area may adversely impact downstream users and resources. All groundwater resources can be considered key; in many of the desert basins, groundwater is the only water source. Some surface water basins are supplied by tributary groundwater basins in the desert; for example, the perennial sections of the Amargosa and Mojave Rivers depend on groundwater flow reaching the surface. Recognizing the interdependence of this relationship is crucial to appropriate management of desert water resources.

Usage of surface water and groundwater resources is primarily governed by California state water law, which also implements relevant portions of the Federal Water Pollution Control Act (Clean Water Act [CWA] Public Law 92-500, as amended; 33 U.S.C. 1251 et seq.). Federally reserved water rights, however, generally apply to all water needs related to the reservation of federal lands. The BLM and other federal agencies work in cooperation with the California State Water Resources Control Board, CDFW under California Fish and Game Code Section 1600, and the California Department of Water Resources regarding management of water resources.

The objective of the Clean Water Act is to restore and maintain the chemical, physical, and biological integrity of the nation's waters (Section 101a). Under Sections 401 and 404, the CWA regulates point-source and non-point-source pollution.

The groundwater resources beneath federally managed lands are primarily the responsibility of those agencies managing the land, except where a local jurisdiction has been established or a basin adjudication has occurred through court action.

Goals and Objectives

The DRECP LUPA does not amend existing goals and objectives in the pre-DRECP LUPA land use plans, including the relevant CDCA standards and guidelines listed in the CMAs section of the Livestock Grazing section, it adds to them. The DRECP LUPA adds the following goals and objectives:

Soil Resources

Goals

- Avoid accelerated rates of soil erosion and resulting losses of habitat and soil productivity.
- Where soils currently exhibit functional biological and physical characteristics that are appropriate to soil type, climate, and land form, minimize disturbance that could compromise these characteristics.
- Maintain important soil ecosystem processes (e.g., nutrient cycling, carbon sequestration) and prepare for and/or respond to significant disturbances to the environment (e.g., floods, contamination) resulting from the interactions between human-caused soil disturbance and a changing climate.

Objectives

- To the extent possible, avoid disturbance of desert pavement, biologically intact soil crusts, and soils highly susceptible to wind and water erosion.
- Minimize soil disturbances to reduce flooding potential and soil erosion; promote management for soils that maintains natural infiltration rates, wildlife habitat, and structural resistance to wind and water erosion.
- Manage soils to meet or exceed the relevant Soil Standards of Rangeland Health, as indicated by ground or plant cover, diversity of plant species, minimal evidence of accelerated wind and water erosion, and the presence of well-developed and old-growth biological soil crusts where appropriate.
- Implement relevant best management practices and other measures to comply with design features required in the Solar and Wind Final PEISs. Required soil resource design features for solar projects are listed in the Solar PEIS ROD in Appendix A.2.2.8.

- Assess and apply proactive and responsive management and mitigation actions to address unavoidable indirect impacts for project-related disturbances to soils, which may be exacerbated by climate change (e.g., wildfire, flash floods).
- Augment soil carbon sequestration to offset carbon losses from facility construction and management activities by reducing impacts to vegetation, soil structure, and soil biota. Develop future carbon sequestration opportunities as vegetation groups shift geographically in response to climate change.

Surface Water Resources

Goal

- Ensure that any surface waters continue to perform key hydrologic and biogeochemical functions that may affect water quantity or quality.

Objectives

- Surface water flows that are dependent upon groundwater, as well as their source aquifers, will remain intact and functional via the maintenance of adequate flow and water table elevations needed for water-dependent resources.
- Water dependent vegetation, including groundwater-dependent microphyll woodlands, mesquite bosques, and riparian vegetation associated with perennial and intermittent streams, will remain in place to provide a natural buffer for minimizing adverse impacts to water quality by removing pollutants and sediment from surface runoff.
- Truncation, realignment, channelization, lining, or filling of perennial, intermittent, and ephemeral surface water resources will be minimized or eliminated where such actions could reduce any available riparian habitat, eliminate the natural buffer system for filtering runoff, or change a stream's hydrology by decreasing water storage capacity or increasing water flow velocity.
- Dry wash morphology, function, and evolution will be maintained to ensure continuity of ecological processes for meeting identified conservation objectives. See Figures III.7-3 to III.7-13 in Volume III, Chapter III.7, Biological Resources, of the Final EIS, for locations of dry wash habitat, and any recent information.
- Relevant best management practices and other adaptive measures will be implemented to comply with design features required in the Solar and Wind Final PEISs. Required surface water resource design features for solar projects are listed in the Solar PEIS ROD in Appendices A.2.2.10 and A.2.2.11.

Groundwater Resources

Goal

- Manage the use of groundwater to avoid the creation or exacerbation of overdraft conditions and the potential to cause negative impacts to aquifers, groundwater-dependent habitats, or surface water.

Objectives

- Do not authorize consumptive groundwater production (or beneficial use) from an identified groundwater basin that would exceed the estimated safe yield of that basin and result in overdraft conditions for the basin.
- Avoid groundwater withdrawals that have direct and indirect effects on groundwater-dependent habitats including aquatic, wetland, playa, microphyll woodland, and riparian habitats.
- Mitigate unavoidable impacts to groundwater-dependent habitats due to groundwater extraction through offsetting actions that achieve neutral or positive effects on these habitats to the extent possible.
- Implement relevant best management practices and other measures to comply with design features required in the Solar and Wind Final PEISs. Required groundwater resource design features for solar projects are listed in the Solar PEIS in Appendix A.2.2.10.

II.4.1.11 Special Vegetation Features

Creosote Rings, Yucca Clones and Saguaro Cactus are considered special vegetation features by BLM. These resources constitute a fragile and unique nonrenewable feature on the landscape.

Goals and Objectives

- Ensure that special vegetative resources are given consideration in land use planning and in management decisions.
- Preserve and protect larger features (e.g., continuous undisturbed habitats, environmental gradients, and climate refugia) on the landscape. Protect and conserve significant special vegetative resources as they are discovered on public lands.
- Manage special vegetative resources in ways that prioritize research needs, facilitate educational and recreational needs, and protect important individual sites.

- Develop specific objectives and management actions for individual localities, when special vegetative features are discovered in the Planning Area.
- Identify special vegetative features localities to aid in the project review and design process.
- Develop interpretive materials to correspond with recreational uses to educate public about protecting special vegetative features and avoiding disturbance of individual localities.

II.4.1.12 Visual Resources Management

The vast open vistas and stark landscapes of the California desert are important attributes that the public is concerned with protecting. The landscapes have been inventoried using BLM's Visual Resource Inventory (VRI) classification system, which is discussed in the Draft and Final EISs in Volume III. Through the DRECP LUPA process, BLM is designating VRM Classes to all public lands in the CDCA. The Bishop RMP and Bakersfield RMP areas of the DRECP LUPA Decision Area have been assigned VRM Classes through previous plans. Each VRM Class allows for landscape changes from management activities and use authorizations that contrast at different levels with the existing characteristic landscapes. In all situations, actions are taken to minimize visual contrasts through careful project design. Note that VRM Class objectives provide one of many parameters for the management and conservation of public land values (including visual values). Therefore, just because a given project meets the VRM objectives, does not mean that it will be permitted if other plan objectives preclude it development.

Goals and Objectives

VRM Class Definitions

- **Class I:** The objective of this class is to preserve the existing character of the landscape. This class allows for natural ecological changes and only very limited management activities and uses. Any contrasts with the natural landscape must be minimal and not attract attention. This class is typically limited to designated Wilderness, Wilderness Study Areas, or wild and scenic river segments with a "Wild" classification.
- **Class II:** The objective of this class is to retain the existing character of the landscape. The level of change to the characteristic landscape should be low. Management activities and uses can be seen, but should not attract the attention of the casual observer. Any changes must repeat the basic elements of form, line, color, and texture in the predominant natural features of the characteristic landscape.

- **Class III:** The objective of this class is to partially retain the existing character of the landscape. The level of change to the characteristic landscape can be moderate. Management activities and uses may attract attention, but should not dominate the view of the casual observer. Changes should repeat the basic elements of the predominant natural features of the landscape.
- **Class IV:** The objective of this class is to allow for management activities and uses requiring major modifications to the natural landscape. The level of change to the characteristic landscape can be high. Management activities and uses may dominate the view and be a major focus of viewer attention. However, every attempt should be made to mitigate the impacts of activities through careful location and repeating the visual elements of the landscape.

II.4.1.13 Wild Horses and Burros

Wild Horses and Burros are a resource managed and protected under the Wild Free-Roaming Horses and Burros Act of 1971 (Public Law 92-195), and its amendments. The Act designated areas where the BLM manages the animals as a resource. The animals cannot be managed outside these designated areas, nor can new areas be created on public lands for the animals. The Herd Management Areas (HMAs) in the LUPA Decision Area are the last burro HMAs remaining in California. In addition, the California Fish and Game Code Sections 10930–10931 identify much of the southeastern portion of the state as a burro sanctuary.

HMAs are where BLM currently actively manages for wild horses and burros. Herd Areas are where the animals were found at the passage of the Wild Free-Roaming Horses and Burros Act of 1971. Through the land use planning process, the HMAs were decided to be actively managed for wild horses and burros.

Goals and Objectives

The DRECP LUPA does not amend existing goals and objectives in the pre-DRECP LUPA land use plans, it adds to them. The DRECP LUPA adds the following goals and objectives:

Goals

- Ensure that wild horse and burro resources are given full consideration in land use planning and in management decisions.
- Preserve and protect remaining HMAs in the DRECP.
- Manage wild horse and burro populations in ways that ensure thriving natural ecological balance of the herds in their habitats.

Objectives

- Development cannot reduce or otherwise negatively impact burros' forage, water, shelter, space or impede their wild, free-roaming behavior in HMAs.
- Ensure renewable energy development projects have no negative impacts on BLM burros.

II.4.1.14 Wilderness Characteristics

As part of the BLM's multiple-use and sustained-yield mandate, Section 201 of FLPMA requires the BLM to maintain on a continuing basis an inventory of all public lands and their resources and other values, which includes wilderness characteristics. Lands within the DRECP Planning Area that could be affected by renewable energy or other development authorized under the plan were inventoried for wilderness characteristics in 2012–2013 under the direction of BLM Manual 6310. Approximately 1,213,000 acres of inventoried lands were found to have wilderness characteristics within BLM-administered lands in the LUPA Decision Area. Portions of existing transmission corridors were not inventoried for lands with wilderness characteristics as part of the DRECP LUPA process. If new development is proposed in a designated corridor, an inventory would be completed at that time.

Goals and Objectives

Goal

- Ensure that adequate consideration and protection is given to lands with wilderness characteristics outside of designated Wilderness and Wilderness Study Areas and that these areas are managed to protect wilderness characteristics where appropriate in concert with other multiple-use and sustained-yield objectives.

Objective

- Protect wilderness characteristics as an integral component of multiple-use and sustained-yield management of Planning Area BLM lands consistent with other goals and objectives.

II.4.2 Conservation and Management Actions

In the land use planning process, after establishing desired outcomes, the BLM identifies allowable uses and management actions that are anticipated to achieve the goals and objectives. Allowable uses are uses identified in the land use plan as allowable restricted, or prohibited on the public lands. Land use plans also identify lands where specific uses are

excluded to protect resource values. Certain lands may be open or closed to specific uses based on legislative, regulatory, or policy requirements or criteria to protect sensitive resource values. The BLM may also establish criteria in the land use plan to guide the identification of site-specific use levels for activities during plan implementation.

Land use plans also identify the actions anticipated to achieve desired outcomes, including actions to maintain, restore, or improve land health. These actions include proactive measures, as well as measures or criteria that will be applied to guide day-to-day activities occurring on public land.

In the DRECP LUPA, allowable uses and management actions are referred to as CMAs. The CMAs below are organized by land use allocation.

LUPA-wide (LUPA) refers to CMAs that apply to activities on all types of land allocations, within the LUPA Decision Area, which includes lands within the interagency DRECP Plan Area and lands outside of the interagency DRECP Plan Area but within the CDCA.

Ecological and Cultural Conservation (CONS) refers to CMAs that apply to activities within California Desert National Conservation Lands, ACECs, and Wildlife Allocations. LUPA-wide CMAs also apply to these areas.

California Desert National Conservation Lands (NLCS) refers to CMAs that apply only to California Desert National Conservation Lands. LUPA-wide and Ecological and Cultural Conservation CMAs also apply to these areas.

Areas of Critical Environmental Concern (ACEC) refers to CMAs that apply to ACECs. LUPA-wide and Ecological and Cultural Conservation CMAs also apply to these areas.

Special Recreation Management Areas (SRMA) and Extensive Recreation Management Areas (ERMA) CMAs apply to the recreation designations. LUPA-wide CMAs also apply to these areas.

Development Focus Areas (DFA) and Variance Process Lands (VPL) apply to areas where renewable energy development is allowed. DFA-VPL CMAs apply to both DFAs and VPLs, where CMAs that only apply to one of the allocations specify that. LUPA-wide CMAs also apply to these areas.

Finally, **General Public Lands (GPL)** CMAs apply to GPLs , that is, lands that do not fall within one of the specified allocations listed above. LUPA-wide CMAs also apply to these areas.

Within each allocation, the CMAs are organized by resource.

For purposes of these CMAs, "activities" refers to all authorized activity on BLM-managed public lands. This includes both BLM-initiated activities as well as activities permitted by the BLM. If the NEPA analysis for an activity shows an impact on a resource, the CMAs for that resource will apply to the activity.

"Renewable energy activities" and "transmission" refer to the activities described in Section II.3.

"Permitted activities" refers to activities permitted or authorized by the BLM, but carried out by a third party. Examples include rights-of-way, grazing, or mining.

In some situations, areas may have more than one designation. Where ACECs are designated within California Desert National Conservation Lands, the ACECs provide special management direction where that management is necessary to achieve the overarching conservation goals for the nationally significant ecological, cultural, and scientific values of the California Desert National Conservation Lands. The California Desert National Conservation Lands incorporate the ACEC site-specific management objectives and use allocations of the underlying Special Unit Management Plans (Appendix B). In other situations, a recreation designation, such as a SRMA, may overlap an ecological or cultural conservation designation, such as California Desert National Conservation Lands. Where two or more designations overlap, all applicable CMAs apply to activities within those areas. If there is a conflict between the CMAs, the more restrictive CMA will be applied, unless otherwise specified.

Some CMAs require compensatory mitigation for impacts to certain resources. If multiple CMAs with compensation requirements apply to a particular activity, these compensation requirements may be "nested"—that is, one mitigation action may satisfy multiple mitigation requirements—if appropriate.

II.4.2.1 LUPA Wide

II.4.2.1.1 Biological Resources

LUPA-wide CMAs are considered to be "umbrella actions" or standard practices for ensuring appropriate biological conservation and management through implementation of avoidance and minimization for activities, as described previously. These LUPA CMAs are for all activities, as specified in individual CMAs, throughout the entire LUPA Decision Area. As such, the LUPA-wide CMAs provide a consistent level of biological management and conservation throughout the LUPA Decision Area.

LUPA-Wide Conservation and Management Actions for Biological Resources

LUPA-BIO-1: Conduct a habitat assessment (see Glossary of Terms) of Focus and BLM Special Status Species' suitable habitat for all activities and identify and/or delineate the DRECP vegetation types, rare alliances, and special features (e.g., Aeolian sand transport resources, Joshua tree, microphyll woodlands, carbon sequestration characteristics, seeps, climate refugia) present using the most current information, data sources, and tools (e.g., DRECP land cover mapping, aerial photos, DRECP species models, and reconnaissance site visits) to identify suitable habitat (see Glossary of Terms) for Focus and BLM Special Status Species. If required by the relevant species specific CMAs, conduct any subsequent protocol or adequate presence/absence surveys to identify species occupancy status and a more detailed mapping of suitable habitat to inform siting and design considerations. If required by relevant species specific CMAs, conduct analysis of percentage of impacts to suitable habitat and modeled suitable habitat.

- BLM will not require protocol surveys in sites determined by the designated biologist to be unviable for occupancy of the species, or if baseline studies inferred absence during the current or previous active season.

Utilize the most recent and applicable assessment protocols and guidance documents for vegetation types and jurisdictional waters and wetlands that have been approved by BLM, and the appropriate responsible regulatory agencies, as applicable.

LUPA-BIO-2: Designated biologist(s) (see Glossary of Terms), will conduct, and oversee where appropriate, activity-specific required biological monitoring during pre-construction, construction, and decommissioning to ensure that avoidance and minimization measures are appropriately implemented and are effective. The appropriate required monitoring will be determined during the environmental analysis and BLM approval process. The designated biologist(s) will submit monitoring reports directly to BLM.

Resource Setback Standards

LUPA-BIO-3: Resource setbacks (see Glossary of Terms) have been identified to avoid and minimize the adverse effects to specific biological resources. Setbacks are not considered additive and are measured as specified in the applicable CMA. Allowable minor incursions (see Glossary of Terms), as per specific CMAs do not affect the following setback measurement descriptions. Generally, setbacks (which range in distances for different biological resources) for the appropriate resources are measured from:

- The edge of each of the DRECP desert vegetation types, including but not limited to those in the riparian or wetland vegetation groups (as defined by alliances within the vegetation type descriptions and mapped based on the vegetation type habitat assessments described in **LUPA-BIO-1**).

- The edge of the mapped riparian vegetation or the Federal Emergency Management Agency (FEMA) 100-year floodplain, whichever is greater, for the Mojave River.
- The edge of the vegetation extent for specified Focus and BLM sensitive plant species.
- The edge of suitable habitat or active nest substrates for the appropriate Focus and BLM Special Status Species.

Seasonal Restrictions

LUPA-BIO-4: For activities that may impact Focus and BLM Special Status Species, implement all required species-specific seasonal restrictions on pre- construction, construction, operations, and decommissioning activities.

Species-specific seasonal restriction dates are described in the applicable CMAs.

Alternatively, to avoid a seasonal restriction associated with visual disturbance, installation of a visual barrier may be evaluated on a case-by-case basis that will result in the breeding, nesting, lambing, fawning, or roosting species not being affected by visual disturbance from construction activities subject to seasonal restriction. The proposed installation and use of a visual barrier to avoid a species seasonal restriction will be analyzed in the activity/project specific environmental analysis.

Worker Education

LUPA-BIO-5: All activities, as determined appropriate on an activity-by-activity basis, will implement a worker education program that meets the approval of the BLM. The program will be carried out during all phases of the project (site mobilization, ground disturbance, grading, construction, operation, closure/decommissioning or project abandonment, and restoration/reclamation activities). The worker education program will provide interpretation for non-English speaking workers, and provide the same instruction for new workers prior to their working on site. As appropriate based on the activity, the program will contain information about:

- Site-specific biological and nonbiological resources.
- Information on the legal protection for protected resources and penalties for violation of federal and state laws and administrative sanctions for failure to comply with LUPA CMA requirements intended to protect site-specific biological and nonbiological resources.
- The required LUPA and project-specific measures for avoiding and minimizing effects during all project phases, including but not limited to resource setbacks, trash, speed limits, etc.

- Reporting requirements and measures to follow if protected resources are encountered, including potential work stoppage and requirements for notification of the designated biologist.
- Measures that personnel can take to promote the conservation of biological and nonbiological resources.

Subsidized Predators Standards

LUPA-BIO-6: Subsidized predator standards, approved by BLM, in coordination with the USFWS and CDFW, will be implemented during all appropriate phases of activities, including but not limited to renewable energy activities, to manage predator food subsidies, water subsidies, and breeding sites including the following:

- Common Raven management actions will be implemented for all activities to address food and water subsidies and roosting and nesting sites specific to the Common Raven. These include identification of monitoring reporting procedures and requirements; strategies for refuse management; as well as design strategies and passive repellant methods to avoid providing perches, nesting sites, and roosting sites for Common Ravens.
- The application of water and/or other palliatives for dust abatement in construction areas and during project operations and maintenance will be done with the minimum amount of water necessary to meet safety and air quality standards and in a manner that prevents the formation of puddles, which could attract wildlife and wildlife predators.
- Following the most recent national policy and guidance, BLM will take actions to not introduce, dispose of, or release any non- native species into areas of native habitat, suitable habitat, and natural or artificial waterways/water bodies containing native species.

All activity work areas will be kept free of trash and debris. Particular attention will be paid to "micro-trash" (including such small items as screws, nuts, washers, nails, coins, rags, small electrical components, small pieces of plastic, glass or wire, and any debris or trash that is colorful or shiny) and organic waste that may subsidize predators. All trash will be covered, kept in closed containers, or otherwise removed from the project site at the end of each day or at regular intervals prior to periods when workers are not present at the site.

- In addition to implementing the measures above on activity sites, each activity will provide compensatory mitigation that contributes to LUPA-wide raven management.

Restoration of Areas Disturbed by Construction Activities But Not Converted by Long-Term Disturbance

LUPA-BIO-7: Where DRECP vegetation types or Focus or BLM Special Status Species habitats may be affected by ground- disturbance and/or vegetation removal during pre-construction, construction, operations, and decommissioning related activities but are not converted by long-term (i.e., more than two years of disturbance, see Glossary of Terms) ground disturbance, restore these areas following the standards, approved by BLM authorized officer, following the most recent BLM policies and procedures for the vegetation community or species habitat disturbance/impacts as appropriate, summarized below:

- Implement site-specific habitat restoration actions for the areas affected including specifying and using:
    - The appropriate seed (e.g., certified weed- free, native, and locally and genetically appropriate seed)
    - Appropriate soils (e.g., topsoil of the same original type on site or that was previously stored by soil type after being salvaged during excavation and construction activities)
    - Equipment
    - Timing (e.g., appropriate season, sufficient rainfall)
    - Location
    - Success criteria
    - Monitoring measures
    - Contingency measures, relevant for restoration, which includes seeding that follows BLM policy when on BLM administered lands .
- Salvage and relocate cactus, nolina, and yucca from the site prior to disturbance using BLM protocols. To the maximum extent practicable for short-term disturbed areas (see Glossary of Terms), the cactus and yucca will be re-planted back to the original site.
- Restore and reclaim short-term (i.e. 2 years or less, see Glossary of Terms) disturbed areas, including pipelines, transmission projects, staging areas, and short-term construction-related roads immediately or during the most biologically appropriate season as determined in the activity/project specific environmental analysis and decision, following completion of construction activities to reduce the amount of habitat converted at any one time and promote recovery to natural habitats and vegetation as well as climate refugia and ecosystem services such carbon storage.

General Closure and Decommissioning Standards

LUPA-BIO-8: All activities that are required to close and decommission the site (e.g., renewable energy activities) will specify and implement project-specific closure and decommissioning actions that meet the approval of BLM, and that at a minimum address the following:

- Specifying and implementing the methods, timing (e.g., criteria for triggering closure and decommissioning actions), and criteria for success (including quantifiable and measureable criteria).
- Recontouring of areas that were substantially altered from their original contour or gradient and installing erosion control measures in disturbed areas where potential for erosion exists.
- Restoring vegetation as well as soil profiles and functions that will support and maintain native plant communities, associated carbon sequestration and nutrient cycling processes, and native wildlife species.
- Vegetation restoration actions will identify and use native vegetation composition, native seed composition, and the diversity to values commensurate with the natural ecological setting and climate projections.

Water and Wetland Dependent Species Resources

LUPA-BIO-9: Implement the following general LUPA CMA for water and wetland dependent resources:

- Implement construction site standard practices to prevent toxic chemicals, hazardous materials, and other fluids from entering vegetation type streams, washes, and tributary networks through water runoff, erosion, and sediment transport by, at a minimum, implementing the following:
    - On project sites, vehicles and other equipment will be maintained in proper working condition and only stored in designated containment areas where runoff is collected or controlled and that are located outside of streams, washes, and distributary networks to minimize accidental fluids and hazardous materials spills.
    - Hazardous material leaks, spills, or releases will be immediately cleaned and equipment will be repaired upon identification. Removal and disposal of spill and related clean-up materials will occur at an approved off-site landfill.

  - Maintenance and operations vehicles will carry the appropriate equipment and materials to isolate, clean up, and repair any hazardous material leaks, spills, or releases.

- Activity-specific drainage, erosion, and sedimentation control actions, which meet the approval of BLM and the applicable regulatory agencies, will be carried out during all appropriate phases of the approved project. These actions, as needed, will address measures to ensure the proper protection of water quality, site-specific stormwater and sediment retention, and design of the project to minimize site disturbance, including the following:
  - Identify site-specific surface water runoff patterns and implement measures to prevent excessive and unnatural soil deposition and erosion.
  - Implement measures to maintain natural drainages and to maintain hydrologic function in the event drainages are disturbed.
  - Reduce the amount of area covered by impervious surfaces through use of permeable pavement or other pervious surfaces. Direct runoff from impervious surfaces into retention basins.
  - Stabilize disturbed areas following grading in the manner appropriate to the soil type so that wind or water erosion is minimized.
  - Minimize irrigation runoff by using low or no irrigation native vegetation landscaping for landscaped retention basins.
  - Conduct regular inspections and maintenance of long-term erosion control measures to ensure long-term effectiveness.
  - Project applicants for sites that may affect intermittent and perennial streams, springs, swales, ephemeral washes, wetland vegetation, other DRECP water land covers, or sites occupied by aquatic or riparian Focus and BLM Special Status Species due to groundwater or surface water extraction will conduct hydrologic studies during project planning to determine the potential effect of groundwater and surface water extraction on the hydrologic unit. These studies will include both watershed effects as well as effects on perched, alluvial, and regional aquifers. Projects that are likely to affect ground-water resources in a manner that would result in substantial loss of riparian or wetland communities or habitat for riparian or aquatic Focus and BLM Special Status Species are prohibited.
  - The use of evaporation ponds for water management will be avoided when the water could harm birds or other terrestrial wildlife due to constituents of concern present in the wastewater (e.g., selenium, hypersalinity, etc.). Evaporation ponds will be configured to minimize attractiveness to shorebirds

(e.g., maintain water depths over two feet; maintain steep slopes along edge; enclose evaporation ponds in long-term structures; or obscure evaporation ponds from view using materials that blend in with the natural surroundings).

- Ramps that allow the egress of wildlife from ponds or other water management infrastructure will be installed.

Standard Practices for Weed Management

LUPA-BIO-10: Consistent with BLM state and national policies and guidance, integrated weed management actions, will be carried out during all phases of activities, as appropriate, and at a minimum will include the following:

- Thoroughly clean the tires and undercarriage of vehicles entering or reentering the project site to remove potential weeds.
- Store project vehicles on site in designated areas to minimize the need for multiple washings whenever vehicles re-enter the project site.
- Properly maintain vehicle wash and inspection stations to minimize the introduction of invasive weeds or subsidy of invasive weeds.
- Closely monitor the types of materials brought onto the site to avoid the introduction of invasive weeds and non-native species.
- Reestablish native vegetation quickly on disturbed sites.
- Monitor and quickly implement control measures to ensure early detection and eradication of weed invasions to avoid the spread of invasive weeds and non-native species on site and to adjacent off-site areas.
- Use certified weed-free mulch, straw, hay bales, or equivalent fabricated materials for installing sediment barriers.

Nuisance Animals and Invasive Species

LUPA-BIO-11: Implement the following CMAs for controlling nuisance animals and invasive species:

- No fumigant, treated bait, or other means of poisoning nuisance animals including rodenticides will be used in areas where Focus and BLM Special Status Species are known or suspected to occur.
- Manage the use of widely spread herbicides and do not apply herbicides effective against dicotyledonous plants within 1,000 feet from the edge of a 100-year floodplain, stream and wash channels, and riparian vegetation or to soils less than 25 feet from the edge of drains. Exceptions will be made when targeting the base

and roots of invasive riparian species such as tamarisk and *Arundo donax* (giant reed). Manage herbicides consistent with the most current national and California BLM policies.

- Minimize herbicide, pesticide, and insecticide treatment in areas that have a high risk for groundwater contamination.
- Clean and dispose of pesticide containers and equipment following professional standards. Avoid use of pesticides and cleaning containers and equipment in or near surface or subsurface water.
- When near surface or subsurface water, restrict pesticide use to those products labeled safe for use in/near water and safe for aquatic species of animals and plants.

Noise

LUPA-BIO-12: For activities that may impact Focus or BLM Special Status Species**,** implement the following LUPA CMA for noise:

- To the extent feasible, and determined necessary by BLM to protect Focus and BLM sensitive wildlife species, locate stationary noise sources that exceed background ambient noise levels away from known or likely locations of and BLM sensitive wildlife species and their suitable habitat.
- Implement engineering controls on stationary equipment, buildings, and work areas including sound-insulation and noise enclosures to reduce the average noise level, if the activity will contribute to noise levels above existing background ambient levels.
- Use noise controls on standard construction equipment including mufflers to reduce noise.

General Siting and Design

LUPA-BIO-13: Implement the following CMA for project siting and design

- To the maximum extent practicable site and design projects to avoid impacts to vegetation types, unique plant assemblages, climate refugia as well as occupied habitat and suitable habitat for Focus and BLM Special Status Species (see "avoid to the maximum extent practicable" in Glossary of Terms).
- The siting of projects along the edges (i.e. general linkage border) of the biological linkages identified in Appendix D (Figures D-1 and D-2) will be configured (1) to maximize the retention of microphyll woodlands and their constituent vegetation type and inclusion of other physical and biological features conducive to Focus and BLM Special Status Species' dispersal, and (2) informed by existing available information on modeled focus and BLM Special

Status Species habitat and element occurrence data, mapped delineations of vegetation types, and based on available empirical data, including radio telemetry, wildlife tracking sign, and road-kill information. Additionally, projects will be sited and designed to maintain the function of F Special Status Species connectivity and their associated habitats in the following linkage and connectivity areas:

  - Within a 5-mile-wide linkage across Interstate 10 centered on Wiley's Well Road to connect the Mule and McCoy mountains (the majority of this linkage is within the Chuckwalla ACEC and Mule-McCoy Linkage ACEC) .
  - Within a 3-mile-wide linkage across Interstate 10 to connect the Chuckwalla and Palen mountains.
  - Within a 1.5-mile-wide linkage across Interstate 10 to connect the Chuckwalla Mountains to the Chuckwalla Valley east of Desert Center.
  - The confluence of Milpitas Wash and Colorado River floodplain within 2 miles of California State Route 78 (this linkage is entirely within the Chuckwalla ACEC) .

- Delineate the boundaries of areas to be disturbed using temporary construction fencing and flagging prior to construction and confine disturbances, project vehicles, and equipment to the delineated project areas to protect vegetation types and focus and BLM Special Status Species.
- Long-term nighttime lighting on project features will be limited to the minimum necessary for project security, safety, and compliance with Federal Aviation Administration requirements and will avoid the use of constant-burn lighting.
- All long-term nighttime lighting will be directed away from riparian and wetland vegetation, occupied habitat, and suitable habitat areas for Focus and BLM Special Status Species. Long- term nighttime lighting will be directed and shielded downward to avoid interference with the navigation of night-migrating birds and to minimize the attraction of insects as well as insectivorous birds and bats to project infrastructure.
- To the maximum extent practicable (see Glossary of Terms), restrict construction activity to existing roads, routes, and utility corridors to minimize the number and length/size of new roads, routes, disturbance, laydown, and borrow areas.
- To the maximum extent practicable (see Glossary of Terms), confine vehicular traffic to designated open routes of travel to and from the project site, and prohibit, within project boundaries, cross- country vehicle and equipment use outside of approved designated work areas to prevent unnecessary ground and vegetation disturbance.
- To the maximum extent practicable(see Glossary of Terms) , construction of new roads and/or routes will be avoided within Focus and BLM Special Status Species

suitable habitat within identified linkages for those Focus and BLM Special Status Species, unless the new road and/or route is beneficial to minimize net impacts to natural or ecological resources of concern. These areas will have a goal of "no net gain" of project roads and/or routes

- To the maximum extent practicable (see Glossary of Terms), any new road and/or route considered within Focus and BLM Special Status Species suitable habitat within identified linkages for those Focus and BLM Special Status Species will not be paved so as not to negatively affect the function of identified linkages.
- Use nontoxic road sealants and soil stabilizing agents.

General Standard Practices

LUPA-BIO-14: Implement the following general standard practices to protect Focus and BLM Special Status Species:

- Feeding of wildlife, leaving of food or trash as an attractive nuisance to wildlife, collection of native plants, or harassing of wildlife on a site is prohibited.
- Any wildlife encountered during the course of an activity, including construction, operation, and decommissioning will be allowed to leave the area unharmed.
- Domestic pets are prohibited on sites. This prohibition does not apply to the use of domestic animals (e.g., dogs) that may be used to aid in official and approved monitoring procedures/protocols, or service animals (dogs) under Title II and Title III of the American with Disabilities Act.
- All construction materials will be visually checked for the presence of wildlife prior to their movement or use. Any wildlife encountered during the course of these inspections will be allowed to leave the construction area unharmed.
- All steep-walled trenches or excavations used during the project will be covered, except when being actively used, to prevent entrapment of wildlife. If trenches cannot be covered, they will be constructed with escape ramps, following up-to-date design standards to facilitate and allow wildlife to exit, or wildlife exclusion fencing will be installed around the trench(s) or excavation(s). Open trenches or other excavations will be inspected by a designated biologist immediately before backfilling, excavation, or other earthwork.
- Minimize natural vegetation removal through implementation of crush and drive or cut or mow vegetation rather than removing entirely.

LUPA-BIO-15: Use state-of-the-art, as approved by BLM, construction and installation techniques, appropriate for the specific activity/project and site, that minimize new site

disturbance, soil erosion and deposition, soil compaction, disturbance to topography, and removal of vegetation.

Activity-Specific Bird and Bat CMAs

LUPA-BIO-16: For activities that may impact Focus and BLM sensitive birds, protected by the ESA and/or Migratory Bird Treaty Act of 1918, and bat species, implement appropriate measures as per the most up-to-date BLM state and national policy and guidance, and data on birds and bats, including but not limited to activity specific plans and actions. The goal of the activity -specific bird and bat actions is to avoid and minimize direct mortality of birds and bats from the construction, operation, maintenance, and decommissioning of the specific activities.

Activity-specific measures to avoid and minimize impacts may include, but are not limited to:

- Siting and designing activities will avoid high bird and bat movement areas that separate birds and bats from their common nesting and roosting sites, feeding areas, or lakes and rivers.
- For activities that impact bird and bat Focus and BLM Special Status Species, during project siting and design, conducting monitoring of bird and bat presence as well as bird and bat use of the project site using the most current survey methods and best procedures available at the time.
- Reusing or co-locating new transmission facilities and other ancillary facilities with existing facilities and disturbed areas to reduce habitat destruction and avoid additional collision risks.
- Reducing bird and bat collision hazards by utilizing techniques such as unguyed monopole towers or tubular towers. Where the use of guywires is unavoidable, demarcate guywires using the best available methods to minimize avian species strikes.
- When fencing is necessary, use bird and bat compatible design standards.
- Using lighting that does not attract birds and bats or their prey to project sites including using non-steady burning lights (red, dual red and white strobe, strobe-like flashing lights) to meet Federal Aviation Administration requirements, using motion or heat sensors and switches to reduce the time when lights are illuminated, using appropriate shielding to reduce horizontal or skyward illumination, and avoiding the use of high-intensity lights (e.g., sodium vapor, quartz, and halogen).
- Implementing a robust monitoring program to regularly check for wildlife carcasses, document the cause of mortality, and promptly remove the carcasses.

- Incorporating a bird and bat use and mortality monitoring program during operations using current protocols and best procedures available at time of monitoring.

LUPA-BIO-17: For activities that may result in mortality to Focus and BLM Special–Status bird and bat species, a Bird and Bat Conservation Strategy (BBCS) will be prepared with the goal of assessing operational impacts to bird and bat species and incorporating methods to reduce documented mortality. The BBCS actions for impacts to birds and bats during these activities will be determined by the activity-specific bird and bat operational actions. The strategy shall be approved by BLM in coordination with USFWS, and CDFW as appropriate, and may include, but is not limited to:

- Incorporating a bird and bat use and mortality monitoring program during operations using current protocols and best procedures available at time of monitoring.
- Activity-specific operational avoidance and minimization actions that reduce the level of mortality on the populations of bird and bat species, such as:
    - Use techniques that minimize attraction of birds to hazardous situations that are mistaken to be or simulate natural habitats (e.g., bodies of water).
    - Implement operational management techniques that minimize impacts to migratory birds during diurnal and seasonal cycles (e.g., positioning of heliostats to decrease surface area exposed to avian species).
    - Evaluation and installation of the best available bird and bat detection and deterrent technologies available at the time of construction.

Known important Focus and BLM Special Status bird areas are:

- Dry lakes and playas of the north Mojave region, which include China Lake, Koehn Lake, Harper Lake, and Searles Lake (as shown in the Audubon Important Bird Areas in Appendix D)
- Antelope Valley (as shown in the Audubon Important Bird Areas in Appendix D)
- Lower Colorado River Valley (as shown in the Audubon Important Bird Areas in Appendix D)
- The Salton Sea and bordering areas including agricultural land of the Imperial Valley (as shown in the Audubon Important Bird Areas in Appendix D)
- Documented avian movement corridors along the north slope of the San Gabriel and San Bernardino mountain ranges

- Other regionally important seasonal use areas and migratory corridors identified in future studies or otherwise documented in the scientific literature over the term of the LUPA

The following provides the DRECP vegetation type, and Focus and BLM Special Status Species biological CMAs to be implemented throughout the LUPA Decision Area.

Riparian and Wetland Vegetation Types and Associated Species (RIPWET)

Riparian Vegetation Types

- Madrean Warm Semi-Desert Wash Woodland/Scrub
- Mojavean Semi-Desert Wash Scrub
- Sonoran-Coloradan Semi-Desert Wash Woodland/Scrub
- Southwestern North American Riparian Evergreen and Deciduous Woodland
- Southwestern North American Riparian/Wash Scrub

Wetland Vegetation Types

- Arid west freshwater emergent marsh
- Californian Warm Temperate Marsh/Seep
- North American Warm Desert Alkaline Scrub and Herb Playa and Wet Flat
- Southwestern North American Salt Basin and High Marsh

Riparian and Wetland Bird Focus Species

- Willow Flycatcher
- Southwestern Willow Flycatcher
- Least Bell's Vireo
- Western Yellow-billed Cuckoo
- Yuma Clapper Rail
- California Black Rail
- Tricolored Blackbird

Fish Focus Species

- Desert pupfish
- Mohave Tui Chub
- Owens Tui Chub

- Owens Pupfish

Other Riparian and Wetland Focus Species

- Tehachapi Slender Salamander

Riparian and Wetland DRECP Vegetation Type CMAs

LUPA-BIO-RIPWET-1: The riparian and wetland DRECP vegetation types and other features listed in Table 17 will be avoided to the maximum extent practicable, except for allowable minor incursions (see Glossary of Terms for "avoidance to the maximum extent practicable" and "minor incursion") with the specified setbacks.

Table 17
Riparian and Wetland Avoidance and Setbacks

Riparian and Wetland Vegetation Types or Features	Setback[1]
Riparian Vegetation Types[1]	
Madrean Warm Semi-Desert Wash Woodland/Scrub	200 feet
Mojavean Semi-Desert Wash Scrub	200 feet
Sonoran-Coloradan Semi-Desert Wash Woodland/Scrub	200 feet
Southwestern North American Riparian Evergreen and Deciduous Woodland	0.25 mile
Southwestern North American Riparian/Wash Scrub	0.25 mile
Wetland Vegetation Types[1]	
Arid west freshwater emergent marsh	0.25 mile
Californian Warm Temperate Marsh/Seep	0.25 mile
Other Riparian and Wetland Related Features	
Managed Wetlands[2]	0.25 mile
Mojave River[3]	0.25 mile
Undifferentiated Riparian land cover[4]	200 feet

[1] Setbacks are measured from the edge of the mapped riparian or wetland vegetation or water feature per LUPA-BIO-3.

[2] Setback is from managed wetlands including USFWS Refuges, state managed wetlands, and duck clubs in Imperial Valley. See specifications for the Salton Sea below.

[3] Setback is measured from the edge of mapped riparian or edge of FEMA 100-year floodplain of the Mojave River, whichever is further from the center line of the Mojave River channel.

[4] Undifferentiated "Riparian" land cover includes portions of major river courses (Mojave River and Colorado River) within the main channels where riparian vegetation groups were not mapped.

For minor incursion (see "minor incursion" in the Glossary of Terms) to the DRECP riparian vegetation types, wetland vegetation types, or encroachments on the setbacks listed in Table 17, the hydrologic function of the avoided riparian or wetland communities will be maintained.

- Minor incursions in the riparian and wetland vegetation types or other features including the setbacks listed in Table 17 will occur outside of the avian nesting

season, February 1 through August 31 or otherwise determined by BLM, USFWS and CDFW if the minor incursion(s) is likely to result in impacts to nesting birds.

LUPA-BIO-RIPWET-2: Hydrologic function of the following DRECP vegetation types will be maintained: North American Warm Desert Alkaline Scrub and Herb Playa and Wet Flat, Southwestern North American Salt Basin and High Marsh, and other undifferentiated wetland-related land covers (i.e., "Playa," "Wetland," and "Open Water").

BLM Special Status Riparian Bird Species

LUPA-BIO-RIPWET-3: For activities that occur within 0.25 mile of a riparian or wetland DRECP vegetation type and may impact BLM Special Status riparian and wetland birds species, conduct a pre-construction/activity nesting bird survey for BLM Special Status riparian and wetland birds according to agency-approved protocols.

- Based on the results of the nesting bird survey above, setback activities that are likely to impact BLM Special Status riparian and wetland bird species, including but not limited to pre-construction, construction and decommissioning, 0.25 mile from active nests Special Status during the breeding season (February 1 through August 31 or otherwise determined by BLM, USFWS and CDFW). For activities in areas covered by this provision that occur during the breeding season and that last longer than one week, nesting bird surveys may need to be repeated, as determined by BLM, in coordination with USFWS and CDFW, as appropriate. No pre-activity nesting bird surveys are necessary for activities occurring outside of the breeding season.

Federally Listed Fish Species

LUPA-BIO-RIPWET-4: Setback pre-construction, construction, and decommissioning activities and other activities that may impact federally listed fish species, 0.25 mile from the edge of existing or newly discovered occurrences of federally listed fish species, except for minor incursions (see Glossary of Terms).

- Demonstrate neutral or beneficial long-term hydrologic effects on federally listed fish species and the adjoining riparian and wetland habitat prior to seeking authorization for and commencing a minor incursion.

LUPA-BIO-RIPWET-5: Site and design activities to fully avoid operational impacts to existing and newly discovered occurrences of federally listed fish species.

Tehachapi Slender Salamander

LUPA-BIO-RIPWET-6: Avoid pre-construction, construction, and decommissioning activities or other activities that may impact the Tehachapi slender salamander within 0.25

mile of existing or newly discovered occurrences of or suitable habitat for Tehachapi slender salamander, except for minor incursions (see Glossary of Terms).

LUPA-BIO-RIPWET-7: Construct culverts or other suitable below-grade crossings for new or improved roadways that bisect suitable habitat for the Tehachapi Slender Salamander.

- Construct barriers to reduce at-grade crossings along new or improved roadways that bisect suitable habitat.

Dune DRECP Vegetation Types, Aeolian Processes and Associated Species (DUNE)

Aeolian Processes

LUPA-BIO-DUNE-1: Because DRECP sand dune vegetation types and Aeolian sand transport corridors are, by definition, shifting resources, activities that potentially occur within or bordering the sand dune DRECP vegetation types and/or Aeolian sand transport corridors must conduct studies to verify the location [refer to Appendix D, Figure D-7] and extent of the sand resource(s) for the activity-specific environmental analysis to determine:

- Whether the proposed activity(s) occur within a sand dune or an Aeolian sand transport corridor
- If the activity(s) is subject to dune/Aeolian sand transport corridor CMAs
- If the activity(s) needs to be reconfigured to satisfy applicable avoidance requirements

LUPA-BIO-DUNE-2: Activities that potentially affect the amount of sand entering or transported within Aeolian sand transport corridors will be designed and operated to:

- Maintain the quality and function of Aeolian transport corridors and sand deposition zones, unless related to maintenance of existing [at the time of the DRECP LUPA ROD] facilities/operations/activities
- Avoid a reduction in sand-bearing sediments within the Aeolian system
- Minimize mortality to DUNE associated Focus and BLM Special Status Species

LUPA-BIO-DUNE-3: Any facilities or activities that alter site hydrology (e.g., sediment barrier) will be designed to maintain continued sediment transport and deposition in the Aeolian corridor in a way that maintains the Aeolian sorting and transport to downwind deposition zones. Site designs for maintaining this transport function must be approved by BLM in coordination with USFWS and CDFW as appropriate.

Mojave Fringe-Toed Lizard

LUPA-BIO-DUNE-4: Dune formations and other sand accumulations (i.e., sand ramps, sand sheets) with suitable habitat characteristics for the Mojave fringe-toed lizard (i.e., unconsolidated blow-sand) will be mapped according to mapping standards established by the BLM National Operations Center.

For minor incursions (see "minor incursion" in the Glossary of Terms) into sand dunes and sand transport areas the activity will be sited in the mapped zone with the least impacts to sand dunes and sand transport and Mojave fringe-toed lizards.

LUPA-BIO-DUNE-5: If suitable habitat characteristics are identified during the habitat assessment, clearance surveys (see Glossary of Terms) for Mojave fringe-toed lizard will be performed in suitable habitat areas.

Bat Species (BAT)

The following CMAs will be implemented for bat Focus and BLM Special Status Species, including but not limited to those listed below:

- California Leaf-nosed Bat
- Pallid Bat
- Townsend's Big-eared Bat

LUPA-BIO-BAT-1: Activities, except wind projects, will not be sited within 500 feet of any occupied maternity roost or presumed occupied maternity roost as described below. Refer to CMA **DFA-VPL-BIO-BAT-1** for distances within DFAs and VPLs.

LUPA-BIO-BAT-2: Mines will be assumed to be occupied bat roosts, unless appropriate surveys for bat use have been conducted during all seasons (including maternity, lekking or swarming, and winter use). Mines not considered potential bat roosts are only those that have no structure/workings (adits or shafts or crevices out of view).

Plant Species (PLANT)

The following CMAs will be implemented for all plant Focus and BLM Special Status Species, including but not limited to those listed below

- Alkali mariposa-lily
- Bakersfield cactus
- Barstow woolly sunflower

- Desert cymopterus
- Little San Bernardino Mountains linanthus
- Mojave monkeyflower
- Mojave tarplant
- Owens Valley checkerbloom
- Parish's daisy
- Triple-ribbed milk-vetch

Plant Focus and BLM Special Status Species CMAs

LUPA-BIO-PLANT-1: Conduct properly timed protocol surveys in accordance with the BLM's most current (at time of activity) survey protocols for plant Focus and BLM Special Status Species.

LUPA-BIO-PLANT-2: Implement an avoidance setback of 0.25 mile for all Focus and BLM Special Status Species occurrences. Setbacks will be placed strategically adjacent to occurrences to protect ecological processes necessary to support the plant Species (see Appendix Q, Baseline Biology Report, in the Proposed LUPA and Final EIS [2015], or the most recent data and modeling).

LUPA-BIO-PLANT-3: Impacts to suitable habitat for Focus and BLM Special Status plant species should be avoided to the extent feasible, and are limited [capped] to a maximum of 1% of their suitable habitat throughout the entire LUPA Decision Area. The baseline condition for measuring suitable habitat is the DRECP modeled suitable habitat for these species utilized in the EIS analysis (2014 and 2015), or the most recent suitable habitat modeling.

- For those plants with Species Specific DFA Suitable Habitat Impact Caps listed in Table 23, those caps apply in the DFAs only. Refer to CMA **DFA-PLANT-1**.

Special Vegetation Features (SVF)

LUPA-BIO-SVF-1: For activity-specific NEPA analysis, a map delineating potential sites and habitat assessment of the following special vegetation features is required: Yucca clones, creosote rings, Saguaro cactus, Joshua tree woodland, microphyll woodland, Crucifixion thorn stands. BLM guidelines for mapping/surveying cactus, yuccas, and succulents shall be followed.

LUPA-BIO-SVF-2: Yucca clones larger than 3 meters in diameter (longest diameter if the clone forms an ellipse rather than a circular ring) shall be avoided.

LUPA-BIO-SVF-3: Creosote bush rings (see Glossary of Terms) larger than 5 meters in diameter (longest diameter if the "ring" forms an ellipse rather than a circle) shall be avoided.

LUPA-BIO-SVF-4: Saguaro cactus should be managed in such a way as to provide long-term habitat for the California populations not just individual plants, except in DFAs.

LUPA-BIO-SVF-5: Joshua tree woodland (*Yucca brevifolia* Woodland Alliance): impacts to Joshua tree woodlands (see Glossary of Terms) will be avoided to the maximum extent practicable (see Glossary of Terms), except for minor incursions (see Glossary of Terms).

LUPA-BIO-SVF-6: Microphyll woodland: impacts to microphyll woodland (see Glossary of Terms) will be avoided, except for minor incursions (see Glossary of Terms).

LUPA-BIO-SVF-7: Crucifixion thorn stands: (*Castela emoryi* Shrubland Special Stands) Crucifixion thorn stands with greater than 100 individuals will be avoided.

General Vegetation Management (VEG)

LUPA-BIO-VEG-1: Management of cactus, yucca, and other succulents will adhere to current up-to-date BLM policy.

LUPA-BIO-VEG-2: Promote appropriate levels of dead and downed wood on the ground, outside of campground areas, to provide wildlife habitat, seed beds for vegetation establishment, and reduce soil erosion, as determined appropriate on an activity-specific basis.

LUPA-BIO-VEG-3: Allow for the collection of plant material consistent with the maintenance of natural ecosystem processes.

LUPA-BIO-VEG-4: Within the Bishop Field Office area, provide yearlong protection of endangered, threatened, candidate, and sensitive plant and animal habitats. Yearlong protection means that no discretionary actions which would adversely affect target resources will be allowed.

LUPA-BIO-VEG-5: All activities will follow applicable BLM state and national regulations and policies for salvage and transplant of cactus, yucca, other succulents, and BLM Sensitive plants.

LUPA-BIO-VEG-6: BLM may consider disposal of succulents through public sale, as per current up-to-date state and national policy.

Individual Focus Species (IFS)

Desert Tortoise

LUPA-BIO-IFS-1: Activities within desert tortoise linkages, identified in Appendix D, that may have a negative impact on the linkage will require an evaluation, in the environmental document(s), of the effects on the maintenance of long- term viable desert tortoise populations within the affected linkage. The analysis will consider the amount of suitable habitat, including climate refugia, required to ensure long-term viability within each linkage given the linkage's population density, long-term demographic and genetic needs, degree of existing habitat disturbance/impacts, mortality sources, and most up-to-date population viability modeling. Activities that would compromise the long-term viability of a linkage population or the function of the linkage, as determined by the BLM in coordination with USFWS and CDFW, are prohibited and will require reconfiguration or re-siting.

LUPA-BIO-IFS-2: Construction of new roads and/or routes will be avoided to the maximum extent practicable (see Glossary of Terms) within desert tortoise habitat in tortoise conservation areas (TCAs) or tortoise linkages identified in Appendix D, unless the new road and/or route is beneficial to minimize net impacts to natural or ecological resources of concern for desert tortoise. TCAs and identified linkages should have the goal of "no net gain" of road density.

Any new road considered within a TCA or identified linkage will not be paved and will be designed and sited to minimize the effect to the function of identified linkages or local desert tortoise populations and shall have a maximum speed limit of 25 miles per hour.

Roads requiring the installation of long-term desert tortoise exclusion fencing for construction or operation will incorporate wildlife underpasses (e.g., culverts) to reduce population fragmentation.

LUPA-BIO-IFS-3: All culverts for access roads or other barriers will be designed to allow unrestricted access by desert tortoises and will be large enough that desert tortoises are unlikely to use them as shelter sites (e.g., 36 inches in diameter or larger). Desert tortoise exclusion fencing may be utilized to direct tortoise use of culverts and other passages.

LUPA-BIO-IFS-4: In areas where protocol and clearance surveys are required (see Appendix D), prior to construction or commencement of any long-term activity that is likely to adversely affect desert tortoises, desert tortoise exclusion fencing shall be installed around the perimeter of the activity footprint (see Glossary of Terms) in accordance with the Desert Tortoise Field Manual (USFWS 2009) or most up-to- date USFWS protocol. Additionally, short-term desert tortoise exclusion fencing will be installed around short-term construction and/or activity areas (e.g., staging areas, storage yards, excavations, and linear

facilities), as appropriate, per the Desert Tortoise Field Manual (USFWS 2009) or most up-to-date USFWS protocol.

- Exemption from desert tortoise protocol survey requirements can be obtained from BLM, in coordination with USFWS, and CDFW as applicable, on a case-by-case basis if a designated biologist determines the activity site does not contain the elements of desert tortoise habitat, is unviable for occupancy, or if baseline studies inferred absence during the current or previous active season.
- Construction of desert tortoise exclusion fences will occur during the time of year when tortoise are less active in order to minimize impacts and to accommodate subsequent desert tortoise surveys. Any exemption or modification of desert tortoise exclusion fencing requirements will be based on the specifics of the activity and the site-specific population and habitat parameters. Sites with low population density and disturbed, fragmented, or poor habitat are likely to be candidates for fencing requirement exemptions or modifications. Substitute measures, such as on-site biological monitors in the place of the fencing requirement, may be required, as appropriate.
- After an area is fenced, and until desert tortoises are removed, the designated biologist is responsible for ensuring that desert tortoises are not being exposed to extreme temperatures or predators as a result of their pacing the fence. Remedies may include the use of shelter sites placed along the fence, immediate translocation, removal to a secure holding area, or other means determined by the BLM, USFWS, and CDFW, as applicable.
- Modification or elimination of the above requirement may also be approved if the activity design will allow retention of desert tortoise habitat within the footprint. If such a modification is approved, modified protective measures may be required to minimize impacts to desert tortoises that may reside within the activity area.
- Immediately prior to desert tortoise exclusion fence construction, a designated biologist (see Glossary of Terms) will conduct a clearance survey of the fence alignment to clear desert tortoises from the proposed fence line's path.
- All desert tortoise exclusion fencing will incorporate desert tortoise proof gates or other approved barriers to prevent access of desert tortoises to work sites through access road entry points.
- Following installation, long-term desert tortoise exclusion fencing will be inspected for damage quarterly and within 48 hours of a surface flow of water due to a rain event that may damage the fencing.
- All damage to long-term or short-term desert tortoise exclusion fencing will be immediately blocked to prevent desert tortoise access and repaired within 72 hours.

LUPA-BIO-IFS-5: Following the clearance surveys (see Glossary of Terms) within sites that are fenced with long-term desert tortoise exclusion fencing a designated biologist (see Glossary of Terms) will monitor initial clearing and grading activities to ensure that desert tortoises missed during the initial clearance survey are moved from harm's way.

A designated biologist will inspect construction pipes, culverts, or similar structures: (a) with a diameter greater than 3 inches, (b) stored for one or more nights, (c) less than 8 inches aboveground and (d) within desert tortoise habitat (such as, outside the long-term fenced area), before the materials are moved, buried, or capped.

As an alternative, such materials shall be capped before storing outside the fenced area or placing on pipe racks. Pipes stored within the long-term fenced area after completing desert tortoise clearance surveys will not require inspection.

LUPA-BIO-IFS-6: When working in areas where protocol or clearance surveys are required (see Appendix D), biological monitoring will occur with any geotechnical boring or geotechnical boring vehicle movement to ensure no desert tortoises are killed or burrows are crushed.

LUPA-BIO-IFS-7: A designated biologist (see Glossary of Terms) will accompany any geotechnical testing equipment to ensure no tortoises are killed and no burrows are crushed.

LUPA-BIO-IFS-8: Inspect the ground under the vehicle for the presence of desert tortoise any time a vehicle or construction equipment is parked in desert tortoise habitat outside of areas fenced with desert tortoise exclusion fencing. If a desert tortoise is seen, it may move on its own. If it does not move within 15 minutes, a designated biologist may remove and relocate the animal to a safe location.

LUPA-BIO-IFS-9: Vehicular traffic will not exceed 15 miles per hour within the areas not cleared by protocol level surveys where desert tortoise may be impacted.

Flat-Tailed Horned Lizard

LUPA-BIO-IFS-10: Comply with the conservation goals and objectives, criteria, and management planning actions identified in the most recent revision of the Flat-tailed Horned Lizard Rangewide Management Strategy (RMS). Activities will include appropriate design features using the most current information from the RMS and RMS Interagency Coordinating Committee to minimize adverse impacts during siting, design, pre-construction, construction, operation, and decommissioning; ensure that current or potential linkages and habitat quality are maintained; reduce mortality; minimize other

adverse impacts during operation; and ensure that activities have a neutral or positive effect on the species.

Bendire's Thrasher

LUPA-BIO-IFS-11: If Bendire's thrasher is present, conduct appropriate activity-specific biological monitoring (see Glossary of Terms) to ensure that Bendire's thrasher individuals are not directly affected by operations (i.e., mortality or injury, direct impacts on nest, eggs, or fledglings).

Burrowing Owl

LUPA-BIO-IFS-12: If burrowing owls are present, a designated biologist (see Glossary of Terms) will conduct appropriate activity-specific biological monitoring (see Glossary of Terms) to ensure avoidance of occupied burrows and establishment of the 656 feet (200 meter) setback to sufficiently minimize disturbance during the nesting period on all activity sites, when practical.

LUPA-BIO-IFS-13: If burrows cannot be avoided on-site, passive burrow exclusion by a designated biologist (see Glossary of Terms) through the use of one-way doors will occur according to the specifications in Appendix D or the most up-to-date agency BLM or CDFW specifications. Before exclusion, there must be verification that burrows are empty as specified in Appendix D or the most up-to-date BLM or CDFW protocols. Confirmation that the burrow is not currently supporting nesting or fledgling activities is required prior to any burrow exclusions or excavations.

LUPA-BIO-IFS-14: Activity-specific active translocation of burrowing owls may be considered, in coordination with CDFW.

California Condor

LUPA-BIO-IFS-15: All activities will be designed and sited in a manner to avoid or minimize the likelihood of contact, injury, and mortality of California condors.

If a condor is identified at a site, the BLM biological staff and USFWS will be immediately notified for guidance.

LUPA-BIO-IFS-16: Flight activity (e.g., surveys, construction, as well as operation and maintenance activities) related to any activities will not be allowed in the airspace extending to 3,000 feet above condor nest sites.

LUPA-BIO-IFS-17: In the range of the California condor, structures supported by guy wires will be marked with recommended bird deterrent devices at the appropriate spacing intervals.

LUPA-BIO-IFS-18: In the range of the California condor, all equipment and work-related materials that are potentially hazardous to condors, including but not limited to items that can be ingested, picked up, or carried away (e.g., loose-wires, open containers with fluids, some construction materials, etc.) will be kept in closed containers either in the work area or placed inside vehicles when they are not being used and at the end of every work day.

LUPA-BIO-IFS-19: In the range of the California condor, when feasible, ethylene glycol-based anti-freeze or other ethylene glycol-based liquid substances will be avoided, and propylene glycol-based antifreeze will be used. Vehicles and equipment using ethylene glycol based substances will be inspected before and after field use as well as during storage on sites for leaks and puddles. Standing fluid will be remediated without unnecessary delay.

LUPA-BIO-IFS-20: Activities that are determined to have a potential risk of taking condors will implement the best detect, deter, and curtailment strategy available at the time of the activity to minimize adverse effects, and avoid or minimize the likelihood of condor injury and mortality. (An example of a 2015 curtailment strategy is shutting down wind generation operations when condor(s) are present, or wind generation facilities switching to night operations only). The strategy must be approved by the BLM and USFWS, in coordination with CDFW as appropriate.

LUPA-BIO-IFS-21: If condors begin to regularly visit a site, BLM may require, in coordination with USFWS, and CDFW as appropriate, the implementation of additional measures to minimize potential impacts to condors. These measures will be based on best available data, activity and areas specifics, and may include, but are not limited to:

- Barriers, including welded wire fabric or hardware cloth, will be installed to prevent access around any facility element that poses a danger to condors.
- Stainless steel lines, rather than poly chemical lines will be used to preclude condors from obtaining and ingesting pieces of poly chemical lines.
- Landing deterrents attached to the walking perching substrates, such as porcupine wire or Daddi Long Legs ®.

LUPA-BIO-IFS-22: Operations and/or activities that reach an activity-specified trigger for condor injury and/or mortality as determined by BLM and USFWS, and CDFW as appropriate, will curtail operations and/or activities using best available techniques, as determined by BLM and USFWS, and CDFW as appropriate. (An example of a 2015 curtailment strategy is shutting down wind generation operations when condor(s) are

present, or wind generation facilities switching to night operations only.) If curtailment techniques are not viable or available, then operations and/or activities will be suspended until the injury and/or condor mortality issue is resolved to the satisfaction of BLM and USFWS, and CDFW, as appropriate.

LUPA-BIO-IFS-23: In the range of the California condor, if an activity may have an impact on California condors, a Condor Operations Strategy (COS) will be developed and implemented on a activity-specific basis in order to avoid and/or reduce the likelihood of injury and mortality from activities. The COS shall be approved by BLM in coordination with USFWS, and CDFW as appropriate for third party activities, and may include, but is not limited, to detailing specifics on: the activity-specific detect, deter and curtailment strategy; monitoring approach to detect condor use of the site; adaptive management approach if condors are found to visit the site; and, activity-specific measures that assist in the recovery of condor.

Golden Eagle

The following CMAs will be implemented to avoid and minimize the impacts to golden eagles.

LUPA-BIO-IFS-24: Provide protection from loss and harassment of active golden eagle nests through the following actions:

- Activities that may impact nesting golden eagles, will not be sited or constructed within 1-mile of any active or alternative golden eagle nest within an active golden eagle territory, as determined by BLM in coordination with USFWS as appropriate.

LUPA-BIO-IFS-25: Cumulative loss of golden eagle foraging habitat within a 1 to 4 mile radius around active or alternative golden eagle nests (as identified or defined in the most recent USFWS guidance and/or policy) will be limited to less than 20%. See **CONS-BIO-IFS-5** for the requirement in Conservation Lands.

LUPA-BIO-IFS-26: For activities that impact golden eagles, applicants will conduct a risk assessment per the applicable USFWS guidance (e.g. the Eagle Conservation Plan Guidance) using best available information as well as the data collected in the pre-project golden eagle surveys.

LUPA-BIO-IFS-27: If a permit for golden eagle take is determined to be necessary, an application will be submitted to the USFWS in order to pursue a take permit.

LUPA-BIO-IFS-28: In order to evaluate the potential risk to golden eagles, the following activities are required to conduct 2 years of pre-project golden eagle surveys in accordance with USFWS Eagle Conservation Plan Guidance as follows:

- Wind projects and solar projects involving a power tower

- Other activities for which the BLM, in coordination with USFWS, and CDFW as appropriate, determines take of golden eagle is reasonably foreseeable or there is a potential for take of golden eagle

LUPA-BIO-IFS-29: For active nests with recreational conflicts that risk the occurrence of take, provide public notification (e.g., signs) of the sensitive area and implement seasonal closures as appropriate.

LUPA-BIO-IFS-30: For activities where ongoing take of golden eagles is anticipated, develop advanced conservation practices per USFWS Eagle Conservation Plan Guidance.

LUPA-BIO-IFS-31: As determined necessary by BLM in coordination with USFWS, and CDFW as appropriate, for activities/projects that are likely to impact golden eagles implement site-specific golden eagle mortality monitoring in support of the pre-construction, pre-activity risk assessment surveys.

Swainson's Hawk

LUPA-BIO-IFS-32: Avoid use of rodenticides and insecticides within five miles of active Swainson's hawk nest.

Desert Bighorn Sheep

LUPA-BIO-IFS-33: Access to, and use of, designated water sources for desert bighorn sheep will not be impeded by activities in designated and new utility corridors.

LUPA-BIO-IFS-34: Transmission projects and new utility corridors will minimize effects on access to, and use of, designated water sources for desert bighorn sheep.

Mohave Ground Squirrel

LUPA-BIO-IFS-35: Protocol surveys (see Glossary of Terms) are required for activities in Mohave ground squirrel key population centers and linkages as indicated in Appendix D. Results of protocol surveys will be provided to BLM and CDFW to consult on, as appropriate, for third party activities.

LUPA-BIO-IFS-36: Activities in Mohave ground squirrel key population centers, as identified in Appendix D, requiring an Environmental Impact Statement are required to assess the effect of the activity on the long term function of the affected key population center.

- Activities within a key population center, as identified in Appendix D, must be designed to avoid adversely impacting the long-term function of the affected key population center.

LUPA-BIO-IFS-37: Activities in key population centers will be sited in previously disturbed areas, areas of low habitat quality and in areas with low habitat intactness, to the maximum extent practicable (see Glossary of Terms).

LUPA-BIO-IFS-38: Disturbance of suitable habitat from activities, requiring an EA or EIS, within the Mohave ground squirrel key population centers and linkages (as identified in Appendix D) will not occur during the typical dormant season (August 1 through February 28) unless absence is inferred and supported by protocol surveys or other available data during the previous active season.

LUPA-BIO-IFS-39: During the typical active Mohave ground squirrel season (February 1 through August 31), conduct clearance surveys throughout the site, immediately prior to initial ground disturbance in the areas depicted in Appendix D. In the cleared areas, perform monitoring to determine if squirrels have entered cleared areas. Contain ground disturbance to within areas cleared of squirrels.

- Detected occurrences of Mohave ground squirrel will be flagged and avoided, with a minimum avoidance area of 50 feet, until the squirrels have moved out of harm's way. A designated biologist (see Glossary of Terms) may also actively move squirrels out of harm's way.

LUPA-BIO-IFS-40: Activities sited in a Mohave ground squirrel linkage (see Appendix D) that may impact the linkage are required to analyze the potential effects on connectivity through the linkage. The activity must be designed to maintain the function of the linkage after construction/implementation and during project/activity operations. Linkage function will be assessed by considering pre- and post-activity ability of the area to support resident Mohave ground squirrels and provide for dispersal of their offspring to key population centers outside the linkage, and dispersal through the linkage between key population centers.

Activities that occur in Mohave ground squirrel linkages shown in Appendix D must be configured and located in a manner that does not diminish Mohave ground squirrel populations in the linkage.

LUPA-BIO-IFS-41: For any ground-disturbing (e.g., vegetation removal, earthwork, trenching) activities, occurrences of Mohave ground squirrel will be flagged and avoided, with a minimum avoidance area of 50 feet, until the squirrels have moved out of harm's way. A designated biologist (see Glossary of Terms) may also actively move squirrels out of harm's way.

LUPA-BIO-IFS-42: Rodenticides will not be used to manage rodents on activity within the range of the Mohave ground squirrel. Use of rodenticide inside of buildings is allowed.

Compensation

LUPA-BIO-COMP-1: Impacts to biological resources, identified and analyzed in the activity specific environmental document, from activities in the LUPA Decision Area will be compensated using the standard biological resources compensation ratio, except for the biological resources and specific geographic locations listed as compensation ratio exceptions, specifics in CMAs **LUPA-BIO-COMP-2** through **-4**, and previously listed CMAs. Compensation acreage requirements may be fulfilled through non-acquisition (i.e., restoration and enhancement), land acquisition (i.e., preserve), or a combination of these options, depending on the activity specifics and BLM approval/authorization.

Compensation for the impacts to designated desert tortoise critical habitat will be in the same critical habitat unit as the impact (see Table 18). Compensation for impacts to desert tortoise will be in the same recovery unit as the impact.

Refer to CMA **LUPA-COMP-1** and **2** for the timing requirements for initiation or completion of compensation.

Table 18
Biological Resources Compensation Ratios for the Impacts of Activities in the DRECP LUPA Decision Area

Standard Biological Resources Compensation Ratio	Exceptions to the Biological Resource Standard Compensation Ratio	
1:1	Desert tortoise designated critical habitat	5:1 in same CH unit
	Mohave ground squirrel: Key population centers	2:1
	Flat-tailed horned lizard: FTHL Management Areas	RMS
	Wetlands	2:1
	Desert riparian woodland vegetation types	5:1

RMS = Flat-Tailed Horned Lizard Rangewide Management Strategy

LUPA-BIO-COMP-2: Birds and Bats – The compensation for the mortality impacts to bird and bat Focus and BLM Special Status Species from activities will be determined based on monitoring of bird and bat mortality and a fee re-assessed every 5 years to fund compensatory mitigation. The initial compensation fee for bird and bat mortality impacts will be based on pre-project monitoring of bird use and estimated bird and bat species mortality from the activity. The approach to calculating the operational bird and bat compensation is based on the total replacement cost for a given resource, a Resource Equivalency Analysis. This involves measuring the relative loss to a population (debt) resulting from an activity and the productivity gain (credit) to a population from the

implementation of compensatory mitigation actions. The measurement of these debts and gains (using the same "bird years" metric as described in Appendix D) is used to estimate the necessary compensation fee.

Each activity, as determined appropriate by BLM in coordination with USFWS, and CDFW as applicable, will include a monitoring strategy to provide activity-specific information on mortality effects on birds and bats in order to determine the amount and type of compensation required to offset the effects of the activity, as described above and in detail in Appendix D. Compensation will be satisfied by restoring, protecting, or otherwise improving habitat such that the carrying capacity or productivity is increased to offset the impacts resulting from the activity. Compensation may also be satisfied by non-restoration actions that reduce mortality risks to birds and bats (e.g., increased predator control and protection of roosting sites from human disturbance). Compensation will be consistent with the most up to date DOI mitigation policy.

LUPA-BIO-COMP-3: Golden eagle – BLM and third-party initiated activities, will provide specific golden eagle compensation in accordance with the most up to date BLM or USFWS policies, including applicable USFWS Eagle Conservation Plan Guidance.

LUPA-BIO-COMP-4: Golden eagle – Third-party applicant/activity proponents are required to contribute to a DRECP-wide golden eagle monitoring program, if the activity/project(s) has been determined, through the environmental analysis, to likely impact golden eagles.

II.4.2.1.2 Air Resources

Air quality is a concern across the DRECP LUPA Decision Area, with many of its air basins having been designated non-attainment areas under the Clean Air Act (CAA) of 1970 and Amendments of 1977 and 1990 (42 U.S.C. 7401 et seq.).

The CAA prohibits any federal land management agency from conducting, supporting, approving, licensing, or permitting any activity on federal land that does not comply with all applicable local, state, tribal, and federal air quality laws, statutes, regulations, ordinances, and implementation plans. These prohibitions are reinforced for the BLM via FLPMA. In support of these regulations, dust control plans have been or are being developed for portions of the Planning Area in order to decrease air pollutant concentrations, increase visibility, and decrease atmospheric deposition. Adherence to air quality regulatory programs through coordination between federal and state agencies and tribes is a key to air quality management success.

Other applicable sections of the CAA include:

- Applicable National Ambient Air Quality Standards (NAAQS) (Section 109)

- State Implementation Plans (SIPs) (Section 110)
- Control of Pollution from Federal Facilities (Section 118)
- Prevention of Significant Deterioration, including visibility impacts to mandatory Federal Class I Areas (Section 160 et seq.)
- Conformity Analyses and Determinations (Section 176[c])

Under the DRECP LUPA, areas will be managed to protect their air quality and visibility in accordance with Class II objectives of Part C of the CAA amendments, unless designated another class by the State of California as a result of recommendations developed by any regional air quality management plan.

LUPA-Wide Conservation and Management Actions for Air Resources

LUPA-AIR-1: All activities must meet the following requirements:

- Applicable National Ambient Air Quality Standards (Section 109)
- State Implementation Plans (Section 110)
- Control of Pollution from Federal Facilities (Section 118) including non-point source
- Prevention of Significant Deterioration, including visibility impacts to mandatory Federal Class I Areas (Section 160 et seq.)
- Conformity Analyses and Determinations (Section 176[c])
- Apply best management practices on a case by case basis
- Applicable local Air Quality Management Jurisdictions (e.g., 403 SCAQMD)

LUPA-AIR-2: Because project authorizations are a federal undertaking, air quality standards for fugitive dust may not exceed local standards and requirements.

LUPA-AIR-3: Where impacts to air quality may be significant under NEPA, requiring analysis through an Environmental Impact Statement, require documentation for activities to include a detailed discussion and analysis of Ambient Air Quality conditions (baseline or existing), National Ambient Air Quality Standards, criteria pollutant nonattainment areas, and potential air quality impacts of the proposed project (including cumulative and indirect impacts and greenhouse gas emissions). This content is necessary to disclose the potential impacts from temporary or cumulative degradation of air quality. The discussion will include a description and estimate of air emissions from potential construction and maintenance activities, and proposed mitigation measures to minimize net PM_{10} and $PM_{2.5}$ emissions. The documentation will specify the emission sources by pollutant from mobile

sources, stationary sources, and ground disturbance. A Construction Emissions Mitigation Plan will be developed.

LUPA-AIR-4: Because fugitive dust is the number one source of PM_{10} and $PM_{2.5}$ emissions in the Mojave and Sonoran Deserts, fugitive dust impacts to air quality must be analyzed for all activities/projects requiring an Environmental Impact Statement and Environmental Assessment.

- The NEPA air quality analysis may include modelling of the sources of PM_{10} and $PM_{2.5}$ that occur prior to construction and/or ground disturbance from the activity/project, and show the timing, duration and transport of emissions off site. When utilized, the modeling will also identify how the generation and movement of PM_{10} and $PM_{2.5}$ will change during and after construction and/or ground disturbance of the activity/project under all activity/project specific NEPA alternatives. The BLM air resource specialist and Authorizing Officer will determine if modelling is required as part of the NEPA analysis based on estimated types and amounts of emissions.

LUPA-AIR-5: A fugitive Dust Control Plan will be developed for all projects where the NEPA analysis shows an impact on air quality from fugitive dust.

II.4.2.1.3 Comprehensive Trails and Travel Management

Components of a Designated Travel Network

In 2006, the BLM issued Instruction Memorandum No. 2006-173, which established policy for the use of terms and definitions associated with the management of transportation-related linear features. It also set a data standard and a method for storing electronic transportation asset data. According to the memorandum, all transportation assets are defined as follows:

- **Road:** A linear route declared a road by the owner, managed for use by low-clearance vehicles having four or more wheels, and maintained for regular and continuous use. These may include ROW roads granted by the BLM to other entities.
- **Primitive Road:** A linear route managed for use by four-wheel drive or high-clearance vehicles. These routes do not normally meet any BLM road design standards.
- **Trail:** A linear route managed for human-powered, stock, or OHV forms of transportation or for historical or heritage values. Trails are not generally managed for use by four-wheel drive or high-clearance vehicles.

Designated Roads, Primitive Roads, and Trails are categorized as follows:

- **Tier 1:** Roads and Primitive Roads with high values for commercial, recreational, casual uses, and/or to provide access to other recreation activities.
- **Tier 2:** Roads and Primitive Roads with high values for recreation and other motorized access (i.e., important through routes).
- **Tier 3:** Primitive Roads and Trails with high value for motorized and non-motorized recreational pursuits (i.e., spur routes).

Off-Highway Vehicle Management

OHVs are synonymous with off-road vehicles. As defined in 43 CFR 8340.0-5 (a): Off-road vehicle means any motorized/battery-powered vehicle capable of, or designed for, travel on or immediately over land, water, or other natural terrain.

In accordance with 43 CFR 8342.1, the BLM's regulations for OHV management, "the authorized officer shall designate all public lands as open, limited, or closed to [OHVs]." As such, all public lands within the Planning Area have been designated in one of three OHV designation categories, as follows:

- **Open Area Designations** are used for intensive OHV or other transportation use areas where there are no special restrictions or where there are no compelling resource protection needs, user conflicts, or public safety issues to warrant limiting cross-country travel.
- **Limited Area Designations** are used where travel must be restricted to meet specific resource/resource use objectives. For areas classified as limited, the BLM must consider a range of possibilities, including travel that will be limited to the following:
    - Types or modes of travel, such as foot, equestrian, bicycle, and motorized
    - Existing roads and trails
    - Time or season of use; limited to certain types of vehicles (OHVs, motorcycles, all-terrain vehicles, high clearance, etc.); limited to licensed or permitted vehicles or use
    - BLM administrative use only
    - Other types of limitations
- **Closed Area Designations** prohibit vehicular travel, both motorized and mechanized, transportation cross-country and on routes, except for where valid rights continue to allow access, such as within a designated Wilderness Area. Areas

are designated closed if closure to all vehicular use is necessary to protect resources, promote visitor safety, or reduce use conflicts.

Back Country Byways Program

The BLM developed the Back County Byway Program to complement the National Scenic Byway Program established by the U.S. Secretary of Transportation. Back County Byways highlight the spectacular nature of the western landscapes. These routes vary from narrow graded roads that are passable only during a few months of the year to two-lane paved highways with year-round access.

BLM will comply with the policy and guidelines of the BLM Back Country Byway Program and intent to showcase routes with high scenic and outstanding natural, cultural, historic or other values consistent with the designation. Where appropriate and feasible, BLM will highlight the spectacular nature of the western landscapes through education and interpretation along linear travel routes which provide recreational driving opportunities that allow for the experiences of solitude and isolation by:

- Maintaining or improving access to BLM recreational destinations and activities
- Helping meet the increasing demand for pleasure driving in back country environments.
- Facilitating effective partnerships at the local, state, and national levels
- Contributing to local and regional economies through increased tourism
- Increasing public awareness of the availability of outstanding recreation attractions on public lands
- Enhancing the visitors' recreation experience and communicate the multiple-use management message through an effective wayside interpretive program
- Increasing the visibility of BLM as a major supplier of outdoor recreation opportunities
- Managing the increased use created through the program to minimize impacts to the environment
- Contributing to the National Scenic Byways Program in a way that is uniquely suited to national public lands managed by BLM

Types of Back Country Byways

Back country byways are designated by the type of road and the vehicle needed to safely travel the byway. Some back country byways vary from a single track bike trail to a low speed paved road that traverses back country areas. Segments of Back Country Byways are subdivided into four types based on the characteristic of the road.

Due to their remoteness, byway travelers should always inquire locally as to byway access and road conditions.

- **Type I –** Roads are paved or have an all-weather surface and have grades that are negotiable by 2-wheel drive vehicles and passenger cars. Most of these roads are narrow, slow speed, secondary routes though public lands.
- **Type II** – Roads that require high-clearance type vehicles such as trucks or 4-wheel drive vehicles. These roads are usually not paved, but may have some type of surfacing. Grades, curves, and road surface are such that they can be negotiated with a 2-wheel drive high clearance vehicle without undue difficulty.
- **Type III** – Roads require 4-wheel drive vehicles or other specialized vehicles such as dirt bikes, all-terrain vehicles (ATVs), etc. These roads are usually not surfaced, but are managed to provide for safety and resource protection needs. These roads can often have steep grades, uneven tread surfaces, and other characteristics that will require specialized vehicles to negotiate usually at slow speeds.
- **Type IV** – Trails are managed specifically to accommodate dirt bike, mountain bike, snowmobile or all-terrain vehicle use. Most of these routes are single track trails.

LUPA-Wide Conservation and Management Actions for Comprehensive Trails and Travel Management

LUPA-CTTM-1: Maintain and manage adequate Road, Primitive Road, and Trail Access to and within SRMAs, ERMAs, OHV Open Areas, and Level 1, 2, and 3 Recreation Facilities.

LUPA-CTTM-2: Avoid activities that would have a significant adverse impact on use and enjoyment within 0.5 mile from centerline of tier 2 Roads/Primitive Roads, and 300 feet from centerline of tier 3 primitive roads/trails. If avoidance of Tier 2 and 3 roads, primitive roads and trails is not practicable, relocate access to the same or higher standard and maintain the setting characteristics and access to recreation activities, facilities, and destinations.

LUPA-CTTM-3: Manage other significant linear features such as Mojave Road, Bradshaw Trail, or other recognized linear features to protect their important recreation activities, experiences and benefits. Prohibit activities that have a significant adverse impact on use and enjoyment within 0.5 mile (from centerline) of such linear features.

LUPA-CTTM-4: If residual impacts to Tier 1 and Tier 2 roads/primitive roads, Back Country Byways, or significant linear features occur from adjacent DFAs or other activities, commensurate compensation in the form of enhanced recreation operations, access, recreation facilities or opportunities will be required.

LUPA-CTTM-5: Manage OHV use per the appropriate Transportation and Travel Management Plan/RMP and/or the SRMA Objectives as outlined in Appendix C as Open, Limited or Closed.

LUPA-CTTM-6: Manage Back Country Byways as a component of BLM Recreation and Travel and Transportation Management program**.**

LUPA-CTTM-7: Manage Recreation Facilities consistent with the objectives for the recreation management areas and facilities (see also Section II.4.2.1.10).

II.4.2.1.4 Cultural Resources and Tribal Interests

LUPA-CUL-1: Continue working with the California Office of Historic Preservation (OHP) to develop and implement a program for record keeping and tracking agency actions that meets the needs of BLM and OHP organizations pursuant to existing State and National agreements and regulation (BLM State Protocol Agreement; BLM National Programmatic Agreement).

LUPA-CUL-2: Using relevant archaeological and environmental data, identify priority geographic areas for new field inventory, based upon a probability for unrecorded significant resources and other considerations.

LUPA-CUL-3: Identify places of traditional cultural and religious importance to federally recognized Tribes and maintain access to these locations for traditional use.

LUPA-CUL-4: Design activities to minimize impacts on cultural resources including places of traditional cultural and religious importance to federally recognized Tribes.

LUPA-CUL-5: Develop interpretive material to correspond with recreational uses to educate the public about protecting cultural resources and avoiding disturbance of archaeological sites.

LUPA-CUL-6: Develop partnerships to assist in the training of groups and individuals to participate in site stewardship programs.

LUPA-CUL-7: Coordinate with visual resources staff to ensure VRM Classes consider cultural resources and tribal consultation to include landmarks of cultural significance to Native Americans (TCPs, trails, etc.).

LUPA-CUL-8: Conduct regular contact and consultation with federally recognized Tribes and individuals, consistent with statute, regulation and policy.

LUPA-CUL-9: Promote DRECP desert vegetation types/communities by avoiding them where possible, then use required compensatory mitigation, off-site mitigation, and other means to ensure Native American vegetation collection areas and practices are maintained.

LUPA-CUL-10: Promote and protect desert fan palm oasis vegetation type/communities by avoiding where possible, then use required compensatory mitigation, off-site mitigation, and other means to ensure Native American cultural values are maintained.

LUPA-CUL-11: Promote and protect desert microphyll woodland vegetation type/communities to ensure Native American cultural values are maintained.

II.4.2.1.5 Lands and Realty

LUPA-LANDS-1: Identify acquired lands as right-of-way exclusion areas when development is incompatible with the purpose of the acquisition.

LUPA-LANDS-2: Prioritize acquisition of land within and adjacent to conservation designation allocations. Acquired land in any land use allocation in this Plan will be managed according to the applicable allocation requirements and/or for the purposes of the acquisition. Management boundaries for the allocation may be adjusted to include the acquired land if the acquisition lies outside the allocation area through a future land use plan amendment process.

LUPA-LANDS-3: Within land use allocations where renewable energy and ancillary facilities are not allowed, an exception exists for geothermal development. Geothermal development will be an allowable use if a geothermal-only DFA overlays the allocation and the lease includes a no surface occupancy stipulation with exception of three specific parcels in the Ocotillo Wells SRMA (refer to the Ocotillo Wells SRMA Special Unit Management Plan in Appendix C).

LUPA-LANDS-4: Nonfederal lands within the boundaries of BLM LUPA land use allocations are not affected by the LUPA.

LUPA-LANDS-5: The MUCs used to determine land tenure in the CDCA Plan will be replaced by areas listed in the CMAs below.

LUPA-LANDS-6: Any activities on Catellus Agreement lands will be consistent with deed restrictions.

LUPA-LANDS-7: Any activities on Catellus Agreement lands will be subject to the approval of the California State Director.

LUPA-LANDS-8: The CDCA Plan requirement that new transmission lines of 161kV or above, pipelines with diameters greater than 12 inches, coaxial cables for interstate communications, and major aqueducts or canals for interbasin transfers of water will be located in designated utility corridors, or considered through the plan amendment process outside of designated utility corridors, remains unchanged. The only exception is that transmission facilities may be located outside of designated corridors within DFAs without a plan amendment. This CMA does not apply the Bishop and Bakersfield RMPs.

Exchanges with the State of California

LUPA-LANDS-8: Continue land exchanges with the State of California, as per the LUPA goals and objectives in Section II.4.1.4. Refer to Appendix F.

LUPA-LANDS-9: Enter into land exchanges with the California State Lands Commission (CSLC) which convey BLM lands suitable for, or developed as, large-scale renewable energy related projects in exchange for CSLC school lands located in and adjacent to designated conservation areas. These exchanges will follow the procedures outlined in Memorandum of Agreement Relating to Land Exchanges to Consolidate Land Parcels signed by the BLM and CSLC on May 21, 2012.

LUPA-LANDS-10: Prioritize land exchange proposals from the CSLC on available lands if there are competing land tenure proposals (e.g., land sale or exchange), CSLC proposals that enhance revenues for schools will generally be given priority.

II.4.2.1.6 Livestock Grazing

The BLM CMAs for grazing include standards of rangeland health and guidelines for grazing management within the CDCA allotments. The Bishop RMP and Bakersfield RMP allotments have approved standards and guidelines in place and are not modified by the DRECP LUPA. The grazing regulations found at 43 CFR 4110.4-2(b) describe the process of devoting parts or all of a grazing allotment to another purpose and providing the permittees and lessees a 2-year notification. Relinquishment of grazing permits and leases within the CDCA only, falls under the 2012 Appropriations Act (Public Law 112-74) and provides policy whereby permittees and lessees can donate their permits and leases back to the BLM for permanent relinquishment through the Land Use Planning process. Grazing allotments that were voluntarily relinquished prior to fiscal year 2012 were identified in the DRECP LUPA as permanently unavailable for grazing.

LUPA-LIVE-1: Adopt the Standards of Rangeland Health and Guidelines for Grazing Management, as detailed below, for the CDCA. This CMA does not apply in the Bishop and Bakersfield RMPs.

Standards of Rangeland Health and Guidelines for Grazing Management

Regional Public Land Health Standards and Guidelines are required for all BLM administered lands in accordance with Part 43 of the CFR subsection 4180. These regulations require that State Directors, in consultation with Resource Advisory Councils, develop Standards for Rangeland Health and Guidelines for grazing management.

The BLM in coordination and consultation with the California Desert District Advisory Committee (see Section 601 of the FLPMA as amended) developed standards and guidelines for the CDCA and used the following land use plan amendments to analyze the specific standard and guideline and to provide the public and opportunity to comment.

- Northern and Eastern Colorado Desert Management Plan—NECO—ROD signed Dec. 2002 (BLM 2002a)
- Northern and Eastern Mojave Desert Management Plan—NEMO—ROD signed Dec. 2002 (BLM 2002b)
- West Mojave Plan—WEMO—ROD signed March 2006 (BLM 2006)

The regulations require approval by the Secretary of the Interior prior to full implementation of standards and guidelines. Until approval is received, the fallback standards and guidelines will be used.

The regulations require approval by the Secretary of the Interior prior to full implementation of the California Desert District standards and guidelines. Until approval is received, the fallback standards and guidelines will be used in the 5 Desert District Offices.

Bakersfield and Bishop Field Offices are covered under the Central California Standards and Guidelines and require no additional approval to continue to use that document.

Standards and Guidelines for the CDCA

Standards of land health are expressions of levels of physical and biological condition or degree of function required for healthy lands and sustainable uses, and define minimum resource conditions that must be achieved and sustained (BLM 2001).

Guideline. A practice, method or technique determined to be appropriate to ensure that standards can be met or that significant progress can be made toward meeting the standard. Guidelines are tools such as grazing systems, vegetative treatments, or improvement projects that help managers and permittees achieve standards. Guidelines may be adapted or modified when monitoring or other information indicates the guideline is not effective, or a better means of achieving the applicable standard becomes appropriate (H-4180-1 Rangeland Health Standards).

The following **Standards** for the CDCA are from the NECO, NEMO, WEMO, and Palm Springs South Coast Resource Management Plan (PSSCRMP) land use plan amendments.

Soils

Soils exhibit infiltration and permeability rates that are appropriate to soil type, climate, geology, land form, and past uses. Adequate infiltration and permeability of soils allow accumulation of soil moisture necessary for optimal plant growth and vigor, and provide a stable watershed, as indicated by:

- Canopy and ground cover are appropriate for the site.
- There is a diversity of plant species with a variety of root depths.
- Litter and soil organic matter are present at suitable sites.
- Microbiotic soil crusts are maintained and in place at appropriate locations.
- Evidence of wind or water erosion does not exceed natural rates for the site.
- Soil permeability, nutrient cycling, and water infiltration are appropriate for the soil type.

Native Species

Healthy, productive, and diverse habitats for native species, including Special Status Species (federal threatened and endangered, federally proposed, federal candidates, BLM sensitive, or California State threatened and endangered, and Unique Plant Assemblages), are maintained in places of natural occurrence, as indicated by:

- Photosynthetic and ecological processes are continuing at levels suitable for the site, season, and precipitation regimes.
- Plant vigor, nutrient cycle, and energy flow are maintaining desirable plants and ensuring reproduction and recruitment.
- Plant communities are producing litter within acceptable limits.
- Age class distribution of plants and animals are sufficient to overcome mortality fluctuations.
- Distribution and cover of plant species and their habitats allow for reproduction and recovery from localized catastrophic events.
- Alien and noxious plants and wildlife do not dominate a site or do not require action to prevent the spread and introduction of noxious/invasive weeds.
- Appropriate natural disturbances are evident.
- Populations and their habitats are sufficiently distributed and healthy to prevent the need for new listing as Special Status Species.

Riparian/Wetland and Stream Function

Wetland systems associated with subsurface, running, and standing water function properly and have the ability to recover from major disturbances. Hydrologic conditions are maintained, as indicated by:

- Vegetative cover adequately protects banks and dissipates energy during peak water flows.
- Dominant vegetation is an appropriate mixture of vigorous riparian species.
- Recruitment of preferred species is adequate to sustain the plant community.
- Stable soils store and release water slowly.
- Plant species present indicate soil moisture characteristics are being maintained.
- There is minimal cover of shallow-rooted invader species, and they are not displacing deep-rooted native species.
- Shading of stream courses and water courses is sufficient to support riparian vertebrates and invertebrates.
- Stream is in balance with water and sediment being supplied by the watershed.
- Stream channel size (depth and width) and meander is appropriate for soils, geology, and landscape.
- Adequate organic matter (litter and standing dead plant material) is present to protect the site from excessive erosion and to replenish soil nutrients through decomposition.

Water Quality

Surface and groundwater complies with objectives of the Clean Water Act and other applicable water quality requirements, including meeting the California State standards, as indicated by:

- The following do not exceed the applicable requirements: chemical constituents, water temperature, nutrient loads, fecal coliform, turbidity, suspended sediment, and dissolved oxygen.
- Standards are achieved for riparian, wetlands, and water bodies.
- Aquatic organisms and plants (e.g., macro-invertebrates, fish, algae, and plants) indicate support for beneficial uses.
- Monitoring results or other data show water quality is meting the Standard.

The following **Guidelines** for grazing in the CDCA are from the NECO, NEMO, WEMO, and PSSCRMP land use plan amendments.

- Facilities will be located away from riparian-wetland areas whenever they conflict with achieving or maintaining riparian-wetland functions.
- The development of springs and seeps or other projects affecting water and associated resources will be designed to protect the ecological functions and processes of those sites.
- Grazing activities at an existing range improvement that conflict with achieving proper functioning conditions (PFC) and resource objectives for wetland systems (lentic, lotic, springs, adits, and seeps) would be modified so PFC and resource objectives can be met, and incompatible projects would be modified to bring them into compliance. The BLM would consult, cooperate, and coordinate with affected interests and livestock producers prior to authorizing modification of existing projects and initiation of new projects. New range improvement facilities would be located away from wetland systems if they conflict with achieving or maintaining PFC and resource objectives.
- Supplements (e.g., salt licks) will be located one-quarter mile or more away from wetland systems so they do not conflict with maintaining riparian-wetland functions.
- Management practices will maintain or promote perennial stream channel morphology (e.g., gradient, width/depth ratio, channel roughness, and sinuosity) and functions that are appropriate to climate and landform.
- Grazing management practices will meet state and federal water quality Standards. Impoundments (stock ponds) having a sustained discharge yield of less than 200 gallons per day to surface or groundwater, are excepted from meeting state drinking water standards per California State Water Resources Control Board Resolution Number 88-63.
- Refer to the most-up-to-date BLM Fire Policy for information related to suppression and use of wildland fire within the planning area.
- In years when weather results in extraordinary conditions, seed germination, seedling establishment, and native plant species growth should be allowed by modifying grazing use.
- Grazing on designated ephemeral rangeland could be allowed only if reliable estimates of production have been made, an identified level of annual growth or residue to remain on site at the end of the grazing season has been established, and adverse effects on perennial species are avoided.
- During prolonged drought, range stocking will be reduced to achieve resource objectives and/or prescribed perennial forage utilization. Livestock utilization of

key perennial species on year-long allotments should be checked about March 1 when the Palmer Severity Drought Index/Standardized Precipitation Index indicates dry conditions are expected to continue.

- Through the assessment process or monitoring efforts, the extent of invasive and/or exotic plants and animals should be recorded and evaluated for future control measures. Methods and prescriptions should be implemented, and an evaluation would be completed to ascertain future control measures for undesirable species.
- Restore, maintain or enhance habitats to assist in the recovery of federally listed threatened and endangered species. Restore, maintain or enhance habitats of Special Status Species including federally proposed, federal candidates, BLM sensitive, or California State threatened and endangered to promote their conservation.
- Grazing activities should support biological diversity across the landscape, and native species and microbiotic crusts are to be maintained.
- Experimental research efforts should be encouraged to provide answers to grazing management and related resource concerns through cooperative and collaborative efforts with outside agencies, groups, and entities.
- Livestock utilization limits of key perennial species will be as shown in (see Table 19) for the various range types.

Table 19
Livestock Utilization Limits of Key Perennial Species

Range Type	Percent Use of Key Perennial Species	
	Poor-Fair range condition or growing season	*Good-Excellent range condition or dormant season*
Mojave Sonoran Desert scrub	25	40
Salt Desert shrub land	25	35
Semi-desert grass and shrub land	30	40
Sagebrush grassland	30	40
Mountain shrub land	30	40

Monitoring

Monitoring of grazing allotment resource conditions would be routinely assessed to determine if Public Land Health Standards are being met. In those areas not meeting one or more Standards, monitoring processes would be established where none exist to monitor indicators of health until the Standard or resource objective has been attained. Livestock trail networks, grazed plants, livestock facilities, and animal waste are expected impacts in all grazing allotments and these ongoing impacts would be considered during analysis of

the assessment and monitoring process. Activity plans for other uses or resources that overlap an allotment could have prescribed resource objectives that may further constrain grazing activities (e.g., ACEC). In an area where a Standard has not been met, the results from monitoring changes to grazing management required to meet Standards would be reviewed annually. During the final phase of the assessment process, the Range Determination includes the schedule for the next assessment of resource conditions. To attain Standards and resource objectives, the best science would be used to determine appropriate grazing management actions. Cooperative funding and assistance from other agencies, individuals, and groups would be sought to collect prescribed monitoring data for indicators of each Standard.

LUPA-Wide Conservation and Management Actions for Livestock Grazing

LUPA-LIVE-2: In the CDCA only, accept grazing permit/lease donations in accordance with legislation in the Fiscal Year 2012 Appropriations Act (Public Law 112-74).

LUPA-LIVE-3: In the Bishop and Bakersfield RMPs, determine whether continued livestock grazing would be compatible with achieving land use plan management goals and objectives in the event that the permit/lease is relinquished.

LUPA-LIVE-4: If the BLM determines that the grazing allotment is to be put to a different public purpose than grazing, follow the notification requirements outline in the Grazing Regulations at 43 CFR 4110.4-2(b) and BLM Instruction Memorandum (IM) 2011-181 (BLM 2011), or future policy replacing IM 2011-181.

LUPA-LIVE-5: For grazing allotments within the CDCA that BLM has received a voluntary request for relinquishment prior to fiscal year 2012, continue the planning process for making these allotments unavailable for grazing.

LUPA-LIVE-6: Complete the process for approving rangeland health standards and guidelines for the CDCA Plan (NEMO, WEMO, NECO and PSSCRMP).

LUPA-LIVE-7: Make Pilot Knob, Valley View, Cady Mountain, Cronese Lake, and Harper Lake allotments, allocations unavailable for livestock grazing and change to management for wildlife conservation and ecosystem function. Reallocate the forage previously allocated to grazing use in these allotments to wildlife and ecosystem functions. Pilot Knob was closed in the WEMO plan amendment. The Cronese Lake, Harper Lake, and Cady Mountain allotments were closed as mitigation for the impacts to the Agassiz's desert tortoise resulting from the Fort Irwin expansion. All forage allocated to livestock grazing in these allotments will be reallocated to wildlife use and ecosystem function.

LUPA-LIVE-8: The following vacant grazing allotments within the CDCA will have all vegetation previously allocated to grazing use reallocated to wildlife use and ecosystem functions and will be closed and unavailable to future livestock grazing: Buckhorn Canyon, Crescent Peak, Double Mountain, Jean Lake, Johnson Valley, Kessler Springs, Oak Creek, Chemehuevi Valley, and Piute Valley.

LUPA-LIVE-9: Allocate the forage that was allocated to livestock use in the Lava Mountain and Walker Pass Desert allotments (which have already been relinquished under the 2012 Appropriations Act) to wildlife use and ecosystem function and permanently eliminate livestock grazing on the allotments.

II.4.2.1.7 Minerals

For identified minerals lands and existing mining and energy development (locatable, salable, solid leasable and geothermal minerals) with currently approved Plans of Operations, Notices, Mine and Reclamation Plans or Plans of Development, under the authorities 43 CFR 3200; 3500; 3600; and 3802/09, the mineral resources have been characterized in the following manner:

LUPA-MIN-1: High Potential Mineral Areas (identified in CA GEM data)

- These areas have been identified as mineral lands having existing and/or historic mining activity and a reasonable probability of future mineral resource development. These identified areas will be designated as mineral land polygons on DRECP maps, recognized as probable future development areas for planning purposes and allowable use areas.
- If an activity is proposed in a High Potential Mineral Area, analyze and consider the mineral resource value in the NEPA analysis.

LUPA-MIN-2: Existing Mineral/Energy Operations

Existing authorized mineral/energy operations, including existing authorizations, modifications, extensions and amendments and their required terms and conditions, are designated as an allowable use within all BLM lands in the LUPA Decision Area, and unpatented mining claims subject to valid existing rights. Amendments and expansions authorized after the signing of the DRECP LUPA ROD are subject to applicable CMAs, including ground disturbance caps within Ecological and Cultural Conservation Areas, subject to valid existing rights, subject to governing laws and regulations.

LUPA-MIN-3: Existing High Priority Mineral/Energy Operations Exclusion Areas

- Existing high-priority operation footprints and their identified expansion areas are excluded from DFA and conservation CMAs, but must comply with LUPA-wide CMAs subject to the governing laws and regulations.
- High priority operation exclusions are referenced by name with their respective footprint (acreage) below.
    - MolyCorp REE (General Legal Description: 35º 26'N; 115º 29'W)—10,490.9 surface acres
    - Briggs Au, Etna (General Legal Description: 35º 56'N; 117º 11'W)—3,216.9 surface acres
    - Cadiz Evaporites (General Legal Description: 34º 17'N; 115º 23'W)—2,591.5 surface acres
    - Searles Dry Lake (Evaporate) Operation (General Legal Description: 35º 43'N; 117º 19'W)—72,000 surface acres
    - Bristol Dry Lake (Evaporate) Operation (General Legal Description: 34º 29'N; 115º 43'W)—3,500 surface acres
    - Mesquite Gold Mine (General Legal Description: 33º 04'N; 114º 59'W)—4,500 surface acres
    - Hector Mine (Hectorite Clay) (General Legal Description: 34º 45'N; 116º 25'W)—1,500 surface acres
    - Castle Mountain/Viceroy Mine (Gold) (General Legal Description: 35º 17'N; 115º 3'W)—5,000 surface acres

LUPA-MIN-4: Access to Existing Operations

- Established designated, approved, or authorized access routes to the aforementioned existing authorized operations and areas will be designated as allowable uses.
- Access routes to Plans of Operations and Notices approved under 43 CFR 3809 will be granted subject to valid existing rights listed in 43 CFR 3809.100.

LUPA-MIN-5: Areas Located Outside Identified Mineral Areas

- Areas which could not be characterized due to insufficient data and mineral potential may fluctuate dependent on market economy, extraction technology, and other geologic information- requiring periodic updating. Authorizations are subject to the governing laws and regulations and LUPA requirements.

LUPA-MIN-6: New or expanded mineral operations will be evaluated on a case-by-case basis, and authorizations are subject to LUPA requirements, and the governing laws and regulations.

II.4.2.1.8 National Recreation Trails

LUPA-NRT-1: The Nadeau Road NRT was designated by the Secretary of the Interior in June 2013. The California Desert District nominates the Sperry Wash Road, El Mirage Interpretive Trail East, and El Mirage Interpretive Trail West for NRT designation.

LUPA-NRT-2: The Nadeau NRT Management Corridor will be protected and activities impacting use and enjoyment of the trail will be avoided within 0.5 mile from centerline of the route.

II.4.2.1.9 Paleontology

LUPA-PALEO-1: If not previously available, prepare paleontological sensitivity maps consistent with the Potential Fossil Yield Classification for activities prior to NEPA analysis.

LUPA-PALEO-2: Incorporate all guidance provided by the Paleontological Resources Protection Act.

LUPA-PALEO-3: Ensure proper data recovery of significant paleontological resources where adverse impacts cannot be avoided or otherwise mitigated.

LUPA-PALEO-4: Paleontological surveys and construction monitors are required for ground disturbing activities that require an EIS.

II.4.2.1.10 Recreation and Visitor Services

LUPA-REC-1: Maintain, and where possible enhance, the recreation setting characteristics – physical components of remoteness, naturalness and facilities; social components of contact, group size and evidence of use; and operational components of access, visitor services and management controls.

LUPA-REC-2: Cooperate with the network of communities and recreation service providers active within the planning area to protect the principal recreation activities and opportunities, and the associated conditions for quality recreation, by enhancing appropriate visitor services, and by identifying and mitigating impacts from development, inconsistent land uses and unsustainable recreation practices such as minimizing impacts to known rockhounding gathering areas.

LUPA-REC-3: Manage lands not designated as SRMAs or ERMAs to meet recreation and visitor services and resource stewardship needs as described in Resource Management Plans (RMPs).

LUPA-REC-4: Prohibit activities that have a significant adverse impact and that do not enhance conservation or recreation values within one mile of Level 1 and Level 2 Recreation facility footprint.

LUPA-REC-5: Avoid activities that have a significant adverse impact and that do not enhance conservation or recreation values within one-half mile of Level 3 Recreation facility footprint including route access and staging areas. If avoidance is not practicable, the facility must be relocated to the same or higher recreation standard and maintain recreation objectives and setting characteristics.

LUPA-REC-6: Limit signage to that necessary for recreation facility/area identification, interpretation, education and safety/regulatory enforcement.

LUPA-REC-7: Refer to local RMPs, RMP amendments, and activity level planning for specially designated areas for Vehicular Stopping, Parking, and Camping limitations.

LUPA-REC-8: Provide on-going maintenance of recreation and conservation facilities, interpretive and regulatory signs, roads, and trails.

II.4.2.1.11 Soil and Water General

LUPA-SW-1: Stipulations or conditions of approval for any activity will be imposed that provide appropriate protective measures to protect the quantity and quality of all water resources (including ephemeral, intermittent, and perennial water bodies) and any associated riparian habitat (see biological CMAs for specific riparian habitat CMAs). The water resources to which this CMA applies will be identified through the activity-specific NEPA analysis.

LUPA-SW-2: Buffer zones, setbacks, and activity limitations specifically for soil and water (ground and surface) resources will be determined on an activity/site-specific basis through the environmental review process, and will be consistent with the soil and water resource goals and objectives to protect these resources . Specific requirements, such as buffer zones and setbacks, may be based, in part, on the results of the Water Supply Assessment defined below. In general, placement of long-term facilities within buffers or protected zones for soil and water resources is discouraged, but may be permitted if soil and water resource management objectives can be maintained.

LUPA-SW-3: Where a seeming conflict between CMAs within or between resources arises, the CMA(s) resulting in the most resource protection apply.

LUPA-SW-4: Nothing in the "Exceptions" below applies to or takes precedence over any of the CMAs for biological resources.

Groundwater Resources

LUPA-SW-5: Exceptions to any of the specific soil and water stipulations contained in this section, as well as those listed below under the subheadings "Soil Resources," "Surface Water," and "Groundwater Resources," may be granted by the authorized officer if the applicant submits a plan, or, for BLM-initiated actions, the BLM provides documentation, that demonstrates:

- The impacts are minimal (e.g., no predicted aquifer drawdown beyond existing annual variability in basins where cumulative groundwater use is not above perennial yield and water tables are not currently trending downward) or can be adequately mitigated.

Soil Resources

LUPA-SW-6: In addition to the applicable required governmental safeguards, third party activities will implement up-to-date standard industry construction practices to prevent toxic substances from leaching into the soil.

LUPA-SW-7: Prepare an emergency response plan, approved by the BLM contaminant remediation specialist, that ensures rapid response in the event of spills of toxic substances over soils.

LUPA-SW-8: As determined necessary on an activity specific basis, prepare a site plan specific to major soil types present (≥5% of footprint or laydown surfaces) in Wind Erodibility Groups 1 and 2 and in Hydrology Soil Class D as defined by the USDA Natural Resource Conservation Service to minimize water and air erosion from disturbed soils on activity sites.

LUPA-SW-9: The extent of desert pavement within the proposed boundary of an activity shall be mapped if it is anticipated that the activity may create erosional or ecologic impacts. Mapping will use the best available data and standards, as determined by BLM. Disturbance of desert pavement within the boundary of an activity shall be limited to the extent possible. If disturbance from an activity is likely to exceed 10% of the desert pavement mapped within the activity boundary, the BLM will determine whether the erosional and ecologic impacts of exceeding the 10% cap by the proposed amount would be insignificant and/or whether the activity should be redesigned to minimize desert pavement disturbance.

LUPA-SW-10: The extent of additional sensitive soil areas (cryptobiotic soil crusts, hydric soils, highly corrosive soils, expansive soils, and soils at severe risk of erosion) shall be mapped if it is anticipated that an activity will impact these resources. To the extent possible, avoid disturbance of desert biologically intact soil crusts, and soils highly susceptible to wind and water erosion.

LUPA-SW-11: Where possible, side casting shall be avoided where road construction requires cut- and-fill procedures.

Surface Water

Refer to the biological resources CMAs for desert vegetation types, and Focus and BLM Special Status Species for setbacks and CMAs for wetlands and riparian areas (seeps, springs, perennial and intermittent streams), including but not limited to the LUPA-BIO-RIPWET CMAs.

LUPA-SW-12: Except in DFAs, exclude long-term structures in, playas (dry lake beds), and Wild and Scenic River corridors, except as allowed with minor incursions (see definition in the Glossary of Terms).

LUPA-SW-13: BLM will manage all riparian areas to be maintained at, or brought to, proper functioning condition.

LUPA-SW-14: All relevant requirements of Executive Orders 11988 (Floodplain Management) and 11990 (Protection of Wetlands) will be complied with.

LUPA-SW-15: Surface water diversion for beneficial use will not occur absent a state water right.

LUPA-SW-16: The 100-year floodplain boundaries for any surface water feature in the vicinity of the project will be identified. If maps are not available from the Federal Emergency Management Agency (FEMA), these boundaries will be determined via hydrologic modeling and analysis as part of the environmental review process. Construction within, or alteration of, 100-year floodplains will be avoided where possible, and permitted only when all required permits from other agencies are obtained.

Groundwater

For any activity that proposes to utilize groundwater resources, the following stipulated CMAs shall apply, regardless of project location.

LUPA-SW-17: An activity's groundwater extraction shall not contribute to exceeding the estimated perennial yield for the basin in which the extraction is taking place.

Perennial yield is that quantity of groundwater that can be withdrawn from the groundwater basin without exceeding the long-term recharge of the basin or unreasonably affecting the basin's physical, chemical, or biological integrity. It is further clarified arithmetically below.

LUPA-SW-18: Water extracted or consumptively used for the construction, operation, maintenance, or remediation of the project shall be solely for the beneficial use of the project or its associated mitigation and remediation measures, as specified in approved plans and permits.

LUPA-SW-19: Water flow meters shall be installed on all extraction wells permitted by BLM.

LUPA-SW-20: After application of applicable avoidance and minimization measures, all remaining unavoidable residual impacts to surface waters from the proposed activity shall be mitigated to ensure no net loss of function and value, as determined by the BLM.

LUPA-SW-21: Consideration shall be given to design alternatives that maintain the existing hydrology of the site or redirect excess flows created by hardscapes and reduced permeability from surface waters to areas where they will dissipate by percolation into the landscape.

LUPA-SW-22: All hydrologic alterations shall be avoided that could reduce water quality or quantity for all applicable beneficial uses associated with the hydrologic unit in the project area, or specific mitigation measures shall be implemented that will minimize unavoidable water quality or quantity impacts, as determined by BLM in coordination with USFWS, CDFW, and other agencies, as appropriate. These beneficial uses may include municipal, domestic, or agricultural water supply; groundwater recharge; surface water replenishment; recreation; water quality enhancement; flood peak attenuation or flood water storage; and wildlife habitat.

LUPA-SW-23: A Water (Groundwater) Supply Assessment shall be prepared in conjunction with the activity's NEPA analysis and prior to an approval or authorization. This assessment must be approved by the BLM in coordination with USFWS, CDFW, and other agencies, as appropriate, prior to the development, extraction, injection, or consumptive use of any water resource. The purpose of the Water Supply Assessment is to determine whether over-use or over-draft conditions exist within the project basin(s), and whether the project creates or exacerbates these conditions. The Assessment shall include an evaluation of existing extractions, water rights, and management plans for the water supply in the basin(s) (i.e., cumulative impacts), and whether these cumulative impacts (including the proposed project) can maintain existing land uses as well as existing

aquatic, riparian, and other water-dependent resources within the basin(s). This assessment shall identify:

- All relevant groundwater basins or sub-basins and their relationships.
- All known aquifers in the basin(s), including their dimensions, whether confined or unconfined, estimated hydraulic conductivity and transmissivity, groundwater surface elevations, and direction and movement of groundwater.
- All surface water basin(s) related to water runoff, delivery, and supply, if different from the groundwater basin(s).
- All sites of surface outflow (springs or seeps) contained within the basin(s), including historic sites.
- All other surface water bodies in the basins(s), including rivers, streams, ephemeral washes/drainages, lakes, wetlands, playas, and floodplains.
- The water requirements of the proposed project and the source(s) of that water.
- An analysis demonstrating that water of sufficient quantity and quality is available from identified source(s) for the life of the project.
- An analysis of potential project-related impacts on water quality and quantity needed for beneficial uses, reserved water rights, existing groundwater users, or habitat management within or down gradient of the groundwater basin within which the project would be constructed.
- The above analyses shall be in the form of a numerical groundwater model. The model extent shall encompass the groundwater basin within which the project would be constructed, and any groundwater-dependent resources within or down gradient of that basin.

The primary product of the Water Supply Assessment shall be a baseline water budget, which shall be established based on the best-available data and hydrologic methods for the identified basin(s). This water budget shall classify and describe all water inflow and outflow to the identified basin(s) or system using best-available science and the following basic hydrologic formula or a derivation:

$$P - R - E - T - G = \Delta S$$

where P is precipitation and all other water inflow or return flow, R is surface runoff or outflow, E is evaporation, T is transpiration, G is groundwater outflow (including consumptive component of existing pumping), and ΔS is the change in storage. The volumes in this calculation shall be in units of either acre-feet per year or gallons per

year. The water budget shall quantify the existing perennial yield of the basin(s). Perennial yield is defined arithmetically as that amount such that

$$P - R - E - T - G \geq 0$$

Water use by groundwater-dependent resources is implicitly included in the definition of perennial yield. For example, in many basins the transpiration component (T) includes water use by groundwater-dependent vegetation. Similarly, groundwater outflow (G) includes discharge to streams, springs, seeps, and wetlands. If one or more budget components is altered, then one or more of the remaining components must change for the hydrologic balance to be maintained. For example, an increase in the consumptive component of groundwater pumping can lower the water table and reduce transpiration by groundwater-dependent vegetation. The groundwater that had been utilized by the groundwater-dependent vegetation would then be considered "captured" by groundwater pumping. Similarly, increased groundwater consumption can capture groundwater that discharges to streams, springs, seeps, wetlands and playas. These changes can occur slowly over time, and may require years or decades before the budget components are fully adjusted. Accordingly, the water/groundwater supply assessment requires that the best-available data and hydrologic methods be employed to quantify these budgets, and that groundwater consumption effects on groundwater-dependent ecosystems be identified and addressed.

The Water Supply Assessment shall also address:

- Estimates of the total cone of depression considering cumulative drawdown from all potential pumping in the basin(s), including the project, for the life of the project through the decommissioning phase
- Potential to cause subsidence and loss of aquifer storage capacity due to groundwater pumping
- Potential to cause injury to other water rights, water uses, and land owners
- Changes in water quality and quantity that affect other beneficial uses
- Effects on groundwater dependent vegetation and groundwater discharge to surface water resources such as streams, springs, seeps, wetlands, and playas that could impact biological resources, habitat, or are culturally important to Native Americans
- Additional field work that may be required, such as an aquifer test, to evaluate site specific project pumping impacts and if necessary, establish trigger points that can be used for a Groundwater Water Monitoring and Mitigation Plan
- The mitigation measures required, if there are significant or potentially significant impacts on water resources include but are not limited to, the use of specific

technologies, management practices, retirement of active water rights, development of a recycled water supply, or water imports

LUPA-SW-24: A Groundwater Monitoring and Reporting Plan, and Mitigation Action Plan shall be prepared to verify the Water Supply Assessment and adaptively manage water use as part of project operations. This plan shall be approved by BLM, in coordination with USFWS, CDFW, and other agencies as appropriate, prior to the development, extraction, injection, or consumptive use of any water resource. The quality and quantity of all surface water and groundwater used for the project shall be monitored and reported using this plan. Groundwater monitoring includes measuring the effects of a project's groundwater extraction on groundwater surface elevations, groundwater flow paths, changes to groundwater-dependent vegetation, and of aquifer recovery after project decommissioning. Surface water monitoring, if applicable, shall monitor for changes in the flows, water volumes, channel characteristics, and water quality as a result of a project's surface water use. Monitoring frequency and geographic scope and reporting frequency shall be decided on a project and site-specific basis and in coordination with the appropriate agencies that manage the water and land resources of the region. The geographic scope may include at the very least, all basins/sub-basins that potentially receive inflow from the basin where the proposed project may be sited, and all basins/sub-basins that may potentially contribute inflow to the basin where the proposed project is located. The plan shall also detail any mitigation measures that may be required as a result of the project. This plan and all monitoring results shall be made available to BLM. BLM will make the plan and results available to USFWS, CDFW, and other applicable agencies.

LUPA-SW-25: Where groundwater extraction, in conjunction with other cumulative impacts in the basin, has potential to exceed the basin's perennial yield or to impact water resources, one or more "trigger points," or specified groundwater elevations in specific wells or surface water bodies, shall be established by BLM. If the groundwater elevation at the designated monitoring wells falls below the trigger point(s)(or exceeds the trigger pumping rate), additional mitigation measures, potentially including cessation of pumping, will be imposed.

LUPA-SW-26: Groundwater pumping mitigation shall be imposed if groundwater monitoring data indicate impacts on water-dependent resources that exceed those anticipated and otherwise mitigated for in the NEPA analysis and ROD, even if the basin's perennial yield is not exceeded. Water-dependent resources include riparian or phreatophytic vegetation, springs, seeps, streams, and other approved domestic or industrial uses of groundwater. Mitigation measures may include changes to pumping rates, volume, or timing of water withdrawals; coordinating and scheduling groundwater pumping activities in conjunction with other users in the basin; acquisition of project water

from outside the basin; and/or replenishing the groundwater resource over a reasonably short timeframe. For permitted activities, permittees may also be required to contribute funds to basin-wide groundwater monitoring networks in basins such as those encompassed by the East Riverside DFA or in the Calvada Springs/South Pahrump Valley area, and to cooperate in the compilation and analysis of groundwater data.

LUPA-SW-27: Water-conservation measures shall be required in basins where current groundwater demand is high and has the future potential to rise above the estimated perennial yield (e.g., Pahrump Valley). These measures may include the use of specific technology, management practices, or both. A detailed discussion and analysis of the effectiveness of mitigation measures must be included. Application of these measures shall be detailed in the Groundwater Water Monitoring and Mitigation Plan.

LUPA-SW-28: Groundwater extractions from adjudicated basins, such as the Mojave River Basin, may be subject to additional restrictions imposed by the designated authority; examples include the Mojave Water Agency and San Bernardino County (see County Ordinance 3872). Where provisions of the adjudication allow for acquisition of water rights, project developers could be required to retire water rights at least equal in volume to those necessary for project operation or propose an alternative offset based on the conditions unique to the adjudicated basin.

LUPA-SW-29: Groundwater pumping mitigation may be imposed if monitoring data indicate impacts on groundwater or groundwater-dependent habitats outside the DRECP area, including those across the border in Nevada. See **LUPA-SW-26** for potential mitigation measures.

LUPA-SW-30: Activities shall comply with local requirements for any long term or short term domestic water use and wastewater treatment.

LUPA-SW-31: The siting, construction, operation, maintenance, remediation, and abandonment of all wells shall conform to specifications contained in the California Department of Water Resources Bulletins #74-81 and #74-90 and their updates.

LUPA-SW-32: Colorado River hydrologic basin - The concepts, principles and general methodology used in the Colorado River Accounting Surface Method, as defined in U.S. Geological Survey Scientific Investigations Report 2008-5113 (USGS 2009), and existing and future updates or a similar methodology, are considered the best available data for assessing activity/project related ground water impacts in the Colorado River hydrologic basin. The best available data and methodology shall be used to determine whether activity/project-related pumping would result in the extracted water being replaced by water drawn from the Colorado River. If activity/project-related groundwater pumping results in the static groundwater level at the well being near (within 1 foot), equal to, or

below the Accounting Surface in a basin hydrologically connected to the Colorado River, that consumption shall be considered subject to the Law of the River (Colorado River Compact of 1922 and amendments). In such circumstances, BLM shall require the applicant to offset or otherwise mitigate the volume of water causing drawdown below the Accounting Surface. Details of such mitigation measures and the right to the use of water shall be described in the Groundwater Water Monitoring and Mitigation Plan.

Soil, Water, and Water-Dependent Resources Restricted to Specific Areas on BLM Lands

LUPA-SW-33: Stipulations for groundwater development in the proximity of Devils Hole: Any development scenario for an activity within 25 miles of Devils Hole shall include a plan to achieve *zero-net* or *net-reduced* groundwater pumping to reduce the risk of adversely affecting senior federal reserved water rights, the designated critical habitat of the endangered Devils Hole pupfish, and the free-flowing requirements of the Wild and Scenic Amargosa River. This plan will require operators to acquire one or more minimization water rights (MWRs) in the over-appropriated, over-pumped, and hydraulically connected Amargosa Desert Hydrographic Basin in Nevada. The MWR(s) shall be: (1) an amount equal (at minimum) to that which is needed for construction and operations; (2) historically fully utilized, preferably for agricultural use; and (3) senior and closer to Devils Hole than the proposed point of diversion.

LUPA-SW-34: Stipulations for groundwater development in the Calvada Springs/South Pahrump Valley area: Activities in this area shall be required to acquire one or more MWRs in the Pahrump Valley Hydrographic Basin in Nevada. The acquired MWR(s) must: (1) be at least equal to the amount proposed to be required and actually used for project construction and operations; and (2) be fully utilized for at least the prior ten years.

LUPA-SW-35: Stipulations for activities in the vicinity of Death Valley National Park, Joshua Tree National Park, or Mojave National Preserve: The NEPA for activities involving groundwater extraction that are in the vicinity of Death Valley National Park, Joshua Tree National Park, or the Mojave National Preserve shall analyze and address any potential impacts of groundwater extraction on Death Valley National Park, Joshua Tree National Park, or Mojave National Preserve. BLM will consult with the National Park Service on this process. The analysis or analyses shall include:

- Potential impacts on the water balances of groundwater basins within these parks and preserves
- A map identifying all potentially impacted surface water resources in the vicinity of the project, including a narrative discussion of the delineation methods used to discern those surface waters in the field

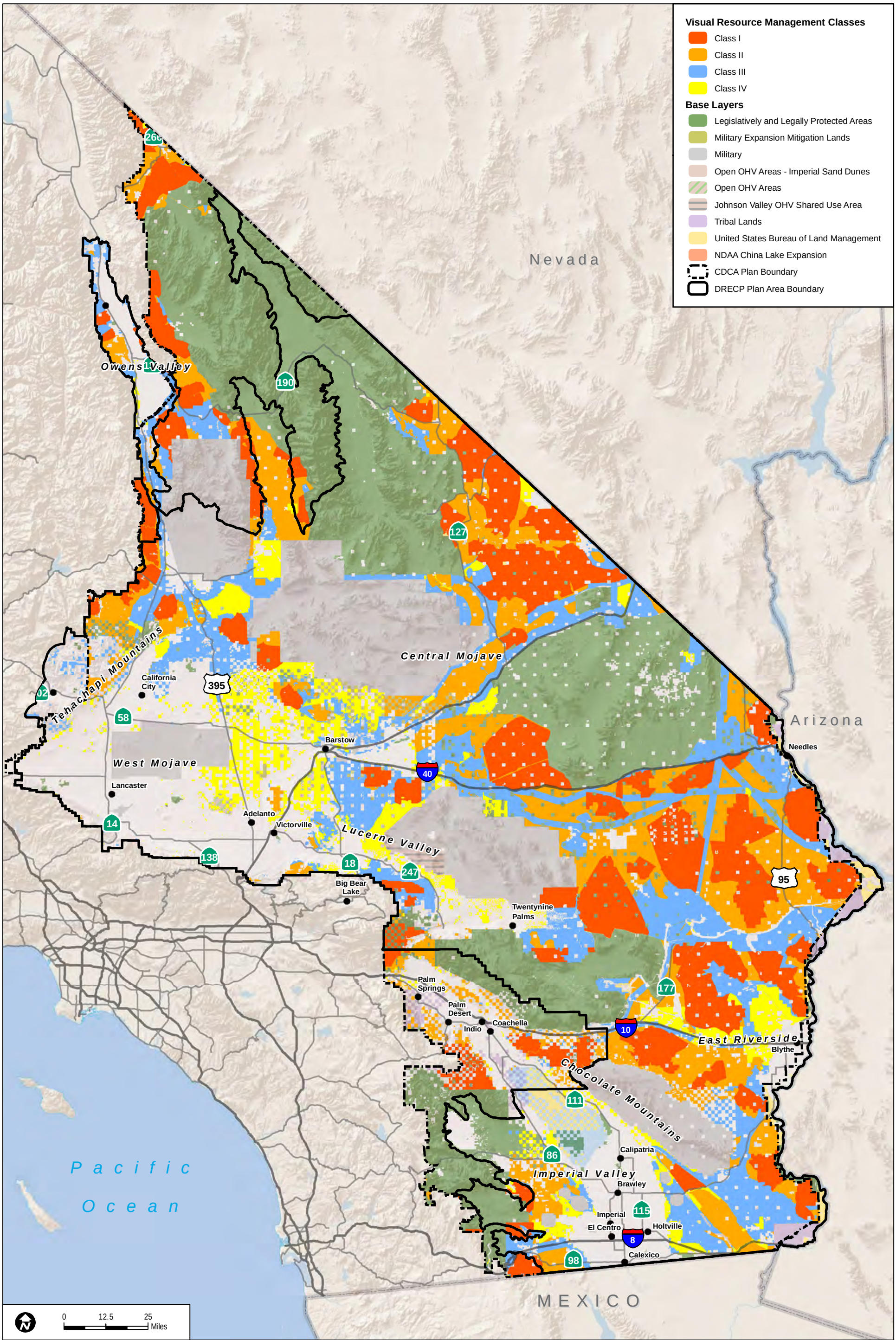
- Any project-related modifications to surface water resources, both temporary and permanent
- Analysis of any potential impacts on perennial streams, intermittent streams, and ephemeral drainages that could negatively impact natural riparian buffers
- Impacts of any project proposed truncation, realignment, channelization, lining, or filling of surface water resources that could change drainage patterns, reduce available riparian habitat, decrease water storage capacity, or increase water flow velocity or sediment deposition, in particular where stormwater diverted around or through the project site is returned to natural drainage systems downslope of the project
- Any potential indirect project-related causes of hydrologic changes that could exacerbate flooding, erosion, scouring, or sedimentation in stream channels
- Alternatives and mitigation measures proposed to reduce or eliminate such impacts

II.4.2.1.12 Visual Resources Management

LUPA-VRM-1: Manage Visual Resources in accordance with the VRM classes shown on Figure 9.

LUPA-VRM-2: Ensure that activities within each of the VRM Class polygons meets the VRM objectives described above, as measured through a visual contrast rating process.

LUPA-VRM-3: Ensure that transmission facilities are designed and located to meet the VRM Class objectives for the area in which they are located. New transmission lines routed through designated corridors where they do not meet VRM Class Objectives will require RMP amendments to establish a conforming VRM Objective. All reasonable effort must be made to reduce visual contrast of these facilities in order to meet the VRM Class before pursing RMP amendments. This includes changes in routing, using lattice towers (vs. monopole), color treating facilities using an approved color from the BLM Environmental Color Chart CC-001 (dated June 2008, as updated on April 2014, or the most recent version) (vs. galvanized) on towers and support facilities, and employing other BMPs to reduce contrast. Such efforts will be retained even if an RMP amendment is determined to be needed. Visual Resource BMPs that reduce adverse visual contrast will be applied in VRM Class conforming situations. For a reference of BMPs for reducing visual impacts see the "*Best Management Practices for Reducing Visual Impacts of Renewable Energy Facilities on BLM-Administered Lands",* available at http://www.blm.gov/style/medialib/blm/wo/MINERALS_REALTY_AND_RESOURCE_PROTECTION_/energy/renewable_references.Par.1568.File.dat/RenewableEnergyVisualImpacts_BMPs.pdf, or the most recent version of the document or BMPs for VRM, as determined by BLM.



Sources: ESRI (2016); CEC (2013); BLM (2016); CDFW (2013); USFWS (2013)

FIGURE 9

DRECP LUPA Visual Resource Management Classes

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II.4.2.1.13 Wilderness Characteristics

LUPA-WC-1: Complete an inventory of areas for proposed activities that may impact wilderness characteristics if an updated wilderness characteristics inventory is not available.

LUPA-WC-2: Employ avoidance measures as described under DFAs and approved transmission corridors.

LUPA-WC-3: For inventoried lands found to have wilderness characteristics but not managed for those characteristics compensatory mitigation is required if wilderness characteristics are directly impacted. The compensation will be:

- 2:1 ratio for impacts from any activities that impact those wilderness characteristics, except in DFAs and transmission corridors
- 1:1 ratio for impact from any activities that impact the wilderness characteristics in DFAs and transmission corridors

Wilderness compensatory mitigation may be accomplished through acquisition and donation, by willing landowners, to the federal government of (a) wilderness inholdings, (b) wilderness edge holdings that have inventoried wilderness characteristics, or (c) other areas within the LUPA Decision Area that are managed to protect wilderness characteristics. Restoration of impaired wilderness characteristics in Wilderness, Wilderness Study Area, and lands managed to protect wilderness characteristics could be substituted for acquisition.

LUPA-WC-4: For areas identified to be managed to protect wilderness characteristics, identified in Figure 7, the following CMAs are required:

- Include a no surface occupancy stipulation for any leasable minerals with no exceptions, waivers, or modifications.
- Exclude these areas from land use authorizations, including transmission.
- Close areas to construction of new roads and routes. Vehicles will continue to be permitted on existing designated routes.
- Close areas to mineral material sales.
- Prohibit commercial or personal-use permits for extraction of materials (e. g. no wood-cutting permits).
- Manage the area as VRM II.

- Require that new structures and facilities are related to the protection or enhancement of wilderness characteristics or are necessary for the management of uses allowed under the land use plan.
- Make lands unavailable for disposal from federal ownership.

LUPA-WC-5: Manage the following Wilderness Inventory Units to protect wilderness characteristics:

- 132A-2
- 132A-3
- 132B
- 136
- 136-1
- 145-1-1
- 145-2-1
- 145-3-1
- 149-2
- 150-2-2
- 158-1
- 158-2
- 159
- 159-1
- 159A-1
- 160
- 160-1
- 160B-2A
- 160B-2B
- 160B-2F
- 160B-3A
- 160B-4A
- 160B-3B
- 160B-4B
- 170-1
- 170-3
- 193-1
- 206-1-1
- 206-1-2
- 206-1-3
- 206-1-4
- 222-2-1
- 251-1
- 251-1-1
- 251-1-2
- 251-2-2
- 251-3
- 251A
- 252
- 259-1
- 259-2
- 266-1
- 276-1
- 276-3
- 277
- 277A-1
- 278
- 280
- 294-1
- 294-2
- 295
- 295A
- 304-2
- 305-1
- 305-2
- 307-1
- 307-2

- 307-1-1
- 307-1-2
- 307-1-3
- 312-1
- 312-2
- 312-3
- 322-1
- 325-1
- 325-2
- 325-3
- 325-4
- 325-5
- 325-7
- 325-8
- 315-14
- 325-17
- 329
- 352-2
- 352A
- 352A-1
- 354
- 355-1
- 355-2
- 355-3

II.4.2.2 Transmission

II.4.2.2.1 Biological Resources

Transmission activities throughout the DRECP LUPA will implement all the applicable CMAs, in addition to the following:

LUPA-TRANS-BIO-1: Where feasible and appropriate for resource protection, site transmission activities along roads or other previously disturbed areas to minimize new surface disturbance, reduce perching opportunities for the Common Raven, and minimize collision risks for birds and bats.

LUPA-TRANS-BIO-2: Flight diverters will be installed on all transmission activities spanning or within 1,000 feet of stream and wash channels, canals, ponds, and any other natural or artificial body of water. The type of flight diverter selected will be subject to approval by BLM, in coordination with USFWS and CDFW as appropriate, and will be based on the best available scientific and commercial data regarding the prevention of bird collisions with transmission and guy wires.

LUPA-TRANS-BIO-3: When siting transmission activities, the alignment should avoid, to the maximum extent practicable, being located across canyons or on ridgelines. Site and design sufficient distance between transmission lines to prevent electrocution of condors.

LUPA-TRANS-BIO-4: Siting of transmission activities will be prioritized within designated utility corridors, where possible, and designed to avoid, where possible, and otherwise minimize and offset impacts to sand transport processes in Aeolian corridors, rare vegetation alliances and Focus and BLM Special Status Species. Transmission substations

will be sited to avoid Aeolian corridors, rare vegetation alliances, and sand-dependent Focus and BLM Special Status Species habitats.

II.4.2.2.2 Cultural Resources and Tribal Interests

LUPA-TRANS-CUL-1: For transmission (and renewable energy) activities, require the applicant to pay all appropriate costs associated with the following processes, through the appropriate BLM funding mechanism:

- All appropriate costs associated with the BLM's analysis of the DRECP geodatabase and other sources for cultural resources sensitivity.
- All appropriate costs associated with preliminary sensitivity analysis.
- All appropriate costs associated with the Section 106 process including the identification and defining of cultural resources. These costs may also include logistical, travel, and other support costs incurred by tribes in the consultation process.
- All appropriate costs associated with updating the DRECP cultural resources geodatabase with project specific results.

LUPA-TRANS-CUL-2: Consistent and in compliance with the NHPA Programmatic Agreement, signed February 5, 2016, or the most up to date signed version – for transmission (and renewable energy) activities, a compensatory mitigation fee will be required within the LUPA Decision Area to address cumulative and some indirect adverse effects to historic properties. The mitigation fee will be calculated in a manner that is commensurate to the size and regional impacts of the project. Refer to the NHPA Programmatic Agreement for details regarding the mitigation fee.

LUPA-TRANS-CUL-3: For transmission (and renewable energy) activities, the management fee rate will be determined through the NHPA programmatic Section 106 consultation process that will be completed as part of the DRECP land use plan amendment.

LUPA-TRANS-CUL-4: For transmission (and renewable energy) activities, demonstrate that results of cultural resources sensitivity, based on the DRECP geodatabase, and other sources, are used as part of the initial planning pre-application process and to select of specific footprints for further consideration.

LUPA-TRANS-CUL-5: For transmission (and renewable energy) activities, provide a statistically significant sample survey as part of the pre-application process, unless the BLM determines the DRECP geodatabase and other sources are adequate to assess cultural resources sensitivity of specific footprints.

LUPA-TRANS-CUL-6: For transmission (and renewable energy) activities, provide justification in the application why the project considerations merit moving forward if the specific footprint lies within an area identified or forecast as sensitive for cultural resources by the BLM.

LUPA-TRANS-CUL-7: For transmission (and renewable energy) activities, complete the NHPA Section 106 Process as specified in 36 CFR Part 800, or via an alternate procedure, allowed for under 36 CFR Part 800.14 prior to issuing a ROD or ROW grant on any utility-scale renewable energy or transmission project. For utility-scale solar energy developments, the BLM may follow the Solar Programmatic Agreement.

II.4.2.2.3 Wilderness Characteristics

LUPA-TRANS-WC-1: Allow transmission activities in areas inventoried and identified as lands with wilderness characteristics.

LUPA-TRANS-WC-2: For inventoried lands found to have wilderness characteristics impacted by transmission activities, compensatory mitigation is required at a 1:1 ratio if wilderness characteristics are directly impacted. This may be accomplished through acquisition and donation, from willing landowners, to the federal government of (a) wilderness inholdings, (b) wilderness edge holdings that have inventoried wilderness characteristics, or (c) other areas within the LUPA Decision Area that are managed to protect wilderness characteristics. Restoration of impaired wilderness characteristics in Wilderness, Wilderness Study Area, and lands managed to protect wilderness characteristics could be substituted for acquisition.

II.3.4.2.1.15 Compensation

The DRECP LUPA compensation requirements are designed to address the potential for residual temporal loss of resource values (e.g. species, vegetation types, cultural, ground disturbance, recreation, visual, etc.) from the time they are affected by implementation of approved activities until appropriate compensatory actions (species specific, cultural, ground disturbance, visual, etc.,) are put in place. The following CMAs are LUPA-wide and apply to compensation for all resources.

LUPA-COMP-1: For third party actions, compensation activities must be initiated or completed within 12 months from the time the resource impact occurs (e.g. ground disturbance, habitat removal, route obliteration, etc. for construction activities; wildlife mortality, visual impacts, etc. due to operations).

- BLM will determine, in the environmental analysis, the activity/project-level timing of the compensation (i.e. initiated, completed or a combination) based on the specific resources being impacted, and scope and content of the activity.

- A 6 month extension may be authorized, subject to approval by the authorizing officer, dependent on the resources impacted and compensation due diligence of the project developer.

LUPA-COMP-2: For BLM initiated activities, compensation activities will be initiated or completed within 12 months from the time the resource impact occurs (e.g. ground disturbance, habitat removal, route obliteration, etc. for construction activities; wildlife mortality, visual impacts, etc. due to operations), subject to federal budget appropriations.

- BLM will determine, in the environmental analysis, the activity/project-level timing of its compensation (i.e. initiated, completed or a combination) based on the specific resources being impacted, and scope and content of its activity.
    - The estimated costs and 12 month timing of required compensation will be built into the activity/project design and environmental analysis.

II.4.2.3 Ecological and Cultural Conservation

The following CMAs apply to all California Desert National Conservation Lands, ACECs, and Wildlife Allocations. All LUPA-wide CMAs also apply to these areas.

II.4.2.3.1 Biological Resources

The following CMAs will be implemented in the BLM Conservation Land Allocations (CDNCL, ACECs and Wildlife Allocations), in addition to the LUPA-BIO CMAs.

- The values, goals, objectives, and management actions established in the BLM special land allocation management plans (California Desert National Conservation Lands, ACEC and Wildlife Allocation) apply to land with BLM LUPA conservation designations, as described in Appendices A and B. The following [CONS-BIO] CMAs for California Desert National Conservation Lands, ACECs and Wildlife Allocations are in addition to LUPA-wide [LUPA-] CMAs.
- If a conflict between CONS-BIO and LUPA- CMAs arises, the most ecological/biological protective CMA, as determined by BLM, takes precedent and will be implemented.
- If a conflict among CONS-BIO CMAs arises, the most ecological/biological protective CMA, as determined by BLM, takes precedent and will be implemented.

Dune Vegetation Types, Aeolian Processes and Associated Species (DUNE)

North American Warm Desert Dune and Sand Flats

CONS-BIO-DUNE-1: All long-term structures will be setback 0.25 mile from Aeolian corridors and Mojave fringe-toed lizard suitable habitat.

CONS-BIO-DUNE-2: All activities will be sited and/or configured to maintain the spatial extent, habitat quality, and ecological function of Aeolian transport corridors unless related to maintenance of existing (at the time of the DRECP LUPA ROD) facilities/activities.

- Roads will not be paved, unless paving is needed to meet another resource objective and Aeolian processes can be preserved.
- Newly constructed roads and/or routes may be considered if they benefit minimization measures for natural, cultural and ecological resources of concern.

Plant Species (PLANT)

Plant Focus and BLM Special Status Species CMAs

CONS-BIO-PLANT-1: Occurrences of plant Focus and BLM Special Status Species, including in designated transmission corridors, will be avoided, to the maximum extent practicable (see "unavoidable impacts to resources" in the Glossary of Terms).

Individual Focus Species (IFS)

Desert Tortoise

CONS-BIO-IFS-1: All activities, except transmission, that will result in the long-term removal of habitat supporting an adult desert tortoise density (i.e., individuals 160mm or more) of more than 5 per square mile or more than 35 individuals total are prohibited. The number of desert tortoises on an activity site will be based on estimates derived from the protocol surveys described previously using the USFWS's pre-activity survey protocol.

CONS-BIO-IFS-2: All activities, except transmission, in desert tortoise TCAs or linkages, as identified in Appendix D, that will result in long-term removal of habitat supporting more than 5 adult individuals are prohibited. The number of desert tortoises on-site is based on estimates derived from the protocol surveys described previously using the USFWS's pre-activity survey protocol.

CONS-BIO-IFS-3: Ground disturbance caps as per Table 20 are reflected in the individual ACEC Special Unit Management Plans and maps in Appendix B**.** Refer to the California Desert National Conservation Lands, Section II.2.1, and ACECs, Section II.2.2, for a

description of how the BLM Conservation Lands Ground Disturbance Cap will be applied, including measured, activity approval and the disturbance mitigation strategy. The same implementation methodology is repeated in CMAs NLCS-DIST-2 and ACEC-DIST-2. Table 20 provides the specific desert tortoise conservation area and linkage ground disturbance caps in the BLM LUPA conservation designations.

Table 20
Desert Tortoise Conservation Area and Linkage Ground Disturbance Caps in the BLM LUPA Conservation Designations

Applicable Areas[1]	Disturbance Cap[2]
Tortoise Conservation Areas	
Desert Tortoise Research Natural Area	0.1%
Fremont-Kramer Area of Critical Environmental Concern and Critical Habitat Unit	0.5%
Superior-Cronese Area of Critical Environmental Concern and Critical Habitat Unit	0.5%
Ord-Rodman Area of Critical Environmental Concern and Critical Habitat Unit	0.5%
Pinto Mountains Area of Critical Environmental Concern and Critical Habitat Unit	0.5%
Chuckwalla Area of Critical Environmental Concern and Critical Habitat Unit	0.5%
Chemehuevi Desert Area of Critical Environmental Concern and Critical Habitat Unit	0.5%
Piute Valley Area of Critical Environmental Concern and Critical Habitat Unit	0.5%
Shadow Valley Area of Critical Environmental Concern	0.5%
Ivanpah Valley Area of Critical Environmental Concern (Includes Critical Habitat on BLM Land)	0.1%
Desert Tortoise Linkages	
Ord-Rodman to Superior-Cronese to Mojave National Preserve	1%
Superior-Cronese to Mojave National Preserve to Shadow Valley to Death Valley National Park Linkage	1%
Joshua Tree National Park and Pinto Mountains Area of Critical Environmental Concern to Chemehuevi Linkage	1%
Death Valley National Park to Nevada Test Site	1%
Ivanpah Valley Linkage	0.1%
Chemehuevi to Chuckwalla Linkage	0.1%
Pinto Wash Linkage	0.1%
Ord-Rodman to Joshua Tree Linkage	0.5%
Fremont Kramer to Ord-Rodman Linkage	0.5%
High-value Colorado Desert Habitat	1%

[1] Tortoise Conservation Areas and Linkages are shown in Appendix D.

Gila Woodpecker

CONS-BIO-IFS-4: All activities will be avoided in the vicinity of Corn Springs and Milpitas Wash, except as administratively necessary or necessary to support existing facilities, as

determined by BLM, in order to protect previously occupied and future restored suitable nesting habitat for the Gila woodpecker.

Golden Eagle

CONS-BIO-IFS-5: The cumulative loss of foraging habitat within a 4 mile radius around active or alternative golden eagle nests will be limited to less than 10% in BLM LUPA conservation designations.

Desert Bighorn Sheep

The Desert Bighorn Sheep CMAs will be implemented to the extent feasible and allowable under existing permits, leases, and allotment plans.

CONS-BIO-IFS-6: BLM designated routes and trails will be appropriately seasonally signed to limit use to the routes and trails, if necessary to reduce impacts from recreational use to lambing and rearing.

CONS-BIO-IFS-7: For non-BLM Lessee's, domestic livestock will not be allowed to be trailed (transported on foot [herded]) through known or likely to be occupied bighorn sheep habitat, to minimize exposure and disease transmission to bighorn sheep. Vehicular movement of livestock will be allowable. Livestock will not be allowed to exit the vehicle transport, except in emergencies, while on BLM- administered land.

For BLM Lessee's, consistent with existing (at time of DRECP LUPA ROD) leases and allotment plans, domestic livestock will be controlled and moved to minimize exposure and disease transmission to bighorn sheep, using techniques including but not limited to fencing with adequate buffers, vehicle transport, and timing. Vehicular movement of livestock will be allowable. Livestock will remain in the vehicle transport, except in emergencies, while on BLM-administered land, unless at the destination.

For BLM grazing Lessee's, trailing of domestic sheep between discontiguous allotments, may be permittable if done in a manner, including timing, which prevents interaction with bighorn sheep and avoids disease transmission from domestic sheep to bighorn sheep.

At the time of grazing allotment lease and/or allotment plan renewal, a measure to eliminate trailing within allotments (movement of domestic livestock on foot or herding) through known or likely to be occupied bighorn sheep habitat will be considered and analyzed using the best available science on domestic livestock disease transmission to bighorn sheep.

CONS-BIO-IFS-8: To reduce the impact on bighorn sheep from domestic livestock in grazing allotments, BLM will:

- Accept voluntarily retirement of allotments
- Accept donation of allotments as one component of mitigation
- Require specific terms and conditions in renewed grazing permits, as needed
- Consider converting domestic sheep allotments to cattle allotments
- Consistent with existing or renewed grazing allotment plans, remove or alter livestock fencing to enhance bighorn sheep movements.

Mojave Ground Squirrel

CONS-BIO-IFS-9: Long-term vegetation removal within key population centers and linkages from activities, requiring an EA or EIS, that may impact the Mohave ground squirrel is prohibited, unless the activity is compatible with Mohave ground squirrel conservation and management. Compatible land uses are those described in the BLM LUPA for ACECs where Mohave ground squirrel occur.

CONS-BIO-IFS-10: To the maximum extent practicable (see Glossary of Terms) and/or as allowed under existing permits, establish and maintain fencing to exclude cattle, horses, sheep, and other potential grazers from areas that are protected and managed for Mohave ground squirrel and from vegetation stands that are important foraging habitat, including winterfat and spiny hopsage.

II.4.2.3.2 Comprehensive Trails and Travel Management

CONS-CTTM-1: Refer to the individual California Desert National Conservation Lands and ACEC Special Unit Management Plans in Appendix A and B, respectively, for specific objectives, management actions and allowable uses. Manage roads/trails consistent with California Desert National Conservation Lands/ACEC goals and objectives and as designated in Trails and Travel Management Plans (TTMPs) or Resource Management Plans (RMPs).

II.4.2.3.3 Recreation and Visitor Services

CONS-REC-1: In California Desert National Conservation Lands and ACECs that overlap with SRMAs and ERMAs, manage in accordance with the Special Unit Management Plans for the SRMA/ERMA and the applicable ecological and cultural conservation unit. If there is a conflict between the California Desert National Conservation Lands or ACEC management and the SRMA/ERMA management, the BLM will apply the most protective management

(i.e., management that best supports natural and cultural resource conservation and limits impacts to the values for which the conservation unit was designated).

CONS-REC-2: Maintain targeted recreation activities, experiences and benefits as consistent with the protection of the values for which the ecological and cultural conservation unit was designated. Maintain, and where possible enhance, the recreation setting characteristics: physical components of remoteness, naturalness and facilities; social components of contact, group size and evidence of use; and operational components of access, visitor services and management controls.

CONS-REC-3: Design public access features (access roads, roadside stops, trailheads, interpretive sites, etc.) to support or enhance conservation values for California Desert National Conservation Land units and ACECs.

II.4.2.4 California Desert National Conservation Lands

The CMAs in this section apply to all California Desert National Conservation Lands identified under Public Law 111-11 in the CDCA. These CMAs only apply to the California Desert National Conservation Lands identified through the DRECP LUPA, and do not amend existing management for other components of NLCS, such as Wilderness Areas. Other areas, such as the management corridors for NSHTs, have their own CMAs. Where the NSHT Management Corridors overlap with California Desert National Conservation Lands identified through the DRECP, both sets of CMAs will apply, however, the NLCS CMAs will not apply in segments of the NSHT Corridors that do not overlap with the National Conservation Lands identified through the DRECP. Site-specific management is outlined in the ACEC Special Unit Management Plans in Appendix B.

All LUPA-wide (LUPA) and Ecological and Cultural Conservation Area (CONS) CMAs also apply to the California Desert National Conservation Lands.

II.4.2.4.1 Comprehensive Trails and Travel Management

NLCS-CTTM-1: Comprehensive Trails and Travel Management – Trails and Travel Management in California Desert National Conservation Lands will be in accordance with the applicable Transportation and Travel Management Plan. Future Transportation and Travel Management Plans for National Conservation Lands would be developed in accordance to the appropriate BLM guidance and policy. The California Desert National Conservation Land designation will be addressed in those subsequent plans with an emphasis on routes that provide for the conservation, protection, and restoration, as well as recreational use and enjoyment of the California Desert National Conservation Lands that is compatible with the values for which the areas were designated.

II.4.2.4.2 Cultural Resources and Tribal Interests

NLCS-CUL-1: Any adverse effects to historic properties resulting from allowable uses will be addressed through the Section 106 process of the National Historic Preservation Act and the implementing regulations at 36 CFR Part 800. Resolution of adverse effects will in part be addressed via alternative mitigation that includes regional synthesis and interpretation of existing archaeological data in addition to mitigation measures determined through the Section 106 consultation process.

II.4.2.4.3 Ground Disturbance Caps

NLCS-DIST-1: Ground Disturbance Caps – Development in California Desert National Conservation Lands are limited by the 1% ground disturbance cap which is the total ground disturbance (existing [past and present] plus future), or to the level allowed by collocated ACEC(s) with its smaller ground disturbance cap units, whichever is more restrictive. Refer to Appendix B for the ACEC Special Unit Management Plans. The ground disturbance caps will be used, managed and implemented following the methodology in the California Desert National Conservation Lands and ACEC land allocation sections, and repeated in, **NLCS-DIST-2** and **ACEC-DIST-2**.

NLCS-DIST-2: Ground Disturbance Cap Management and Implementation

Specifically, the ground disturbance caps would be implemented as a limitation and objective using the following process:

- **Limitation:** If the ground disturbance condition of the California Desert National Conservation Lands and/or ACEC unit is below the designated ground disturbance cap (see calculation method), the ground disturbance cap is a limitation on ground-disturbing activities within the California Desert National Conservation Lands and/or ACEC, and precludes approval of future discretionary ground disturbing activities (see exceptions below) above the cap.
- **Objective, triggering disturbance mitigation:** If the ground disturbance condition of the California Desert National Conservation Lands and/or ACEC is at or above its designated cap, the cap functions as an objective, triggering the specific ground disturbance mitigation requirement. Ground disturbance mitigation is unique to ground disturbance cap implementation and a discrete form of compensatory mitigation, separate from other required mitigation in the DRECP LUPA (see Glossary of Terms). The ground disturbance mitigation requirement remains in effect for all (see exceptions below) activities until which time the California Desert National Conservation Lands and/or ACEC drops below the cap, at which time the cap becomes a limitation and the ground disturbance mitigation is no longer a

requirement. If ground disturbance mitigation opportunities do not exist in a unit (see below for "unit" of measurement), ground disturbing activities (see exceptions below) will not be allowed in that unit until which time opportunities for ground disturbance mitigation in the unit become available (see types and forms of ground disturbance mitigation below) or the unit recovers and drops below the cap.

- Actions necessary to control the immediate impacts of an emergency that are urgently needed to reduce the risk to life, property, or important natural, cultural, or historic resources, in accordance with 43 Code of Federal Regulations (CFR) 46.150, are an exception to the ground disturbance cap limitation, objective and ground disturbance mitigation requirements. Ground disturbance from emergency actions will count in the ground disturbance calculation for other activities, and also be available for ground disturbance mitigation opportunities and restoration, as appropriate.

Calculating ground disturbance: Ground disturbance will be calculated on BLM managed land at the time of an individual proposal, by BLM for a BLM initiated action or by a third party for an activity needing BLM approval or authorization, for analysis in the activity-specific National Environmental Policy Act (NEPA) document. Once BLM approves/accepts or conducts a calculation for a ACEC, that calculation is considered the baseline of past and present disturbance and is valid for 12 months, and can be used by other proposed activities in the same unit. Ground disturbances, that meet the criteria below, would be added into the calculation for the 12 month period without having to revisit the entire calculation. After a 12 month period has passed and a proposed action triggers the disturbance calculation, BLM will examine the existing ground disturbance calculation to determine: 1) if the calculation is still reliable, in which case add in any additional disturbance that has occurred since that calculation; or 2) if the disturbance must be recalculated in its entirety. Once completed for a specific activity, the ground disturbance calculation may be used throughout the activity's environmental analysis. However, the BLM may recalculate the affected unit(s) or portions of the unit(s) if it determines such recalculation is necessary for the BLM's environmental analysis.

Unit of measurement: When calculating the ground disturbance, it is necessary to identify the appropriate unit level at which the disturbance will be calculated. For ground disturbing activities that occur within California Desert National Conservation Lands, the disturbance calculation will be based on the California Desert National Conservation Lands, ACEC unit boundary, or the boundary of the disturbance cap area(s), whichever area is smaller. If there is overlap between California Desert National Conservation Lands and an ACEC, the calculation will take place based on the smallest unit. If an activity/project overlaps two or more smaller units, the cap will be calculated, individually, for all affected units.

Ground disturbance includes: The calculation shall include existing ground disturbance in addition to the estimated ground disturbance from the proposed activity (future) determined at the time of the individual proposal:

- Authorized/approved ground disturbing activities – built and not yet built
- BLM identified routes – all routes, trails, etc., authorized and unauthorized, identified in the Ground Transportation Linear Feature (GTLF) and/or other BLM route network database (i.e., BLM local databases that contain the best available data on routes and trails, replacement for GTLF, etc.), following applicable BLM standards and policy for identification of routes (authorized and unauthorized)
- Assumptions may be used to identify the percentage/degree/area/etc. of ground disturbance for a specific authorized/approved activity or activity-type based on:
    - Activity-specific environmental analysis, such as NEPA or ESA Section 7 Biological Assessment
    - Known and documented patterns of ground disturbance
    - Other documented site-specific factors that limit or play a role in ground disturbance, such as topography, geography, hydrology (e.g. desert washes obliterating authorized routes on a regular basis), historical and predicted patterns of use
- Any unauthorized disturbance that can be seen at a 1:10,000 scale using the best available aerial imagery
- Ground disturbance from wildfire, animals, or other disturbances that can be seen at a 1:10,000 scale using the best available aerial imagery
- Historic Route 66 maintenance - potential ground disturbance estimates:
    - As part of the ground disturbance calculation, the potential disturbance associated with estimated operations related to the maintenance of Historic Route 66 will automatically be included in the ground disturbance calculation as existing ground disturbance for the units specified below, until which time these estimated acres are no longer necessary due to approved operations:
        - South Amboy-Mojave California Desert National Conservation Lands 221 acres
        - Bristol Mountains ACEC 92 acres
        - Chemehuevi ACEC 43 acres
        - Pisgah ACEC 86 acres

- The estimated ground disturbance acreage includes disturbance associated with potential access to the locations if no current access exists.
- The estimated ground disturbance acres for maintenance of Historic Route 66 in the before mentioned conservation units is not approval of these activities by BLM. Activities associated with the management and maintenance of Historic Route 66 on BLM administered land will follow all applicable laws, regulations and policies.

Exceptions to the disturbance calculation:

- Actions necessary to control the immediate impacts of an emergency that are urgently needed to reduce the risk to life, property, or important natural, cultural, or historic resources, in accordance with 43 CFR 46.150, will not be required to conduct a disturbance calculation. If the actions are ground disturbing, that disturbance will count towards the disturbance cap when next calculated for non-emergency activities.
- Actions that are authorized under a Department of Interior (DOI) or BLM NEPA Categorical Exclusion will not be required to conduct a disturbance calculation; however, these actions are not exempt from the disturbance mitigation requirement if a unit is at or above its cap. Although the BLM is not required to calculate the disturbance cap before approving an activity under a Categorical Exclusion, if the BLM knows an area is at or exceeding the cap, the disturbance mitigation requirements would apply to that activity.
- BLM authorized/approved research or restoration activities that are designed or intended to promote and enhance the nationally significant landscape values for which the California Desert National Conservation Land was designated.
- Actions that are entirely within the footprint of an existing authorized/approved site of ground disturbance that is within the calculation above.
- Livestock grazing permit renewals (however, water developments or other range improvements requiring an Environmental Assessment or Environmental Impact Statement would be subject to the disturbance calculation and any mitigation requirements).

Ground disturbance mitigation: The purpose of ground disturbance mitigation (disturbance mitigation) is to allow actions to occur in California Desert National Conservation Lands and/or ACEC that is at or above its designated disturbance cap(s), while at the same time providing a restoration mechanism that will, over time, improve the condition of the unit(s) and take them below their cap. Disturbance mitigation is compensatory. Disturbance mitigation is unique to ground disturbance cap implementation

and a discrete form of compensatory mitigation, separate from other required mitigation in the DRECP (see Glossary of Terms).

Disturbance mitigation may only be used for ground disturbance that is otherwise allowed by the LUPA and consistent with the purposes for which the California Desert National Conservation Lands and/or ACEC was designated. Areas used for disturbance mitigation are still considered disturbed until which time they meet the "Ground Disturbance Recovery" criteria in the description below.

Unit for implementing disturbance mitigation: The appropriate unit level for implementing disturbance mitigation is the same as that used for calculating ground disturbance. For ground disturbing activities that occur within California Desert National Conservation Lands, the disturbance mitigation will be required within the California Desert National Conservation Lands, ACEC boundary, or the boundary of the disturbance cap area(s), whichever area is smaller. If there is overlap between California Desert National Conservation Lands and an ACEC, the disturbance mitigation will take place in the smallest unit. If an activity/project overlaps two or more smaller units, disturbance mitigation will be required for all units that are at or over their specified disturbance cap.

No disturbance mitigation required: If the calculated ground disturbance for the unit(s) is under the cap:

- No disturbance mitigation required; use activity design features to minimize new ground disturbance and help stay below cap.

Disturbance mitigation required: If the calculated ground disturbance is at or above the unit(s) cap, disturbance mitigation is required:

- Use activity design features to minimize new ground disturbance to the extent practicable.
- For the portion of the proposed activity that is located on land within an area previously disturbed by an authorized/approved action that has been terminated the required disturbance mitigation ratio is 1.5 (1½):1.
- For the portion of the proposed activity that is located on undisturbed land or land disturbed by unauthorized activities, the required disturbance mitigation ratio is 3:1.
- Although the BLM is not required to calculate the ground disturbance cap before approving/authorizing an activity under a Categorical Exclusion, if the BLM knows an area is at or exceeding the cap, the disturbance mitigation requirements would apply to that activity.

- In the rare circumstance where the BLM authorizes activities on areas restored (e.g., as disturbance or other forms of mitigation), the required disturbance mitigation ratio requirement is doubled, that is, 3:1 or 6:1, respectively.
- If disturbance mitigation opportunities do not exist in a unit, ground-disturbing activities (see exceptions below) will not be allowed in that unit until which time opportunities for disturbance mitigation in the unit become available (see types and forms of disturbance mitigation below) or the unit recovers and drops below the cap.

Exceptions to the disturbance mitigation requirement:

- Any portion of the proposed activity that is located on land previously disturbed by an existing, valid authorized/approved action.
- Livestock grazing permit renewals (however, water developments or other range improvements requiring an Environmental Assessment or Environmental Impact Statement would be subject to the disturbance calculation and any mitigation requirements).
- Land use authorization assignments and renewals with no change in use.
- BLM authorized/approved activities that are designed and implemented to reduce existing ground disturbance, such as ecological, cultural, or habitat restoration or enhancement activities.
- Non-discretionary actions, where BLM has no authority to require compensatory mitigation.

Types and forms of disturbance mitigation:

- Restoration of previously disturbed BLM lands within the boundary of the specific California Desert National Conservation Lands and/or ACEC unit(s) being impacted.
- Acquisition of undisturbed lands within the boundary of the specific California Desert National Conservation Lands and/or ACEC unit being impacted.
- Ground disturbance mitigation can be "nested" (i.e., combined) with other resource mitigation requirements, when appropriate. For example, a parcel restored for desert tortoise habitat mitigation may also satisfy the disturbance mitigation requirement if the parcel is within the appropriate unit of California Desert National Conservation Lands, ACEC boundary, or smaller disturbance cap unit.

Ground Disturbance Recovery

In general, California Desert National Conservation Lands and/or ACEC ground disturbance recovery would be determined during the decadal ground disturbance threshold ecoregion trend monitoring assessments (see below, and Monitoring and Adaptive Management). California Desert National Conservation Lands and/or ACEC recovery may be assessed at intermediate intervals, in between the decadal assessments, at BLM's discretion based on adequate funding and staffing. Between the decadal assessments, BLM will assume disturbed areas and units (same as used for calculations and mitigation) are not yet recovered until data is presented and BLM determines the area meets one of the two criteria below:

- Field verification that disturbed area(s) are dominated by the establishment of native shrubs, as appropriate for the site, and demonstrated function of ecological processes (e.g., water flow, soil stability).
- Ground disturbance can no longer be seen at the 1:10,000 scale using the best available aerial imagery.

Areas within California Desert National Conservation Lands and/or ACEC(s) may be determined recovered by BLM at any time, once one of the two criteria above are met, prior to the entire unit (of calculation and mitigation) being determined recovered. Areas determined recovered by BLM would be removed from the subsequent ground disturbance calculation for that unit.

II.4.2.4.4 Lands and Realty

NLCS-LANDS-1: Renewable energy activities and related ancillary facilities are not allowed. New transmission and interconnect (i.e. generation tie lines) lines are allowed in designated corridors only. California Desert National Conservation Lands are a right-of-way avoidance areas for all other land use authorizations. Right-of-way avoidance areas are defined as areas to be avoided but may be available for location of right-of-ways with special stipulations.

NLCS-LANDS-2: Avoid use authorizations that negatively affect the values for which the California Desert National Conservation Lands are designated, unless mitigation, including compensatory mitigation, result in a net benefit to the California Desert National Conservation Lands.

NLCS-LANDS-3: Public access will be designed to facilitate or enhance the use, enjoyment, conservation, protection, and restoration of California Desert National Conservation Land values identified for the ecoregion .

NLCS-LANDS-4: All lands within California Desert National Conservation Lands are identified for retention. If the BLM determines that disposal through exchange would result in a net benefit to the values of the California Desert National Conservation Lands, it may consider that exchange through a land use plan amendment.

NLCS-LANDS-5: Site authorizations that protect or enhance conservation values, such as those granted as compensatory mitigation or for habitat restoration, are allowed. Compensatory mitigation measures sited on California Desert National Conservation Lands are not be limited to mitigation for activities on BLM-managed public land.

II.4.2.4.5 Minerals

NLCS-MIN-1: High Potential Mineral Areas

- In California Desert National Conservation Lands and ACECs, determine if reasonable alternatives exist outside of the California Desert National Conservation Lands and ACECs prior to proposing mineral resource development within one of these areas.
- In California Desert National Conservation Lands, subject to valid existing rights, if mineral resource development is proposed on a parcel of public land administered by the BLM for conservation purposes and designated as part of the NLCS within the CDCA, pursuant to Omnibus Public Land Management Act Section 2002(b)(2)(D):
    - Identify, analyze, and consider the resources and values for which that parcel of public land is administered for conservation purposes.
    - Determine whether development of mineral resources is compatible with the BLM's administration of that parcel of public land for conservation purposes. If development is incompatible, the mineral resource would not be developed, subject to valid existing rights.
    - Approve any operation for which valid existing rights have been determined, subject to the applicable CMAs in the DRECP LUPA, including LUPA-MIN-1 through 6.
- In California Desert National Conservation Lands, to protect the values for which a California Desert National Conservation Land unit was designated, and avoid, minimize, and compensate impacts to those values that results in net benefit for California Desert National Conservation Lands values, all Plans of Operation will meet the performance standards found at 43 CFR 3809.420, specifically 43 CFR 3809.420(a)(3)—Land-use plans, and 43 CFR 3809.420(b)(7)—Fisheries, wildlife and plant habitat, and will be subject to the regulations found at 43 CFR 3809.100 and 43 CFR 3809.101, if applicable.

NLCS-MIN-2: For the purposes of locatable minerals, California Desert National Conservation Lands are treated as "controlled" or "limited" use areas in the CDCA, requiring a Plan of Operations for greater than casual use under 43 CFR 3809.11.

NLCS-MIN-3: California Desert National Conservation Lands are available for mineral material sales and solid mineral leases, and would require mitigation, including compensatory mitigation, that results in net benefit for California Desert National Conservation Lands values consistent with applicable statutes and regulations.

NLCS-MIN-4: California Desert National Conservation Lands are available for geothermal leasing only in the specified areas where a DRECP LUPA DFA overlaps with the California Desert National Conservation Lands and the geothermal lease contains a specific no surface occupancy stipulation.

NLCS-MIN-5: Geothermal and other leasing must protect groundwater quality and quantity.

II.4.2.4.6 National Scenic and Historic Trails

NLCS-NSHT-1: Management of National Scenic and Historic Trails – Manage National Scenic and Historic Trails as units of the BLM's NLCS per PL 111-11, and components of the National Trails System under the National Trails System Act. Where National Scenic and Historic Trails overlap California Desert National Conservation Lands or other NLCS units (e.g., Wilderness Areas), the more protective CMAs or land use allocations apply.

NLCS-NSHT-2: Management Corridor – The National Trail Management Corridor, on BLM land, has a width generally 1 mile from the centerline of the trail, 2-mile total width. Where the National Trail Management Corridors overlap California Desert National Conservation Lands or other NLCS units, the more protective CMAs or land use allocations will apply.

NLCS-NSHT-3: Site Authorization – NSHT Management Corridors are right-of-way avoidance areas for land use authorizations. Sites authorizations will require mitigation, including compensatory mitigation resulting in net benefit to the NSHT. Authorizations that interfere with the Nature and Purpose for which the NSHT was established are not be allowed, as required by the National Trail Systems Act.

NLCS-NSHT-4: Linear Rights-of-Way – Generally, the NSHT Management Corridors are avoidance areas for linear rights-of-way, except in existing designated transmission/utility corridors, which are available for linear rights-of-way. Cultural landscapes, high potential historic sites, and high potential route segments within or along National Historic Trail Management Corridors are excluded from transmission activities, except in existing designated transmission/utility corridors. For all linear rights-of-way adversely impacting NSHT Management Corridors, the BLM will follow

the protocol in BLM Manual 6280 to coordinate, as required, and complete an analysis showing that the development does not substantially interfere with the nature and purposes of the NSHT, and that mitigation results in a net benefit to the NSHT.

NLCS-NSHT-5: Renewable Energy Rights-of-Way – Renewable energy activities are not be allowed within NSHT Management Corridors, except in LUPA approved DFAs. Where development may adversely impact NSHT Management Corridors, the BLM will follow the protocol in BLM Manual 6280 as required and complete an analysis to ensure that it does not substantially interfere with the nature and purposes of the NSHT, avoids activities incompatible with NSHT nature and purposes, and that mitigation, including compensatory mitigation, results in a net benefit to the NSHT.

NLCS-NSHT-6: Land Tenure – All lands within NSHT Management Corridors are identified for retention. If the BLM determines that disposal through exchange would result in a net benefit to the values of the NSHT, it may consider that exchange through a land use plan amendment.

NLCS-NSHT-7: Locatable Minerals – For the purposes of locatable minerals, NSHT Management Corridors are treated as "controlled" or "limited" use areas in the CDCA, requiring a Plan of Operations for greater than casual use under 43 CFR 3809.11.

NLCS-NSHT-8: Mineral Material Sales – NSHT Management Corridors are available for mineral material sales if the sale does not conflict or cause adverse impact on resources, qualities, values, settings, or primary uses or substantially interfere with nature and purpose of NSHT, and avoids activities inconsistent with NHST purposes. The sale must require mitigation/compensation and must result in net benefit to NSHT values.

NLCS-NSHT-9: Solid Mineral Leases – NSHT Management Corridors will be available for solid mineral leases if the lease does not conflict or cause adverse impact on resources, qualities, values, settings, or primary uses or substantially interfere with nature and purpose of NSHT, and avoids activities inconsistent with NHST purposes. The lease must require mitigation/compensation and result in net benefit to NSHT values.

NLCS-NSHT-10: Geothermal Leasable Minerals – NSHT Management Corridors are available for geothermal leasing in LUPA approved DFAs only and with a no surface occupancy stipulation, as long as the action would not substantially interfere with the nature and purposes of the NSHT, and will follow the most recent national policy and guidance.

NLCS-NSHT-11: Recreation and Visitor Services – Commercial and competitive Special Recreation is a discretionary action and will be considered on a case-by-case basis for activities consistent with the NSHT nature and purposes.

NLCS-NSHT-12: Cultural Resources – Any adverse effects to historic properties resulting from allowable uses will be addressed through the Section 106 process of the National Historic Preservation Act and the implementing regulations at 36 CFR Part 800.

NLCS-NSHT-13: Cultural Resources – All high potential NHT segments will be assumed to contain remnants, artifacts and other properties eligible for the National Register of Historic Places, pending evaluation.

NLCS-NSHT-14: Visual Resources Management – All NSHT Management Corridors are designated as VRM Class I or II dependent on the CMA's or land use allocation, except within existing approved transmission/utility corridors (VRM Class III) and DFAs (VRM Class IV). However, state of the art VRM BMPs for renewable energy will be employed commensurate with the protection of nationally significant scenic resources and cultural landscapes to minimize the level of intrusion and protect trail settings.

NLCS-NSHT-15 Mitigation Requirements – If there is overlap between a National Scenic or Historic Trail, National Trail Management Corridor on BLM land, or trail under study for possible designation and a DFA, BLM Manual 6280 must be followed. Efforts will be made to avoid conflicting activities and approved activities will be subject to mitigation for adverse impacts to the resources, qualities, values, settings, and primary use or uses (RQVs), including, but not limited to, the following: avoidance, the cost of trail relocation, on-site mitigation and off-site mitigation. Compensation can include acquisition or restoration of corridor RQVs, features and landscapes will be at a minimum of 2:1, and must result in a net benefit to the overall trail corridor. Proposed development of high potential route segments must not substantially interfere with the nature and purposes of the National Scenic or Historic Trail.

II.4.2.4.7 Recreation and Visitor Services

NLCS-REC-1: Commercial and competitive Special Recreation Permits are a discretionary action and will be issued on a case by case basis, for activities that do not diminish the values of the California Desert National Conservation Lands unit and will be prohibited if the proposed activities would adversely impact the nationally significant ecological, cultural or scientific values for which the area was designated.

II.4.2.4.8 Soil, Water, and Water Dependent Resources

NLCS-SW-1: Apply for water rights on a case by case basis to protect water dependent California Desert National Conservation Land values.

II.4.2.5 ACECs

The CMAs in this section apply to all ACECs within the LUPA. All LUPA-wide (LUPA) and Ecological and Cultural Conservation Area (CONS) CMAs also apply to ACECs. Required elements of the ACECs (Name, Location, and Size; Description of Value, Resource System, or Hazard; and Provisions for Special Management Attention) and maps of each unit are included in the ACEC Special Unit Management Plans in Appendix B.

II.4.2.5.1 Cultural Resources and Tribal Interests

ACEC-CUL-1: Survey, identify and record new cultural resources within ACEC boundaries prioritizing ACECs where the relevant and important criteria include cultural resources.

ACEC-CUL-2: Update records for existing cultural resources within ACECs, prioritizing ACECs where the relevant and important criteria include cultural resources.

ACEC-CUL-3: Develop baseline assessment of specific natural and man-made threats to cultural resources in ACECs (i.e., erosion, looting and vandalism, grazing, OHV), prioritizing ACECs where the relevant and important criteria include cultural resources.

ACEC-CUL-4: Provide on-going monitoring for cultural resources based on the threat assessment, prioritizing ACECs where the relevant and important criteria include cultural resources.

ACEC-CUL-5: Identify, develop or incorporate standard protection measures and best management practices to address threats.

ACEC-CUL-6: Where specific threats are identified, implement protection measures consistent with agency NHPA Section 106 responsibilities.

II.4.2.5.2 Ground Disturbance Cap

ACEC-DIST-1: Development in ACECs is limited by specified ground disturbance caps which are the total ground disturbance (existing [past and present] plus future). The specific ACEC ground disturbance caps are delineated in each of the individual ACEC Special Unit Management Plans (Appendix B). The ground disturbance caps will be used, managed and implemented following the methodology for California Desert National Conservation Lands and ACECs identified in Section II.2 and repeated in CMAs **NLCS-DIST-2**, and **ACEC-DIST-2**.

ACEC-DIST-2: Specifically, the ground disturbance caps would be implemented as a limitation and objective using the following process:

- **Limitation:** If the ground disturbance condition of the ACEC is below the designated ground disturbance cap (see calculation method), the ground disturbance cap is a limitation on ground-disturbing activities within the California Desert National Conservation Lands and/or ACEC, and precludes approval of future discretionary ground disturbing activities (see exceptions below) above the cap.
- **Objective, triggering disturbance mitigation:** If the ground disturbance condition of the ACEC is at or above its designated cap, the cap functions as an objective, triggering the specific ground disturbance mitigation requirement. Ground disturbance mitigation is unique to ground disturbance cap implementation and a discrete form of compensatory mitigation, separate from other required mitigation in the DRECP LUPA (see Glossary of Terms). The ground disturbance mitigation requirement remains in effect for all (see exceptions below) activities until which time the ACEC drops below the cap, at which time the cap becomes a limitation and the ground disturbance mitigation is no longer a requirement. If ground disturbance mitigation opportunities do not exist in a unit (see below for "unit" of measurement), ground disturbing activities (see exceptions below) will not be allowed in that unit until which time opportunities for ground disturbance mitigation in the unit become available (see types and forms of ground disturbance mitigation below) or the unit recovers and drops below the cap.
- Actions necessary to control the immediate impacts of an emergency that are urgently needed to reduce the risk to life, property, or important natural, cultural, or historic resources, in accordance with 43 Code of Federal Regulations (CFR) 46.150, are an exception to the ground disturbance cap limitation, objective and ground disturbance mitigation requirements. Ground disturbance from emergency actions will count in the ground disturbance calculation for other activities, and also be available for ground disturbance mitigation opportunities and restoration, as appropriate.

Calculating ground disturbance: Ground disturbance will be calculated on BLM managed land at the time of an individual proposal, by BLM for a BLM initiated action or by a third party for an activity needing BLM approval or authorization, for analysis in the activity-specific National Environmental Policy Act (NEPA) document. Once BLM approves/accepts or conducts a calculation for a ACEC, that calculation is considered the baseline of past and present disturbance and is valid for 12 months, and can be used by other proposed activities in the same unit. Ground disturbances, that meet the criteria below, would be added into the calculation for the 12 month period without having to revisit the entire calculation After a 12 month period has passed and a

proposed action triggers the disturbance calculation, BLM will examine the existing ground disturbance calculation to determine: 1) if the calculation is still reliable, in which case add in any additional disturbance that has occurred since that calculation; or 2) if the disturbance must be recalculated in its entirety. Once completed for a specific activity, the ground disturbance calculation may be used throughout the activity's environmental analysis. However, the BLM may recalculate the affected unit(s) or portions of the unit(s) if it determines such recalculation is necessary for the BLM's environmental analysis.

Unit of measurement: When calculating the ground disturbance, it is necessary to identify the appropriate unit level at which the disturbance will be calculated. For ground disturbing activities that occur within an ACEC, the disturbance calculation will be based on the ACEC unit boundary, or the boundary of the disturbance cap area(s), whichever area is smaller. If there is overlap between California Desert National Conservation Lands and an ACEC, the calculation will take place based on the smallest unit. If an activity/project overlaps two or more smaller units, the cap will be calculated, individually, for all affected units.

Ground disturbance includes: The calculation shall include existing ground disturbance in addition to the estimated ground disturbance from the proposed activity (future) determined at the time of the individual proposal:

- Authorized/approved ground disturbing activities – built and not yet built
- BLM identified routes – all routes, trails, etc., authorized and unauthorized, identified in the Ground Transportation Linear Feature (GTLF) and/or other BLM route network database (i.e., BLM local databases that contain the best available data on routes and trails, replacement for GTLF, etc.), following applicable BLM standards and policy for identification of routes (authorized and unauthorized)
- Assumptions may be used to identify the percentage/degree/area/etc. of ground disturbance for a specific authorized/approved activity or activity-type based on:
    - Activity-specific environmental analysis, such as NEPA or ESA Section 7 Biological Assessment
    - Known and documented patterns of ground disturbance
    - Other documented site-specific factors that limit or play a role in ground disturbance, such as topography, geography, hydrology (e.g. desert washes obliterating authorized routes on a regular basis), historical and predicted patterns of use
- Any unauthorized disturbance that can be seen at a 1:10,000 scale using the best available aerial imagery

- Ground disturbance from wildfire, animals, or other disturbances that can be seen at a 1:10,000 scale using the best available aerial imagery
- Historic Route 66 maintenance - potential ground disturbance estimates:
  - As part of the ground disturbance calculation, the potential disturbance associated with estimated operations related to the maintenance of Historic Route 66 will automatically be included in the ground disturbance calculation as existing ground disturbance for the units specified below, until which time these estimated acres are no longer necessary due to approved operations:
    - South Amboy-Mojave California Desert National Conservation Lands 221 acres
    - Bristol Mountains ACEC 92 acres
    - Chemehuevi ACEC 43 acres
    - Pisgah ACEC 86 acres
  - The estimated ground disturbance acreage includes disturbance associated with potential access to the locations if no current access exists.
  - The estimated ground disturbance acres for maintenance of Historic Route 66 in the before mentioned conservation units is not approval of these activities by BLM. Activities associated with the management and maintenance of Historic Route 66 on BLM administered land will follow all applicable laws, regulations and policies.

Exceptions to the disturbance calculation:

- Actions necessary to control the immediate impacts of an emergency that are urgently needed to reduce the risk to life, property, or important natural, cultural, or historic resources, in accordance with 43 CFR 46.150, will not be required to conduct a disturbance calculation. If the actions are ground disturbing, that disturbance will count towards the disturbance cap when next calculated for non-emergency activities.
- Actions that are authorized under a Department of Interior (DOI) or BLM NEPA Categorical Exclusion will not be required to conduct a disturbance calculation; however, these actions are not exempt from the disturbance mitigation requirement if a unit is at or above its cap. Although the BLM is not required to calculate the disturbance cap before approving an activity under a Categorical Exclusion, if the BLM knows an area is at or exceeding the cap, the disturbance mitigation requirements would apply to that activity.

- BLM authorized/approved research or restoration activities that are designed or intended to promote and enhance the relevant and important values for which the ACEC was designated.
- Actions that are entirely within the footprint of an existing authorized/approved site of ground disturbance that is within the calculation above.
- Livestock grazing permit renewals (however, water developments or other range improvements requiring an Environmental Assessment or Environmental Impact Statement would be subject to the disturbance calculation and any mitigation requirements).

Ground disturbance mitigation: The purpose of ground disturbance mitigation (disturbance mitigation) is to allow actions to occur in California Desert National Conservation Lands and/or ACEC that is at or above its designated disturbance cap(s), while at the same time providing a restoration mechanism that will, over time, improve the condition of the unit(s) and take them below their cap. Disturbance mitigation is compensatory. Disturbance mitigation is unique to ground disturbance cap implementation and a discrete form of compensatory mitigation, separate from other required mitigation in the DRECP (see Glossary of Terms).

Disturbance mitigation may only be used for ground disturbance that is otherwise allowed by the LUPA and consistent with the purposes for which the California Desert National Conservation Lands and/or ACEC was designated. Areas used for disturbance mitigation are still considered disturbed until which time they meet the "Ground Disturbance Recovery" criteria in the description below.

Unit for implementing disturbance mitigation: The appropriate unit level for implementing disturbance mitigation is the same as that used for calculating ground disturbance. For ground disturbing activities that occur within an ACEC, the disturbance mitigation will be required within the ACEC unit boundary, or the boundary of the disturbance cap area(s), whichever area is smaller. If there is overlap between California Desert National Conservation Lands and an ACEC, the disturbance mitigation will take place in the smallest unit. If an activity/project overlaps two or more smaller units, disturbance mitigation will be required for all units that are at or over their specified disturbance cap.

No disturbance mitigation required: If the calculated ground disturbance for the unit(s) is under the cap:

- No disturbance mitigation required; use activity design features to minimize new ground disturbance and help stay below cap.

Disturbance mitigation required: If the calculated ground disturbance is at or above the unit(s) cap, disturbance mitigation is required:

- Use activity design features to minimize new ground disturbance to the extent practicable.
- For the portion of the proposed activity that is located on land within an area previously disturbed by an authorized/approved action that has been terminated the required disturbance mitigation ratio is 1.5 (1½):1.
- For the portion of the proposed activity that is located on undisturbed land or land disturbed by unauthorized activities, the required disturbance mitigation ratio is 3:1.
- Although the BLM is not required to calculate the ground disturbance cap before approving/authorizing an activity under a Categorical Exclusion, if the BLM knows an area is at or exceeding the cap, the disturbance mitigation requirements would apply to that activity.
- In the rare circumstance where the BLM authorizes activities on areas restored (e.g., as disturbance or other forms of mitigation), the required disturbance mitigation ratio requirement is doubled, that is, 3:1 or 6:1, respectively.
- If disturbance mitigation opportunities do not exist in a unit, ground-disturbing activities (see exceptions below) will not be allowed in that unit until which time opportunities for disturbance mitigation in the unit become available (see types and forms of disturbance mitigation below) or the unit recovers and drops below the cap.

Exceptions to the disturbance mitigation requirement:

- Any portion of the proposed activity that is located on land previously disturbed by an existing, valid authorized/approved action.
- Livestock grazing permit renewals (however, water developments or other range improvements requiring an Environmental Assessment or Environmental Impact Statement would be subject to the disturbance calculation and any mitigation requirements).
- Land use authorization assignments and renewals with no change in use.
- BLM authorized/approved activities that are designed and implemented to reduce existing ground disturbance, such as ecological, cultural, or habitat restoration or enhancement activities.
- Non-discretionary actions, where BLM has no authority to require compensatory mitigation.

Types and forms of disturbance mitigation:

- Restoration of previously disturbed BLM lands within the boundary of the specific ACEC unit(s) being impacted.
- Acquisition of undisturbed lands within the boundary of the specific ACEC unit being impacted.
- Ground disturbance mitigation can be "nested" (i.e., combined) with other resource mitigation requirements, when appropriate. For example, a parcel restored for desert tortoise habitat mitigation may also satisfy the disturbance mitigation requirement if the parcel is within the appropriate unit of California Desert National Conservation Lands, ACEC boundary, or smaller disturbance cap unit.

Ground Disturbance Recovery

In general, California Desert National Conservation Lands and/or ACEC ground disturbance recovery would be determined during the decadal ground disturbance threshold ecoregion trend monitoring assessments (see below, and Monitoring and Adaptive Management). California Desert National Conservation Lands and/or ACEC recovery may be assessed at intermediate intervals, in between the decadal assessments, at BLM's discretion based on adequate funding and staffing. Between the decadal assessments, BLM will assume disturbed areas and units (same as used for calculations and mitigation) are not yet recovered until data is presented and BLM determines the area meets one of the two criteria below:

- Field verification that disturbed area(s) are dominated by the establishment of native shrubs, as appropriate for the site, and demonstrated function of ecological processes (e.g., water flow, soil stability).
- Ground disturbance can no longer be seen at the 1:10,000 scale using the best available aerial imagery.

Areas within California Desert National Conservation Lands and/or ACEC(s) may be determined recovered by BLM at any time, once one of the two criteria above are met, prior to the entire unit (of calculation and mitigation) being determined recovered. Areas determined recovered by BLM would be removed from the subsequent ground disturbance calculation for that unit.

II.4.2.5.3 Lands and Realty

ACEC-LANDS-1: Renewable energy activities are not allowed. ACECs are right-of-way avoidance areas for all other land use authorizations, except when identified as right-of-way exclusion areas in the individual unit's Special Management Plan (Appendix B).

Transmission is allowed. Re-powering of an existing wind facility is allowed if the re-power project remains within the existing approved wind energy ROW and reduces environmental impacts.

ACEC-LANDS-2: All lands within Areas of Critical Environmental Concern are identified for retention. If the BLM determines that disposal through exchange would result in a net benefit to the values of the ACEC, it may consider that exchange through a land use plan amendment.

II.4.2.5.4 Minerals

ACEC-MIN-1: High Potential Mineral Areas

- In California Desert National Conservation Lands and ACECs, determine if reasonable alternatives exist outside of the California Desert National Conservation Lands/ACEC areas prior to proposing mineral resource development within one of these areas.

II.4.2.5.5 Visual Resources Management

ACEC-VRM-1: Manage Manzanar ACEC to conform to VRM Class II standards.

II.4.2.6 Wildlife Allocations

The CMAs in this section apply to all Wildlife Allocations within the LUPA. All LUPA-wide (LUPA) and Ecological and Cultural Conservation Area (CONS) CMAs also apply to Wildlife Allocations.

II.4.2.6.1 Lands and Realty

WILD-LANDS-1: Renewable energy activities and related ancillary facilities are not allowed.

WILD-LANDS-2: Applications for use authorizations that provide a benefit to the management area or serve public interests may be allowed, unless prohibited by statute.

WILD-LANDS-3: Use authorization applications, excluding renewable energy projects and related ancillary facilities, will be evaluated in accordance with whether they are compatible with and not contrary to the wildlife values or the protection and enhancement of wildlife and plant habitat for that Allocation.

WILD-LANDS-4: All lands within Wildlife Allocations are identified for retention. If the BLM determines that disposal through exchange would result in a net benefit to the values of the Wildlife Allocation, it may consider that exchange through a land use plan amendment.

II.4.2.7 SRMAs

The CMAs in this section apply to all SRMAs within the LUPA. All LUPA-wide CMAs (LUPA) also apply to SRMAs. See Appendix C, SRMA and ERMA Special Unit Management Plans, for maps and the goals, objectives, and unit-specific CMAs for SRMAs.

Biological Resources-Vegetation

SRMA-VEG-1: Vegetative Use Authorizations: Commercial collection of seed is an allowable use in designated OHV Open Areas. CMAs within SRMAs apply to this kind of activity.

II.4.2.7.1 Comprehensive Trails and Travel Management

SRMA-CTTM-1: Refer to the individual SRMA Special Unit Management Plans (Appendix C) for SRMA/Recreation Management Zone specific objectives, management actions, and allowable uses. Protect SRMAs for their unique/special recreation values. Manage roads/primitive roads/trails consistent with SRMA objectives and as designated in Transportation and Travel Management Plan/RMPs.

II.4.2.7.2 Lands and Realty

SRMA-LANDS-1: Renewable energy development is not an allowable use in SRMAs due to the incompatibility with the values of the SRMA. Two exceptions to this management action are:

- Geothermal development is an allowable use if a geothermal-only DFA overlays the SRMA designation and complies with a "no surface occupancy" restriction; with exception of the Ocotillo Wells SRMA (refer to the technology specifics for the DFA and the Special Unit Management Plan in Appendix C)
- If DRECP variance land designation overlays the SRMA, renewable energy may be allowed on a case-by-case basis if the proposed project is found to be compatible with recreation values and the Special Unit Management Plan (Appendix C) specific to the SRMA.

Re-powering of an existing wind facility is allowed if the re-power project remains within the existing approved ROW and reduces environmental and recreation impacts.

SRMA-LANDS-2: Acquired land within the SRMAs will be managed according to the goals and objectives of the SRMA, and activities on these lands will be consistent with the CMAs for SRMAs.

SRMA-LANDS-3: Lands within SRMAs are available for disposal. However, disposal actions are only available to parties that will manage the land in accordance with the recreational values identified in the Special Unit Management Plan (Appendix C) for the SRMA.

II.4.2.7.3 Recreation and Visitor Services

SRMA-REC-1: Manage SRMAs for their targeted recreation activities, experiences and benefits. Maintain (and where possible enhance) the recreation setting characteristics—physical components of remoteness, naturalness and facilities; social components of contact, group size and evidence of use; and operational components of access, visitor services and management controls.

SRMA-REC-2: In SRMAs that overlap with California Desert National Conservation Lands and ACECs, manage in accordance with the Special Unit Management Plans for the SRMA/ERMA and the applicable ecological and cultural conservation unit (Appendices A, B, and C). If there is a conflict between the California Desert National Conservation Lands or ACEC management and the SRMA/ERMA management, the BLM will apply the most protective management (i.e., management that best supports natural and cultural resource conservation and limits impacts to the values for which the conservation unit was designated).

SRMA-REC-3: SRMA objectives and desired recreation setting characteristics described in the Special Unit Management Plans (Appendix C) may be refined and/or zoned in activity-level planning, based on visitor-use surveys and other monitoring.

II.3.4.2.6.4 Visual Resources Management

SRMA-VRM-1: Manage the Alabama Hills SRMA to conform to VRM Class II standards.

II.4.2.8 ERMAs

The CMAs in this section apply to all ERMAs within the LUPA. All LUPA-wide (LUPA) also apply to ERMAs. See Appendix C, Special Unit Management Plans, for maps and the goals, objectives, and unit-specific CMAs for ERMAs.

ERMA-LUPA-1: Renewable energy activities and related ancillary facilities are not allowed where an ERMA overlaps with California Desert National Conservation Lands, ACEC, or Wildlife Allocation, or is not allowed in a specific ERMA as described in the Special Unit Management Plan (see Appendix C).

ERMA-LUPA-2: In areas where renewable energy activities and related ancillary facilities are an allowable use, the CMAs related to renewable energy activities and

related ancillary facilities for General Public Lands apply (refer to Section II.4.2.10), including but not limited to:

- Renewable energy activities and related ancillary facilities that may have a measurable (i.e., the effect can be evaluated) adverse impact (direct, indirect or cumulative)on the biological or cultural conservation strategies, including individual California Desert National Conservation Lands, ACEC and/or Wildlife Allocation units of the DRECP LUPA are not allowed.
- Renewable energy activities and related ancillary facilities that may have a measureable (i.e., the effect can be evaluated) adverse impact (direct, indirect or cumulative) on the recreation design, including individual SRMAs and ERMAs, of the DRECP LUPA are not allowed.
- Renewable energy activities and related ancillary facilities that may have a measurable (i.e., the effect can be evaluated) adverse impact (direct, indirect, or cumulative) on the renewable energy and transmission design, including individual DFAs and VPLs, are not allowed.

II.4.2.8.1 Recreation and Visitor Services

ERMA-REC-1: When considering land use authorizations within ERMAs, retain to the extent practicable recreation activities and associated qualities and conditions within these areas.

II.4.2.9 Development Focus Areas and Variance Process Lands

The following CMAs will be implemented in the DFAs and VPLs, in addition to the LUPA-wide CMAs (LUPA).

II.4.2.9.1 DFAs and VPL CMAs

The following CMAs will be implemented in both the DFAs and VPLs, in addition to the LUPA-wide CMAs (LUPA).

Biological Resources

North American Warm Desert Dune and Sand Flats

DFA-VPL-BIO-DUNE-1: Activities in DFAs and VPLs, including transmission substations, will be sited to avoid dune vegetation (i.e., North American Warm Desert Dune and Sand Flats). Unavoidable impacts (see "unavoidable impacts to resources" in the Glossary of Terms) to dune vegetation will be limited to transmission projects, except transmission substations, and access roads that will be sited to minimize unavoidable impacts.

- For unavoidable impacts (see "unavoidable impacts to resources" in the Glossary of Terms) to dune vegetation, the following will be required:
    - Access roads will be unpaved.
    - Access roads will be designed and constructed to be at grade with the ground surface to avoid inhibiting sand transportation.

DFA-VPL-BIO-DUNE-2: Within Aeolian corridors that transport sand to dune formations and vegetation types downwind inside and outside of the DFAs, all activities will be designed and operated to facilitate the flow of sand across activity sites, and avoid the trapping or diverting of sand from the Aeolian corridor. Buildings and structures within the site will take into account the direction of sand flow and, to the extent feasible, build and align structures to allow sand to flow through the site unimpeded. Fences will be designed to allow sand to flow through and not be trapped.

Individual Focus Species (IFS)

Desert Tortoise

DFA-VPL-BIO-IFS-1: To the maximum extent practicable (see Glossary of Terms), activities will be sited in previously disturbed areas, areas of low quality habitat, and areas with low habitat intactness in desert tortoise linkages and the Ord-Rodman TCA, identified in Appendix D.

Mohave Ground Squirrel

DFA-VPL-BIO-IFS-2: Within the Mohave ground squirrel range configure solar panel and wind turbine arrays to allow areas of native vegetation that will facilitate Mohave ground squirrel movement through the project site. This may include raised and/or rotating solar panels or open space between rows of panels or turbines. Fences surrounding sites should be permeable for Mohave ground squirrels.

Bats

DFA-VPL-BIO-BAT-1: Wind projects will not be sited within 0.5 mile of any occupied or presumed occupied maternity roost.

Fire Prevention/Protection

DFA-VPL-BIO-FIRE-1: Implement the following standard practice for fire prevention/protection:

- Implement site-specific fire prevention/protection actions particular to the construction and operation of renewable energy and transmission project that include procedures for reducing fires while minimizing the necessary amount of vegetation clearing, fuel modification, and other construction-related activities. At a minimum these actions will include designating site fire coordinators, providing adequate fire suppression equipment (including in vehicles), and establishing emergency response information relevant to the construction site.

Biological Compensation

DFA-VPL-BIO-COMP-1: Impacts to biological resources from all activities in DFAs and VPLs will be compensated using the same ratios and strategies as LUPA-BIO-COMP-1 through 4, with the exception identified below in DFA-VPL-BIO-COMP-2.

DFA-VPL-BIO-COMP-2: Exception to the biological resources standard compensation ratio of 1:1 - desert tortoise intact linkage habitat compensation ratio of 2:1 applies to the identified modeled intact linkage habitat (Appendix D) in two linkages—Ord-Rodman critical habitat unit to Joshua Tree National Park, and Fremont-Kramer critical habitat unit to the Ord-Rodman critical habitat unit, as identified in Appendix D. Maintenance and enhancement of the function of these two linkages is essential to the function of the Ord-Rodman critical habitat unit.

Comprehensive Trails and Travel Management

DFA-VPL-CTTM-1: Avoid Tier 1, Tier 2, Tier 3 roads/primitive roads/trails, Backcountry Byways, and other significant linear features (as defined in the LUPA-wide CMAs). If avoidance is not practicable, relocate access to the same or higher standard and maintain the recreation setting characteristics and access to recreation activities, facilities, and destination.

DFA-VPL-CTTM-2: If residual impacts to Tier 1 and Tier 2 roads/primitive roads/trails, Backcountry Byways, or other significant linear features cannot be protected and maintained, commensurate compensation in the form of an enhanced recreation operations, recreation facilities or opportunities will be required.

Cultural Resources and Tribal Interests

BLM developed and maintains a geodatabase for Cultural Resources and Cultural Resources investigations in a GIS. The geodatabase is regularly updated with newly recorded and re-recorded resource and investigation data. However, while the geodatabase includes location information (feature classes or shapefiles), the associated information about each resource or investigation (attribute data) is limited or inconsistent. As it exists now, the geodatabase cannot be used for predictive analyses like those recommended in *A Strategy for Improving Mitigation Policies and Practices of the Department of the Interior* (DOI 2014). However, with some updates, the geodatabase will be a powerful tool for identifying potential conservation priorities as well as development opportunities. Many of the CMAs below are intended to facilitate the update of BLM's geodatabase, and require its use when the updates are complete.

The following CMAs are for renewable energy and transmission land use authorizations only, in DFAs and VPLs. All other activities in DFAs and VPs are subject to the NHPA Section 106 process.

DFA-VPL-CUL-1: For renewable energy activities and transmission, require the applicant to pay all appropriate costs associated with the following processes, through the appropriate BLM funding mechanism:

- All appropriate costs associated with the BLM's analysis of the DRECP geodatabase and other sources for cultural resources sensitivity.
- All appropriate costs associated with preliminary sensitivity analysis.
- All appropriate costs associated with the Section 106 process including the identification and defining of cultural resources. These costs may also include logistical, travel, and other support costs incurred by tribes in the consultation process.
- All appropriate costs associated with updating the DRECP cultural resources geodatabase with project specific results.

DFA-VPL-CUL-2: Consistent and in compliance with the NHPA Programmatic Agreement, signed February 5, 2016, or the most up to date signed version -for renewable energy activities and transmission, a compensatory mitigation fee will be required within the LUPA Decision Area to address cumulative and some indirect adverse effects to historic properties. The mitigation fee will be calculated in a manner that is commensurate to the size and regional impacts of the project. Refer to the Programmatic Agreement for details regarding the mitigation fee.

DFA-VPL-CUL-3: For renewable energy activities and transmission, the management fee rate will be determined through the NHPA programmatic Section 106 consultation process that will be completed as part of the DRECP land use plan amendment.

DFA-VPL-CUL-4: For renewable energy activities and transmission, demonstrate that results of cultural resources sensitivity, based on the DRECP geodatabase, and other sources, are used as part of the initial planning pre-application process and to select of specific footprints for further consideration.

DFA-VPL-CUL-5: For renewable energy activities and transmission, provide a statistically significant sample survey as part of the pre-application process, unless the BLM determines the DRECP geodatabase and other sources are adequate to assess cultural resources sensitivity of specific footprints.

DFA-VPL-CUL-6: For renewable energy activities and transmission, provide justification in the application why the project considerations merit moving forward if the specific footprint lies within an area identified or forecast as sensitive for cultural resources by the BLM.

DFA-VPL-CUL-7: For renewable energy activities and transmission, complete the NHPA Section 106 Process as specified in 36 CFR Part 800, or via an alternate procedure, allowed for under 36 CFR Part 800.14 prior to issuing a ROD or ROW grant on any utility-scale renewable energy or transmission project. For utility-scale solar energy developments, the BLM may follow the Solar Programmatic Agreement.

Livestock Grazing

DFA-VPL-LIVE-1: Avoid siting solar developments in active livestock grazing allotments. If a ROW is granted for solar development in an active livestock grazing allotment, prior to solar projects being constructed in active livestock allotments, an agreement must be reached with the grazing permittee/lessee on the 2-year notification requirements. If any rangeland improvements such as, but not limited to, fences, corrals, or water storage projects, are to be impacted by energy projects, reach agreement with the BLM and the grazing permittee/lessee on moving or replacing the range improvement. This may include the costs for NEPA, clearances, and materials.

DFA-VPL-LIVE-2: In California Condor use areas, wind energy ROWs will include a term and condition requiring the permittee and wind operator to eliminate grazing of livestock.

DFA-VPL-LIVE-3: Include no surface occupancy stipulation on geothermal leases in active grazing allotments.

Vegetation

DFA-VPL-VEG-1: Vegetative Use Authorizations: Commercial collection of seed in DFAs and VPLs is an allowable use. CMA's within these areas apply to this kind of activity.

Visual Resources Management

DFA-VPL-VRM-1: Encourage development in a planned fashion within DFAs (e.g., similar to the planned unit development concept used for urban design—i.e., in-fill vs. scattered development, use of common road networks, Generator Tie Lines etc., use of similar support facility designs materials and colors etc.) to avoid industrial sprawl.

DFA-VPL-VRM-2: Development in DFAs and VPLs are required to incorporate visual design standards and include the best available, most recent BMPs, as determined by BLM (e.g. Solar, Wind, West Wide Energy Corridor, and Geothermal PEISs, the "*Best Management Practices for Reducing Visual Impacts of Renewable Energy Facilities on BLM-Administered Lands*", and other programmatic BMP documents).

DFA-VPL-VRM-3: Required Visual Resource BMPs. All development within the DFAs and VPLs will abide by the BMPs addressed in the most recent version of the document "*Reducing Visual Impacts of Renewable Energy Facilities on BLM-Administered Lands",* or its replacement, including, but not limited to the following:

- Transmission:
  - Color-treat monopoles Shadow Gray per the BLM Environmental Color Chart CC001 unless a more effective color choice is selected by the local Field Office VRM specialist.
  - Lattice towers and conductors will have non-specular qualities.
  - Lattice Towers will be located a minimum of 3/4 miles away from Key Observation Points such as roads, scenic overlooks, trails, campgrounds, navigable rivers and other areas people tend to congregate and located against a landscape backdrop when topography allows.
- Solar – Color treat all facilities Shadow Gray from the BLM Environmental Color Chart CC001 unless a more effective color is selected by the Field Office VRM specialist, including but not limited to:
  - Concentrated solar thermal parabolic trough panel backs
  - Solar power tower heliostats
  - Solar power towers

- Cooling towers
- Power blocks

- Wind – Color treat all facilities Shadow Gray with the exception of the wind turbine and towers 200 vertical feet or more.
- Night Sky – BMPs to minimize impacts to night sky including light shielding will be employed.

II.4.2.9.2 Development Focus Areas

The following CMAs will be implemented in the DFAs, in addition to the LUPA-wide (LUPA) and DFA-VPL CMAs.

Renewable Energy

DFA-RE-1: In order to use the DRECP's BLM LUPA streamlined process for renewable energy in DFAs and transmission, project proponents must first consult with appropriate representatives of the Department of Defense to ensure the proposed renewable energy and/or transmission activity will not cause an unacceptable risk to national security. Refer to additional detail in LUPA Section IV.4 and Appendix E. Specifically, the following process will be implemented:

- For renewable energy and transmission activities proposed in red areas (see Appendix E), the DRECP BLM LUPA streamlined process will not be available unless a letter is obtained from the Department of Defense Siting Clearinghouse stating that military impacts have been mitigated.
- For renewable energy and transmission activities proposed in orange or yellow areas (see Appendix E), the DRECP BLM LUPA streamlined process will be not be available until Department of Defense representatives at the regional level have been consulted and have been provided a minimum of 30 days to assess potential mission impacts. If the regional representatives conclude within the 30 day period that there is a significant possibility that a proposed activity presents an unacceptable risk to national security, the BLM will not streamline the proposed activity process and will require additional environmental analysis regarding Department of Defense impacts, unless a letter is obtained from the Department of Defense Siting Clearinghouse stating that military impacts have been mitigated.

Biological Resources

Individual Focus Species

DFA-BIO-IFS-1: Conduct the following surveys as applicable in the DFAs as shown in Table 21.

Table 21
Individual Species DFA Survey Requirements

Species	DFA Survey Requirements
Reptile	
Desert tortoise	Protocol surveys in the desert tortoise habitat areas indicated in Appendix D.
Flat-tailed horned lizard	Protocol surveys as specified in the Rangewide Management Strategy (RMS).
Bird	
Bendire's thrasher	Pre-construction nesting bird survey during breeding season (March 1 through September 30) in suitable habitat on and within 500 feet of construction zone.
Burrowing Owl	Breeding season surveys (February 1 through August 31) per Burrowing Owl Guidelines (CDFG 2012). Clearance surveys (for direct take avoidance) no less than 14 days prior to ground disturbance per Burrowing Owl Guidelines.
California condor	None.
Gila woodpecker	None.
Golden eagle	Pre-project golden eagle surveys and pre-construction risk assessment surveys in **LUPA-BIO-IFS-28**, if applicable as described in golden eagle CMAs below.
Swainson's Hawk	Protocol surveys in the Antelope and Owens Valleys.
Mammal	
Desert bighorn sheep	None.
Mohave ground squirrel	Clearance surveys in the Mohave ground squirrel habitat areas indicated in Appendix D. Protocol surveys in key population centers and linkages as identified on the map in Appendix D

DFA-BIO-IFS-2: Implement the following setbacks shown below in Table 22 as applicable in the DFAs.

Table 22
Individual Species DFA Setback Requirements

Species	DFA Setbacks
Reptile	
Desert tortoise	None.
Flat-tailed horned lizard	None.
Bird	
Bendire's thrasher	Setback pre-construction, construction, and decommissioning, and other activities 500 feet from active nests.
Burrowing Owl	656 feet (200 meters) from active nesting sites.
California condor	Setback wind and transmission projects 5 miles from nest sites. Setback solar, geothermal, and other activities than may impact condors 1.5 miles from nest sites and out of direct line of site from nest sites.
Gila woodpecker	Setback pre-construction, construction, and decommissioning, and other activities that may impact the species 0.25 mile from suitable habitat during the breeding season (April 1 through July 31).
Golden eagle	Setback activities 1 mile from active or alternative nests within an active territory as described in **LUPA-BIO-IFS-24**.
Swainson's Hawk	0.5 mile from active nests.
Mammal	
Desert bighorn sheep	None.
Mohave ground squirrel	None.

Desert Tortoise

DFA-BIO-IFS-3: Protocol surveys, as described in **DFA-BIO-IFS-1** and shown in Table 21, are required for development in the desert tortoise survey areas (see Appendix D). Based on the results of the protocol surveys the identified desert tortoises will be translocated, or the activity will be redesigned/relocated as described below:

- If protocol surveys identify 35 or fewer desert tortoises in potential impact areas on an activity site, the USFWS and CDFW (for third party activities) will be contacted and provided with the protocol survey results and information necessary for the translocation of identified desert tortoises. Pre-construction and construction, and other activities will not begin until the clearance surveys for the site have been completed and the desert tortoises have been translocated. Translocation will be conducted in coordination with the USFWS and CDFW, as appropriate, per the protocols in the Desert Tortoise Field Manual (USFWS 2009) and the most up-to-date USFWS protocol.

- If protocol surveys identify an adult desert tortoise density (i.e., individuals 160 millimeters or more) of more than 5 per square mile or more than 35 individuals total on a project site, the project will be required to be redesigned, re-sited, or relocated to avoid and minimize the impacts of the activity on desert tortoise.

Mohave Ground Squirrel

DFA-BIO-IFS-4: The DFA in the "North of Edwards" Mohave ground squirrel key population center is closed to renewable energy applications and any activity that is likely to result in the mortality (killing) of a Mohave ground squirrel until Kern and San Bernardino counties complete county General Plan amendments/updates that include renewable energy development and Mohave ground squirrel conservation on nonfederal land in the West Mojave ecoregion and the CDFW releases a final Mohave Ground Squirrel Conservation Strategy, or for a period of 5 years after the signing of the DRECP LUPA ROD, whichever comes first. If Kern and San Bernardino counties and CDFW do not complete their respective plans within the 5-year period, prior to opening the DFA to renewable energy applications and other impacting activities, BLM will assess new Mohave ground squirrel information, in coordination with the CDFW, to determine if modifications to the DFA or CMAs are warranted based on new Mohave ground squirrel information.

DFA-BIO-IFS-5: Once the planning criteria in CMA **DFA-BIO-IFS-4**, are met, the DFA in the "North of Edwards" Mohave ground squirrel key population center will be reevaluated. If Kern and San Bernardino counties receive Mohave ground squirrel take authorizations from the CDFW through completed Natural Community Conservation Plans or county-wide conservation strategies that address Mohave ground squirrel conservation at a landscape level and include renewable energy development areas on nonfederal land in the West Mojave ecoregion, the "North of Edwards" key population center DFA will be eliminated and the management changed to General Public Lands, as part of adaptive management.

Plants

DFA-BIO-PLANT-1: Impact to suitable habitat (see Glossary of Terms) for the following plant Focus Species within the DRECP Plan Area will be capped (see "DFA Suitable Habitat Impacts Cap" in the Glossary of Terms) in the DFAs as described below and in Table 23. The suitable habitat impact cap for these plant species is to be measured in DFAs as a group, not individually.

Triple-ribbed milk-vetch is an avoidance species in DFAs, therefore none of its suitable habitat is to be impacted.

Table 23
Plant Focus Species - DFA Suitable Habitat Impact Caps

Plant Focus Species	% of Suitable Habitat allowed to be impacted in DFAs
Alkali mariposa-lily	10%
Barstow woolly sunflower	20%
desert cymopterus	20%
Little San Bernardino Mountains linanthus	20%
Mojave monkeyflower	20%
Mojave tarplant	20%
Owens Valley checkerbloom	20%
Parish's daisy	20%

Recreation

DFA-REC-1: Retain, to the extent possible, the identified recreation setting characteristics: physical components of remoteness, naturalness and facilities; social components of contact, group size and evidence of use; and operational components of access, visitor services and management controls (see recreation setting characteristics matrix).

DFA-REC-2: Avoid large-scale ground disturbance within one-half mile of Level 3 Recreation facility footprint including route access and staging areas. If avoidance isn't practicable, the facility must be relocated to the same or higher standard and maintain recreation objectives and setting characteristics.

DFA-REC-3: SRMAs are exclusion areas for renewable energy development due to the incompatibility with the values of SRMAs. Two exceptions to this management action are:

1. geothermal development is an allowable use in the few instances in Imperial County where a geothermal-only DFA overlays the SRMA designation and the lease includes a "no surface occupancy" stipulation, with exception of three specific parcels in the Ocotillo Wells SRMA (the Special Unit Management Plan in Appendix C)
2. the VPL at Antimony Flat in Kern County overlaying the SRMA, renewable energy may be allowed on a case-by-case basis if the proposed project is found to be compatible with the specific SRMA values.

DFA-REC-4: When considering large-scale development in DFAs, retain to the extent possible existing, approved recreation activities.

Recreation Mitigation Measures

If impacts to recreation opportunities or setting characteristics identified in RMPs, or activity plans for designated recreation areas (SRMA, ERMA, OHV Areas, etc.), from proposed activities are identified, one or more of the following mitigation measures will be applied.

DFA-REC-5: For displacement of dispersed recreation opportunities, commensurate compensation in the form of enhanced recreation operations, recreation facilities or opportunities will be required. If recreation displacement results in resource damage due to increased use in other areas, mitigate that damage through whatever measures are most appropriate as determined by the Authorized Officer.

DFA-REC-6: Where activities in DFAs displace authorized facilities, similar new recreation facilities/campgrounds (including but not limited to the installation of new structures including pit toilets, shade structures, picnic tables, installing interpretive panels, etc.), will be provided.

DFA-REC-7: If designated vehicle routes are directly impacted by activities (includes modification of existing route to accommodate industrial equipment, restricted access or full closure of designated route, pull outs, and staging area's to the public, etc.), mitigation will include the development of alternative routes to allow for continued vehicular access with proper signage, with a similar recreation experience. In addition, mitigation will also include the construction of an "OHV touring route" which circumvents the activity area and allows for interpretive signing materials to be placed at strategic locations along the new touring route, if determined to be appropriate by BLM.

DFA-REC-8: Impacts from activities in a DFA to Special Recreation Permit activities will be mitigated by providing necessary planning and NEPA compliance documentation for Special Recreation Permit replacement activities, as determined appropriate on a case-by case basis.

DFA-REC-9: If residual impacts to SRMAs occur from activity impacts in a DFA, commensurate mitigation through relocation or replacement of facilities or compensation (in the form of a recreation operations and enhancement fund) will be required.

DFA-REC-10: Within ERMAs, impacts from development projects that do not enhance conservation or recreation goals will require commensurate mitigation through relocation or replacement of facilities.

Lands and Realty

DFA-LANDS-1: Lands within DFAs are available for disposal.

DFA-LANDS-2: Development of acquired lands within DFAs is allowed, at the discretion of the BLM California State Director, unless development is incompatible with the purposes of the acquisition and any applicable deed restrictions.

DFA-LANDS-3: Lands proposed for exchange in DFAs will be segregated from the public land laws for 5 years, but wind, solar, geothermal and transmission applications and their associated facilities are allowed.

DFA-LANDS-4: Review withdrawn lands in DFAs upon receipt of a ROW application and if appropriate modify to allow for issuance of ROW grants.

DFA-LANDS-5: Cost recovery funding used to process a ROW application may be used to adjudicate and remedy any conflicting land withdrawals, if necessary.

DFA-LANDS-6: Make public lands in DFAs available for selection by the CSLC in lieu of base lands within DFAs. Base lands are School Lands the State of California was entitled to but did not receive title to due to prior existing encumbrances.

DFA-LANDS-7: Transmission facilities are an allowable use and will not require a plan amendment within DFAs.

Visual Resources Management

DFA-VRM-1: Manage all DFAs as VRM Class IV to allow for industrial scale development. Employ best management practices to reduce visual contrast of facilities.

DFA-VRM-2: Regional mitigation for visual impacts is required in DFAs . Mitigation is be based on the VRI class and the underlying visual values (scenic quality, sensitivity, and distance zone) for the activity area as it stands at the time the ROD is signed for the DRECP LUPA. Compensatory mitigation may take the form of reclamation of other BLM lands to maintain (neutral) or enhance (beneficial) visual values on VRI Class II and III lands. Other considerations may include acquisition of conservation easements to protect and sustain visual quality within the viewshed of BLM lands. The following mitigation ratios will be applied in DFAs:

- VRI Class II 1:1 ratio
- VRI Class III ½ (0.5) : 1 ratio
- VRI Class IV, no mitigation required

Additional mitigation will be required where activities affect viewsheds of specially designated areas (e.g., National Scenic and Historic Trails).

Wild Horses and Burros

DFA-WHB-1: Incorporate all guidance provided by the Wild Free-Roaming Horses and Burros Act of 1971, its amendments, associated regulations, and any pertinent court rulings into the project/activity proposal, as appropriate.

DFA-WHB-2: Development that would reduce burros' access to forage, water, shelter, or space or impede their wild, free-roaming behavior in Herd Management Area is not allowed.

DFA-WHB-3: Mitigation can only occur on lands that the animals were found at the passage of the Wild Free-Roaming Horses and Burros Act of 1971. Expansion of the boundaries of a Herd Management Area back into the Herd Areas would require a land use plan amendment, the cost of which would be incurred by the applicant proposing to develop in the Herd Management Area, if part of the proposed mitigation package.

Wilderness Characteristics

DFA-WC-1: Renewable energy activities are allowed in DFAs that have been inventoried and identified as lands with wilderness characteristics.

DFA-WC-2: For inventoried lands found to have wilderness characteristics in DFAs, compensatory mitigation is required at a 1:1 ratio if wilderness characteristics are directly impacted. This may be accomplished through acquisition and donation, from willing landowners, to the federal government of (a) wilderness inholdings, (b) wilderness edge holdings that have inventoried wilderness characteristics, or (c) other areas within the LUPA Decision Area that are managed to protect wilderness characteristics. Restoration of impaired wilderness characteristics in Wilderness, Wilderness Study Area, and lands managed to protect wilderness characteristics could be substituted for acquisition.

II.4.2.9.3 Variance Process Lands

The following CMAs will be implemented in the VPLs, in addition to the LUPA-wide (LUPA-) and the DFA-VPL CMAs.

Renewable Energy

VPL-BIO-RE-1: All renewable energy activities, during the planning phase, must establish baseline conditions for Focus and BLM Special Status bird and bat species using protocols and methodologies approved by BLM in coordination with USFWS, and CDFW as appropriate.

VPL-BIO-RE-2: As part of a renewable energy activity proposal that may affect bird and bat Focus and BLM Special Status Species, a proven (e.g., peer reviewed) technology solution to bird and bat Focus and BLM Special Status Species injury and mortality must be incorporated into the activity design and operation as a mandatory element.

VPL-BIO-RE-3: As part of a renewable energy activity proposal that may conflict with Department of Defense operations, a proven (e.g., peer reviewed) technology solution to Department of Defense conflicts must be incorporated as a mandatory element.

VPL-BIO-RE-4: Each utility-scale renewable energy activity must result in a no net increase in ground disturbance within the specific ROW grant area.

VPL-BIO-RE-5: The VPL at Antimony Flat in Kern County will remain as a VPL or be removed based on consistency with the Kern County General Plan Update. If removed, renewable energy activities would no longer be an allowable use in the SRMA.

Lands and Realty

VPL-LANDS-1: Lands within VPLs are available for disposal.

Recreation and Visitor Services

VPL-REC-1: The VPL at Antimony Flat in Kern County will remain as a VPL or be removed based on consistency with the Kern County General Plan Update. If removed, renewable energy activities would no longer be an allowable use in the SRMA.

Visual Resources Management

VPL-VRM-1: Manage all Variance Process Lands as VRM Class III.

VPL-VRM-2: Regional mitigation is required for visual impacts in VPLs. Mitigation will be based on the VRI class and the underlying visual values (scenic quality, sensitivity, and distance zone) for the development area as it stands at the time the ROD is signed for the DRECP. Compensatory mitigation may take the form of reclamation of other BLM lands to maintain (neutral) or enhance (beneficial) visual values on VRI Class II and III lands. Other considerations may include acquisition of conservation easements to protect and sustain visual quality within the viewshed of BLM lands. The following mitigation ratios will be applied in VPLs:

- VRI Class II 2:1 ratio
- VRI Class III 1:1 ratio
- VRI Class IV no mitigation required

Additional mitigation will be required where activities affect viewsheds of specially designated areas (e.g., National Scenic and Historic Trails).

II.4.2.10 General Public Lands

The following CMAs apply to the General Public Lands (GPL) in the DRECP plan area as shown on Figure 10, in addition to the LUPA wide (LUPA) CMAs. As per Section II.1 and the Glossary of Terms, GPLs are within the DRECP plan area only and do not apply to lands outside the DRECP plan area but within the CDCA plan boundary. As described in Section II.3.2.3, the BLM has the discretion to deny renewable energy rights-of-way that do not conform to the LUPA, including the GPL CMAs below.

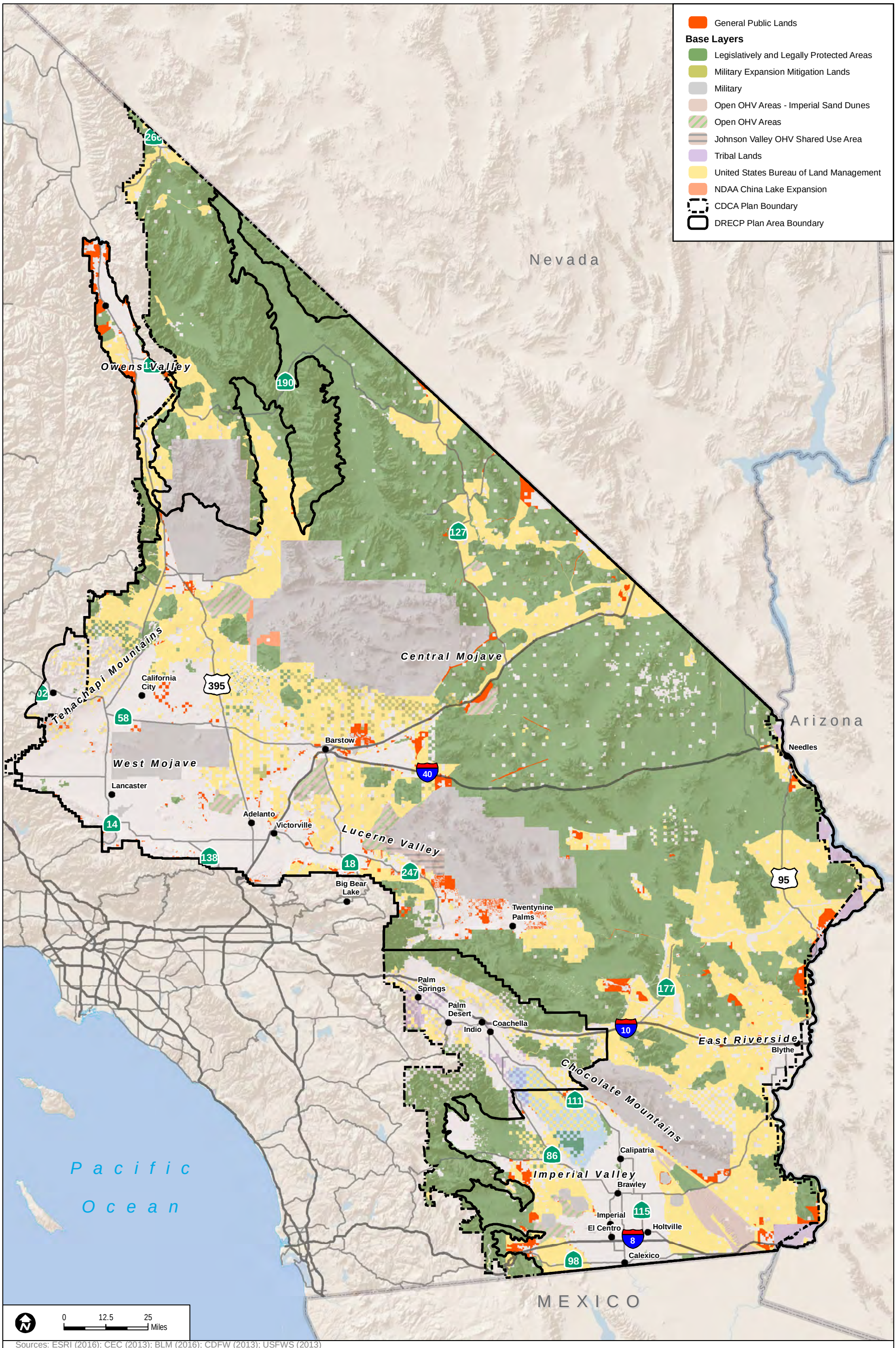
GPL-1: DRECP LUPA Biological and Cultural Conservation Design – Activities that may have a measurable (i.e. the effect can be evaluated) adverse impact (direct, indirect or cumulative) on the biological or cultural conservation strategies, including individual California Desert National Conservation Lands, ACEC and/or Wildlife Allocation units of the DRECP LUPA are not allowed.

GPL-2: DRECP LUPA Recreation Design - Activities that may have a measureable (i.e. the effect can be evaluated) adverse impact (direct, indirect or cumulative) on the recreation design, including individual SRMAs and ERMAs, of the DRECP LUPA are not allowed.

GPL-3: DRECP LUPA Renewable Energy and Transmission Design - Activities that may have a measurable (i.e. the effect can be evaluated) adverse impact (direct, indirect, or cumulative) on the renewable energy and transmission design, including individual DFAs and VPLs, are not allowed.

GPL-4: Renewable Energy Activities – A renewable energy activity that is not transmission aligned (see Glossary of Terms), as per the DRECP energy development design, is not allowed.

GPL-5: DRECP LUPA – Activities that may have a measurable (i.e. the effect can be evaluated) adverse impact (direct, indirect, or cumulative) on the LUPA-wide structure, and implementation of the DRECP LUPA are not allowed.



Sources: ESRI (2016); CEC (2013); BLM (2016); CDFW (2013); USFWS (2013)

FIGURE 10

DRECP LUPA General Public Lands

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II.4.2.10.1 Comprehensive Trails and Travel Management

GPL-CTTM-1: Avoid Tier 1, Tier 2, Tier 3 roads/primitive roads/trails, Backcountry Byways, and other significant linear features (as defined in the LUPA-wide CMAs). If avoidance is not practicable, relocate access to the same or higher standard and maintain the recreation setting characteristics and access to recreation activities, facilities, and destination.

GPL-CTTM-2: If residual impacts to Tier 1 and Tier 2 roads/primitive roads/trails, Backcountry Byways, or other significant linear features cannot be protected and maintained, commensurate compensation in the form of an enhanced recreation operations, recreation facilities or opportunities will be required.

II.4.2.10.2 Cultural Resources and Tribal Interests

The following CMAs are for renewable energy and transmission land use authorizations. All other activities will be subject to the NHPA Section 106 process.

GPL-CUL-1: For renewable energy activities and transmission, the applicant is required to pay all appropriate costs associated with the following processes, through the appropriate BLM funding mechanism:

- All appropriate costs associated with the BLM's analysis of the DRECP geodatabase and other sources for cultural resources sensitivity.
- All appropriate costs associated with preliminary sensitivity analysis.
- All appropriate costs associated with the Section 106 process including the identification and defining of cultural resources. These costs may also include logistical, travel, and other support costs incurred by tribes in the consultation process.
- All appropriate costs associated with updating the DRECP cultural resources geodatabase with project specific results.

GPL-CUL-2: For renewable energy activities and transmission, management fee, defined at a per acre rate and annual escalation provision for the life of the grant, will paid to the BLM as partial mitigation for the cumulative effects on cultural resources across the DRECP Plan Area and may be used to develop regional research designs and other forms of off-site and compensatory mitigation.

GPL-CUL-3: For renewable energy activities and transmission, the management fee rate will be determined through the NHPA programmatic Section 106 consultation process that will be completed as part of the DRECP LUPA.

GPL-CUL-4: For renewable energy activities and transmission, applicant must demonstrate that results of cultural resources sensitivity, based on the DRECP geodatabase, and other sources, are used as part of the initial planning pre-application process and to select of specific footprints for further consideration.

GPL-CUL-5: For renewable energy activities and transmission, applicants will provide a statistically significant sample survey as part of the pre-application process, unless the BLM determines the DRECP geodatabase and other sources are adequate to assess cultural resources sensitivity of specific footprints.

GPL-CUL-6: For renewable energy activities and transmission, applicants will provide justification in the application why the project considerations merit moving forward if the specific footprint lies within an area identified or forecast as sensitive for cultural resources by the BLM.

GPL-CUL-7: For renewable energy activities and transmission, applicants will complete the NHPA Section 106 Process as specified in 36 CFR Part 800, or via an alternate procedure, allowed for under 36 CFR Part 800.14 prior to issuing a ROD or ROW grant on any utility-scale renewable energy or transmission project. For utility-scale solar energy developments, the BLM may follow the Solar Programmatic Agreement, if applicable.

II.4.2.10.3 Lands and Realty

GPL-LANDS-1: Lands within GPL are unavailable for disposal.

GPL-LANDS-2: Cost recovery funding used to process a ROW application may be used to adjudicate and remedy any conflicting land withdrawals, if necessary.

II.4.2.10.4 Livestock Grazing

GPL-LIVE-1: Avoid siting solar developments in active livestock grazing allotments. If a ROW is granted for solar development in an active livestock grazing allotment, prior to solar projects being constructed in active livestock allotments, an agreement must be reached with the grazing permittee/lessee on the 2-year notification requirements. If any rangeland improvements such as, but not limited to, fences, corrals, or water storage projects, are to be impacted by energy projects, reach agreement with the BLM and the grazing permittee/lessee on moving or replacing the range improvement. This includes the costs for NEPA, clearances, and materials.

GPL-LIVE-2: In California condor use areas, wind energy ROWs will include a term and condition requiring the permittee and wind operator to eliminate grazing of livestock.

GPL-LIVE-3: A no surface occupancy stipulation will be included on geothermal leases in active grazing allotments.

II.4.2.10.5 Recreation and Visitor Services

GPL-REC-1: Retain, to the extent possible, the identified recreation setting characteristics: physical components of remoteness, naturalness and facilities; social components of contact, group size and evidence of use; and operational components of access, visitor services and management controls (see recreation setting characteristics matrix).

GPL-REC-2: Avoid large-scale ground disturbance within one-half mile of Level 3 Recreation facility footprint including route access and staging areas. If avoidance isn't practicable, the facility must be relocated to the same or higher standard and maintain recreation objectives and setting characteristics.

GPL-REC-3: When considering large-scale development in the GPL areas, retain to the extent possible existing, approved recreation activities.

GPL Recreation Mitigation Measures

If impacts to recreation opportunities or setting characteristics identified in RMPs, or activity plans for designated recreation areas (SRMA, ERMA, OHV Areas, etc.), from proposed activities are identified, one or more of the following mitigation measures will be applied.

GPL-REC-4: For displacement of dispersed recreation opportunities, commensurate compensation in the form of enhanced recreation operations, recreation facilities or opportunities will be required. If recreation displacement results in resource damage due to increased use in other areas, mitigate that damage through whatever measures are most appropriate as determined by the Authorized Officer.

GPL-REC-5: Where activities displace authorized facilities, similar new recreation facilities/campgrounds (including but not limited to the installation of new structures including pit toilets, shade structures, picnic tables, installing interpretive panels, etc.), will be provided.

GPL-REC-6: If designated vehicle routes are directly impacted by activities (includes modification of existing route to accommodate industrial equipment, restricted access or full closure of designated route, pull outs, and staging area's to the public, etc.), mitigation will include the development of alternative routes to allow for continued vehicular access with proper signage, with a similar recreation experience. In addition, mitigation will also include the construction of an "OHV touring route" which circumvents the activity area and

allows for interpretive signing materials to be placed at strategic locations along the new touring route, if determined to be appropriate by the Authorized Officer.

GPL-REC-7: Impacts from third-party activities to authorized Special Recreation Permit activities will be mitigated by providing necessary planning and NEPA compliance documentation for Special Recreation Permit replacement activities, as determined appropriate on a case-by-case basis.

GPL-REC-8: If residual impacts to SRMAs occur from third party activity impacts in GPLs areas, commensurate mitigation through relocation or replacement of facilities or compensation (in the form of a recreation operations and enhancement fund) will be required.

GPL-REC-9: Within ERMAs, impacts from third-party development projects that do not enhance conservation or recreation goals will require commensurate mitigation through relocation or replacement of facilities.

II.4.2.10.6 Visual Resources Management

GPL-VRM-1: Development in GPLs is required to incorporate visual design standards and include the best available, most recent BMPs, as determined by BLM (e.g. Solar, Wind, West Wide Energy Corridor, and Geothermal PEISs, the Best Management Practices for Reducing Visual Impacts of Renewable Energy Facilities on BLM-Administered Lands, and other programmatic BMP documents).

GPL-VRM-2: Required Visual Resource BMPs. All development will abide by the BMPs addressed in the most recent version of the document "*Reducing Visual Impacts of Renewable Energy Facilities on BLM-Administered Lands*" or its replacement, including, but not limited to the following:

- Transmission:
    - Color-treat monopoles Shadow Gray per the BLM Environmental Color Chart CC001 unless a more effective color choice is selected by the local Field Office VRM specialist.
    - Lattice towers and conductors will have non-specular qualities.
    - Lattice Towers will be located a minimum of 3/4 miles away from Key Observation Points such as roads, scenic overlooks, trails, campgrounds, navigable rivers and other areas people tend to congregate and located against a landscape backdrop when topography allows.

- Solar – Color treat all facilities Shadow Gray from the BLM Environmental Color Chart CC001 unless a more effective color is selected by the Field Office VRM specialist, including but not limited to:
    - Concentrated solar thermal parabolic trough panel backs
    - Solar power tower heliostats
    - Solar power towers
    - Cooling towers
    - Power blocks
- Wind – Color treat all facilities Shadow Gray with the exception of the wind turbine and towers 200 vertical feet or more.
- Night Sky – BMPs to minimize impacts to night sky including light shielding will be employed.

GPL-VRM-3: Regional mitigation is required for visual impacts in GPLs. Mitigation will be based on the VRI class and the underlying visual values (scenic quality, sensitivity, and distance zone) for the development area as it stands at the time the ROD is signed for the DRECP. Compensation may involve reclamation of visual impacts that are present within other areas designated as BLM VRM Class I or II lands (so that they are no longer visible in the long term), mitigation on BLM lands inventoried as having equal to or greater visual resource values, or amending RMP for lands located within VRM Class III or IV to a higher level of protection (VRM Class I or II) for areas that are visually intact with no cultural modifications and have visual resource inventoried values that are equal to or greater in value and place a protective Visual ACEC delineated around the compensatory mitigated area. The following mitigation ratios will be applied:

- VRI Class II 2:1 ratio
- VRI Class III 1:1 ratio
- VRI Class IV no mitigation required

Additional mitigation will be required where projects affect viewsheds of specially designated areas (e.g., National Scenic and Historic Trails).

II.5 CDCA Plan Amendments

The following decisions apply to the CDCA Plan, but not the other RMPs amended by the DRECP LUPA.

II.5.1 Multiple-Use Classes

The DRECP LUPA eliminates the multiple-use classes (MUCs) in the CDCA. Because the LUPA identifies California Desert National Conservation Lands, ACECs, Wildlife Allocations, SRMAs, ERMAs, DFAs, VPLs, and GPLs, and specific CMAs for those allocations and areas, retaining the MUCs created duplicative and potentially contradictory management. Many of the concepts of the MUCs were maintained, but with different names.

Table 24 presents an overview of how the CDCA's MUCs under the No Action Alternative translate to the DRECP LUPA land allocations in management objectives/allowable uses. Where the DRECP LUPA is silent on a resource, activity, or use, this table provides guidance on which decisions in the CDCA Plan would apply. For example, if an area is an ACEC, the BLM would apply the decisions for Class Limited (L) if the DRECP LUPA did not provide direction.

Table 24
DRECP LUPA and CDCA Multiple-Use Class Crosswalk

CDCA Class	DRECP LUPA Allocation
MUC C Controlled Use (Wilderness Management) (Note: Class C identifies areas "preliminarily recommended" for wilderness designation by Congress. The CDCA guidelines summarize the kinds of management likely to be used in these areas after formal designation of wilderness by Congress.)	Unchanged, no new allocation
MUC L Limited Use	California Desert National Conservation Lands (outside of Wilderness and Wilderness Study Areas) Areas of Critical Environmental Concern (ACECs) Wildlife Allocations
MUC M Moderate Use	Special Recreation Management Areas (SRMAs) that do not overlap with ACECs, California Desert National Conservation Lands, or OHV-open areas General Public Lands Variance Process Lands
MUC I Intensive Use	OHV-open areas Development Focus Areas

III MONITORING AND ADAPTIVE MANAGEMENT PROGRAM

The monitoring and adaptive management program (MAMP) is an integral part of implementing the DRECP LUPA. This section describes the BLM MAMP framework. The monitoring elements of the MAMP include activity-level monitoring for compliance with BLM approvals (i.e., compliance monitoring) and land use plan monitoring, which includes both implementation and effectiveness monitoring and monitoring for validation of management actions. The adaptive management element of the MAMP is an iterative process designed to continually improve the understanding of managed systems and inform their management over time.

III.1 Federal Guidelines and Policies Related to Monitoring and Adaptive Management

This section summarizes the federal regulations and policies that address the role of monitoring and adaptive management in the DRECP LUPA.

BLM Land Use Plan Amendment

The regulations in 43 CFR 1610.4-9 require that land use plans establish intervals and standards for monitoring and evaluation based on the sensitivity of the resource decisions, with additional specificity in the BLM Land Use Planning Handbook (H-1601-1), Chapter V (BLM 2005). Land use plan monitoring includes both implementation monitoring (also called compliance monitoring in this section) and effectiveness monitoring. In addition to monitoring, the BLM must periodically evaluate the land use plan and periodic plan monitoring reports to determine whether the land use plan decisions and NEPA analysis are still valid and whether the land use plan is being implemented. NEPA requires mitigation monitoring in 40 CFR 1505.2(c), with additional specificity provided in the BLM NEPA Handbook (H-1790-1), Chapter 10 (BLM 2008b).

Implementation monitoring is the process of tracking and documenting the implementation, or the progress toward implementation, of land use plan decisions. Effectiveness monitoring is the process of collecting data and information as the plan is being implemented in order to determine whether or not desired outcomes are being met or whether progress is being made toward meeting them.

[Activity] Project-Level Monitoring

BLM requires that holders of ROW grants fund monitoring associated with those grants (43 CFR 2805.16-17). This is done through preparation and funding of an Environmental and Construction Compliance Monitoring Plan (ECCMP) to ensure

compliance with BLM terms, conditions, and stipulations in the ROW grants, the Plan of Development, and required mitigation.

The purpose of the ECCMP is to provide an on-the-ground approach to compliance during project development designed to facilitate successful implementation. This includes the following requirements:

- Required mitigation approved in the RODs, designed to minimize undue and unnecessary degradation to public lands, and offset impacts to the human, environmental, and cultural environment
- Implementation plans based on mitigation requirements
- Terms, conditions, and stipulations in the ROW grant
- Conditions in Notices to Proceed
- Approved methods and construction plans contained in the Plan of Development, which mirror the action approved in the ROD

BLM Assessment, Inventory, and Monitoring Strategy

The BLM Assessment, Inventory, and Monitoring (AIM) Strategy was initiated, in part, to evaluate current monitoring activities and recommend procedures to improve the efficiency and effectiveness of these activities. The AIM Strategy provides guidance on collecting monitoring data that are essential for, and effective in, informing defendable land management (Toevs et al. 2011).

To effectively manage renewable resources and other resources and activities, the BLM needs information at multiple spatial and temporal scales about resource extent, condition and trend, stressors, and the location and nature of authorized uses, disturbances, and projects. Acquiring and assessing this information would be accomplished through integrating several fundamental processes (i.e., the integrated approach), including: (1) development and application of a consistent set of ecosystem indicators and methods for measuring them (i.e., core quantitative indicators and consistent methods for monitoring); (2) development and implementation of a statistically valid sampling framework; (3) application and integration of remote sensing technologies; and (4) implementation of related data acquisition and management plans (Toevs et al. 2011).

The BLM used the AIM Strategy as the basis for development of the Riverside East Solar Energy Zone (SEZ) Long-Term Monitoring and Adaptive Management Pilot Project (Toevs et al. 2011; BLM 2014b). The pilot project serves as an example of a comprehensive, cost-effective, monitoring strategy to better understand the long-term, landscape-level impacts of solar energy development, and other activities on BLM lands, and will inform

development of similar and other monitoring strategies. The following are elements of a framework MAMP using the AIM strategy:

- Frame the issue
- Understand the system
- Develop objectives
- Assemble background and existing information
- Develop monitoring and sampling schema
- Create/finalize monitoring plan
- Implement data collection and management
- Analysis and reporting
- Adaptive management loop

Department of the Interior Adaptive Management Implementation Policy

DOI Departmental Manual 522 DM 1, Adaptive Management, provides policy guidance for DOI bureaus and offices to incorporate adaptive management strategies into their land and resource management decisions (DOI 2008). The DOI's policy is to encourage the use of adaptive management, as appropriate, as a tool in managing lands and resources.

III.2 Monitoring

III.2.1 Activity-Level Monitoring

For all authorized activities on BLM land, the AIMs strategy will be used to guide the design of the specific activity-level monitoring plan appropriate for the individual activity. Third-party activities requiring a ROW grant will follow the strategy below.

Third-Party Activity-Level Monitoring

BLM requires holders of ROW grants to prepare and fund an ECCMP to ensure compliance with the BLM terms, conditions, and stipulations in the ROW grants, the Plan of Development, and required mitigation as provided for in the ROD (43 CFR 2805.16-17). The ECCMP also ensures that environmental conditions are monitored during the construction, operation, and decommissioning, if applicable, phases of a project. The ECCMP identifies a compliance contractor; monitoring requirements for each of the environmental resources on a project site; establishes metrics against which monitoring observations can be measured; identifies potential mitigation measures; and establishes

protocols for incorporating monitoring observations and additional mitigation measures into standard operating procedures and BMPs.

BLM Compliance Monitoring Contractor

The compliance monitoring contractor would provide a compliance manager and on-the-ground compliance monitors to oversee and conduct inspections of construction, operations, and decommissioning, if applicable, activities, to evaluate and document compliance or non-compliance with required project measures and conditions during such activities. The compliance manager would be the point of contact position designated by the compliance contractor and would report to the BLM Authorized Officer or the designated BLM Compliance Manager for all compliance-related issues. The on-site compliance monitor would report to the compliance manager and be responsible for observing and reporting compliance with all terms, conditions, and stipulations of the BLM ROW grants for construction, operations, and decommissioning, if applicable, activities. The BLM Authorized Officer would be the BLM official with administrative authority for ROW grant issuance and authority for accepting and approving project-related changes. The BLM may also identify additional staff as additional designated Compliance Contacts, as needed for a specific project.

Although the compliance monitoring contactor directly contracts with the applicant for compliance monitoring services, including designation of service fees, the contract between the compliance monitoring contractor and the applicant may not be terminated without prior authorization of the BLM Authorized Officer.

To meet the compliance monitoring objectives, the ECCMP would include several required elements:

- The compliance monitoring contractor's responsibilities on the behalf of the BLM
- The compliance monitoring contractor's day-to-day tasks
- The compliance monitoring contractor's decision-making authority

Typical tasks carried out by the compliance manager would include:

- Oversight of the ECCMP
- Preparation of relevant project materials
- Participation in the BLM preconstruction meeting
- Participation in the applicant's environmental compliance training program
- Supervision and review of all environmental monitoring activities, materials, schedules and budgets

- Supervision of the compliance monitors
- Guidance on and review of compliance issues
- Review and processing of variance requests (see *Variances* below), in coordination with BLM and permitting or reviewing agencies, as necessary
- Review and distribution of daily and other periodic reports
- Confer regularly with the BLM Compliance Manager and Compliance Contacts
- Serve as contact between BLM and applicant
- Serve as BLM's representative to permitting agencies, private landowners, and special interest groups regarding environmental compliance monitoring efforts and issues

On-site compliance monitors would be qualified and experienced in their particular tasks and would possess all required authorizations and permits needed to carry out their monitoring tasks. All compliance monitors would be familiar with the ECCMP, participate in the BLM preconstruction meeting, participate in the applicant's environmental compliance training program, and receive additional training, as needed, from the compliance monitoring contractor. All compliance monitors would be familiar with the permit requirements, project organizational structure, required building codes, fire codes, construction, operations and decommissioning documents, other relevant building standards, environmental compliance reporting responsibilities, and the chain of communication. Compliance monitors would maintain daily contact with the compliance manager.

BLM Compliance Monitoring and Reporting

The compliance monitoring contractor would be required to provide adequate full-time on-the-ground compliance monitors during all construction, operations, and decommissioning, if applicable, activities. The number of compliance monitors required at any given time would depend on the type of activities, and therefore would be subject to ongoing evaluation and adjustment over time. For example, large-scale grading activities during construction likely would require more intensive compliance monitoring than routine operations. Monitoring adjustments could also be made in response to noncompliance problems, site-specific conditions during construction (e.g., seasonal use by wildlife), and the skill level and behavior of the contractor crews and foreperson.

Typically compliance monitoring of construction activities would occur on a daily basis and sensitive environmental resource areas would be inspected on a regular basis to ensure protection. During construction, the compliance monitors would communicate with the project inspectors on a regular basis to discuss the status of the construction activities and

significant near-term (e.g., 2–3 days) construction activities. The compliance monitors would have the authority to immediately halt a noncompliance activity that is damaging or has the potential to damage a sensitive environmental resource, or an activity that is not being performed to building and construction standards.

The compliance monitors would submit daily monitoring reports, including photo-documentation as appropriate, for each location visited on that day. Each activity monitored would be assigned a compliance level (described below) and documented in a weekly report. The daily and weekly reports would be compiled in weekly summary database and made readily available to relevant agencies, including BLM and permitting agencies (e.g., on a non-public applicant website).

The daily and weekly reports would include relevant monitoring information, including, but not limited to:

- Description of general type of activity (i.e., construction grading, operation, decommissioning) and specific activity (e.g., grading, vegetation removal, erosion control)
- Percent of activity complete (for construction and decommissioning) or some other metric agreed to by BLM
- Presence/absence of environmentally sensitive resources
- Compliance level, including:
    - Communication: a communication report to document and track relevant meetings or discussions between the compliance monitor and agencies, applicant representatives, other monitors, inspectors, or contractor personnel.
    - Acceptable: inspected area or activity is in compliance with project specifications and mitigation measures.
    - Problem area: inspected area or activity that does not meet acceptable compliance with project specifications and mitigation measures, but is not yet in noncompliance. This level is intended to identify issues or conditions that could result in non-compliance or a serious violation without remediation or corrective action.
    - Noncompliance: inspected area or activity that violates project specifications or other requirements, damages sensitive environmental resource(s), or places sensitive environmental resources, personal safety, or worker safety at unnecessary risk.
    - Serious violation: inspected area or activity that is in noncompliance and causes or poses risks of substantial harm or threat to sensitive environmental resources or worker/public safety. This level requires immediate reporting of the violation

and direct communication among the compliance manager, the BLM Compliance Manager, and the relevant applicant representative regarding the violation, corrective actions, and possible enforcement actions.

Monthly reports would be issued that summarize the activities conducted during the reporting periods and would include at minimum the following information:

- A summary of reports completed by compliance monitors by compliance level (e.g., number of communications, acceptable reports, etc.) during the prior month and cumulatively to date for the project
- A summary of the variances approved by the compliance manager and compliance monitors and the net affected acreage during the prior month and cumulatively to date for the project

The compliance monitoring contractor would make the monthly report readily available to BLM and other relevant agencies, including permitting agencies (e.g., on a non-public applicant website).

Variances

Unforeseen and unavoidable situations often occur during construction, operations or decommissioning activities that require changes or adjustments to project methods and/or mitigation measures. Examples of such changes include route realignments, extra workspace, changes to previously approved construction work areas, and discrepancies or inconsistencies in project materials. Such necessary changes would be processed through variance requests submitted by the applicant to the BLM for review and approval or denial. In some cases, BLM may delegate authority over variances to the compliance monitoring contractor.

Typically three variance levels are used to process variance requests:

1. **Level 1 Variances (Field Decisions):** Site-specific, minor, performance-based changes to project specifications, construction methods, or mitigation measures that result in similar or better protection of sensitive environmental resources or better constructability. Level 1 variances could be reviewed and approved or denied in the field by compliance monitors. Examples of Level 1 variances include erosion control structure modifications and minor site-specific plan specifications such as relocating a spoil storage area or minor changes to project design necessitated by site restrictions. Level 1 variances could also be used to communicate agency-directed changes to mitigation measures.

2. **Level 2 Variances:** Project changes that exceed the field decision authority of the compliance monitor and require processing and approval by the BLM Compliance Manager. Level 2 variances typically would be required for project changes that would affect BLM-administered lands outside the previously approved work area, but within areas that were already surveyed for sensitive environmental resources. Level 2 variances would usually require review of additional documentation, correspondence, and records. Examples of Level 2 variances would include additional work space outside the previously approved work area, but within previously surveyed areas; use of existing access roads not previously approved for use and that are not considered a "like use" that could be approved under a Level 1 variance; and project plan modifications different from the approved Plan of Development.
3. **Level 3 Variances:** Project changes that would affect BLM-administered lands outside the previously approved work area, and which had not been surveyed for sensitive environmental resources and/or would change the function, structure, technology required, or other part of the approved project. Level 3 variances could require review of additional documentation (including site surveys for sensitive environmental resources), correspondence, and records. A Level 3 variance could also require an amendment to the ROW grant. A Level 3 variance would be signed by the BLM Authorized Officer or the BLM Compliance Manager.

Stop Work Authority

A key component of effective environmental compliance monitoring would be stop work authority. The BLM would have the authority to stop work if project activities deviate from the protection requirements for sensitive environmental resources or from the approved project activities authorized by the BLM ROW grant. BLM may delegate stop work authority to the compliance monitoring contractor, compliance manager, or compliance monitor, as deemed appropriate by BLM. Any stop work order would be immediately followed by formal written temporary suspension from the BLM Compliance Manager or BLM Authorized Officer.

Preconstruction Meeting

The compliance monitoring contractor would ensure that BLM conducts a preconstruction meeting prior to issuance of any Notices to Proceed. During the preconstruction meeting, the BLM Compliance Manager would discuss the requirement of the ROD, the ROW grant, the Plan of Development, and any additional stipulations. The compliance manager and at least one compliance monitor would participate in the preconstruction meeting.

Compliance Training and Education

The compliance monitoring contractor would be responsible for training its staff (or generally the environmental inspection team) and the construction personnel prior to the start of construction, with relevant BLM staff participating in the environmental training program. The environmental training program would follow the preconstruction meeting (see *Preconstruction Meeting* above). The BLM Compliance Manager or compliance manager would be responsible for conveying the components of the ECCMP, including the protection measures, the daily activities of the compliance monitors, the chain of command, the variance process, conflict resolution, stop work authority, etc. In addition, the compliance monitoring contractor would also train compliance monitors in all project duties and tasks, as described above in *BLM Compliance Monitoring Contractor*.

III.2.2 Land Use Plan Monitoring

Under the BLM LUPA, the BLM would conduct land use plan monitoring, which includes both implementation and effectiveness monitoring. In BLM terminology, implementation monitoring is the process of tracking and documenting the implementation, or the progress toward implementation, of land use plan decisions. The effectiveness monitoring component is the process of collecting data and information as the plan is being implemented in order to determine whether or not desired outcomes are being met or whether progress is being made toward meeting them.

III.2.2.1 Ground Disturbance Threshold Ecoregion Trend Monitoring

To monitor the overall general condition and ground disturbance trend of the California Desert National Conservation Areas and ACECs, one ecoregion per year, on a continual rotating basis, will be assessed in relation to a 1% ground disturbance threshold. This monitoring and assessment will begin one year after the signing of the DRECP LUPA ROD. The ecoregion(s) within the West Mojave Trails and Travel Management Plan (WMRNP) will be monitored and assessed no sooner than 5 years after the signing of the DRECP LUPA ROD. The BLM California State Director will determine the order of the ecoregional trend monitoring.

The results of the trend monitoring, in combination with other pertinent ecological and cultural data, may trigger the adaptive management process, relative to changes, up or down, of the ground disturbance caps, ground disturbance mitigation requirements, or ground disturbance mitigation ratios (see CMAs NLCS-DIST-2 and ACEC-DIST-2).

III.2.2.2 Resource-Specific Monitoring Examples

The following sections provide example monitoring strategies for cultural resources and tribal interests, recreation, and visual resources. These examples may be adjusted if needed during the life of the LUPA. For other resources, the BLM would monitor the LUPA decisions, as appropriate, and CMAs and implement adaptive management as necessary.

Cultural Resources

The DRECP LUPA identifies goals and objectives, and CMAs for protection and management of cultural resources in the DRECP LUPA Decision Area. The BLM will monitor the California Desert National Conservation Lands to ensure the identified nationally significant cultural values are being managed appropriately to protect those values. In ACECs, the BLM will monitor the cultural values that make up the relevant and important values. For the overall DRECP LUPA actions, BLM will monitor the cultural resources to ensure the purpose of the LUPA is met.

The CMAs for cultural resources and tribal interests provide a method to identify and protect archaeological data, identify places with traditional cultural and religious importance to federally recognized Native Americans, and design BLM actions to minimize impacts to cultural resources, among others. The management of cultural resources on BLM land is done in compliance with multiple federal laws. The CMAs are developed and recommended by an appropriately staffed interdisciplinary team in accordance with policies described in the BLM Manual, Sections 8100 through 8170, and consistent with the statewide protocol with the California SHPO and other guidelines from the SHPO.

Monitoring the cultural resources and tribal interests CMAs allow the BLM to review whether the implementation of the CMAs meets the stated goals and objectives. Monitoring also provides an opportunity to revise and adapt the CMAs if necessary, to support the nature and purposes of the trail.

Avoiding and Minimizing Impacts to Cultural Resources and Tribal Interests

The CMAs for the entire LUPA Decision Area require identification of cultural resources prior to use of this land and includes taking the cultural resources sensitivity into consideration prior to selecting a renewable energy site in a DFA. The BLM must ensure that actions and authorizations in the LUPA Decision Area are designed first to minimize impacts on cultural resources including places of traditional cultural and religious importance to federally recognized Native Americans.

The CMAs require all development to abide by the requirements established in Section 110, Section 106, and Section 304 of the National Historic Preservation Act and Section 9 of the Archaeological Resources Protection Act.

Monitoring

Because it is unlikely that all cultural resources and tribal interests would be completely avoided by activities, monitoring the CMAs is an important step to ensure they are achieving the desired goals and objectives. Monitoring the CMAs is also important to ensure the California Desert National Conservation Lands and ACECs are protecting the resources for which they were established.

The BLM, in cooperation with others, will develop interpretive materials and design trainings to provide stewardship programs to protect cultural resources and tribal interests. In order to ensure these types of actions meet the goals and objectives of the CMAs, the BLM will monitor the effects. This requires establishing a baseline, monitoring the disturbance of archaeological sites, and monitoring natural and man-made threats to cultural resources that can be quantified.

The baseline data allows the BLM to clearly identify whether the CMAs are achieving their desired results and if they are not, adapt those actions. By continuously monitoring the CMAs, the BLM and its partners can identify standard protection measures and best management practices that can be used widely throughout the LUPA Decision Area.

The CMAs also provide protection for cultural resources and tribal interests in areas where renewable energy and transmission would be built. The CMAs include a management fee to be paid to the BLM as partial mitigation for cumulative effects that could be used to develop regional research designs and other forms of off-site and compensatory mitigation. Monitoring the success of regional designs is also necessary to ensure they are successful. As with all monitoring, this allows the BLM to adapt and revise the regional design if it does not achieve the desired results.

Recreation

The DRECP LUPA identifies goals and objectives for the LUPA recreation decisions in Section II.4.1.9, as well as a comprehensive suite of required CMAs that would avoid and/or minimize adverse impacts to recreational resources. The recreational CMAs are extensive and include management actions for the SRMAs and ERMAs designated through the BLM LUPA including management for renewable energy projects.

The CMAs also provide for recreation opportunities in the NLCS lands, ACECS, and Wildlife Allocations such that these areas are potentially available for recreation even though their

primary goals are not recreation but rather biological and culture conservation. Monitoring the CMAs will allow the BLM to review whether the implementation of the CMAs meet the goals and objectives and provides an opportunity to revise and adapt the CMAs if necessary.

The Recreation and Visitor Services goals and objectives draw on the BLM California-specific Recreation and Visitor Services Strategy was completed in 2008 (BLM 2008a). This Strategy was designed to meet the specific needs and changing demands of recreation visitors and changes in BLM recreation management. It includes a number of actions that are folded into the DRECP goals and CMAs and that can and should be monitored. Examples include:

- Completing an inventory of the recreation setting characteristics
- Administering the setting to maintain diversity across the spectrum of recreation experiences
- Working with business, organized recreation groups, outfitters, communities, and interesting individuals to care for public lands
- Planning and managing lands for sustainable recreation-tourism
- Working to identify appropriate fees in collaboration with communities, local governments, the private sector, and other agency cooperators
- Improving information regarding travel routes including GIS mapping
- Designing sustainable travel systems that meet recreationists needs
- Developing facilities and resources through partnerships and expanding visitor education, among many others

Avoiding and Minimizing Impacts to Recreation

The BLM developed a number of CMAs to avoid or minimize impacts of renewable development and also to encourage and enhance the designation of areas managed for recreation. Specifically the BLM is seeking to improve access to recreation opportunities, ensure a quality experience and enjoyment of natural, biological, and cultural resources, and provide for and receive fair value in recreation.

Because the LUPA designates 2.6 million acres of SRMAs and 903,000 acres of ERMAs, avoiding and minimizing impacts to these lands is important to ensure that these designations meet their objectives. CMAs are designed to protect the SRMAs and ERMAs while retaining other appropriate use. To facilitate this, the BLM designed mitigation measures that are part of the CMAs to reduce impacts to recreation setting characteristics identified in Field Office RMPs or activity plans. Monitoring these measures and adapting to

the information would ensure the successful meeting of the recreation goals provided in the LUPA and CMAs.

Monitoring

In order to monitor recreation the BLM needs to establish key parameters of the CMAs to be measured to review success. Such parameters will include monitoring the particular allocations or the LUPA Decision Area to quantify the number of recreational visits, types of recreational activities and use patterns, accomplishment of management objectives, and potential adverse impacts to resources and visitor experiences from recreational use. Monitoring programs will include actions such as:

- Installing and monitoring vehicle counters to observe visitation levels
- Monitoring campground use to gauge visitor use patterns
- Observing and documenting use of elements such as wildlife guzzlers to observe wildlife use levels
- Engaging wildlife viewer to survey migratory birds to assess bird populations and visitor enthusiasm
- Visitor use surveys, including outcomes-focused surveys and focus groups

The results of the monitoring will provide an opportunity to identify actions to protect resources, enhance visitor experiences, and deal with health and safety needs in the area. The BLM, and any other management partners, will engage the SRMA visitors through visitor surveys to ascertain patterns, preferences, and demographics.

Monitoring will help the BLM to detect and document natural and human-induced changes in resource conditions and visitor experiences, and offer insights into the effectiveness of resource management policies and objectives. It will also help agency personnel understand what might be driving the changes requiring intervention (corrective management actions or strategies).

Based on the information gathered, the BLM will ensure the CMAs are successful or adapt them if necessary to meet the ultimate recreation goals and objectives. The BLM may also consider refining the SRMA objectives and desired recreation setting characteristics based on monitoring results.

Visual Resources

The DRECP LUPA identifies a comprehensive suite of required CMAs to avoid, minimize, and/or mitigate adverse impacts on visual resources . The Visual Resource CMAs are extensive, and incorporate state-of-the-art BMPs that have been developed by BLM specifically for

renewable energy development in the context of the Energy Policy Act of 2005, the FLPMA, and the BLM's Visual Resource Management (VRM) System.

Avoiding and Minimizing Visual Impacts

A number of CMAs were developed specifically to avoid or minimize impacts. A fundamental example is the CMA requiring project proponents to demonstrate and ensure that development (including transmission facilities) within each of the VRM Class polygons meets the management objectives of that VRM Class, as measured through a visual contrast rating process.

Other CMAs will avoid or minimize impacts by assigning VRM Classes to DFAs and to certain visually sensitive lands. Examples include:

- Managing all DFAs as VRM Class IV
- Managing all Variance Process Lands as VRM Class III
- Managing all NSHT Corridors, and Lands managed for Wilderness Characteristics as VRM Class II
- Managing all Wilderness and Wilderness Study Areas (WSAs) as VRM Class I (as per current BLM Policy)

Importantly, the CMAs for Visual Resource Management require all development, whether within or outside of DFAs, to abide by the BMPs addressed in the BLM's *Reducing Visual Impacts of Renewable Energy Facilities on BLM-Administered Lands*. Included are BMPs specific to wind, solar or geothermal energy development, as well as those for the design, construction, operation, and decommissioning activities common elements, detailed under the following categories:

- Visual impact analysis and mitigation planning
- Facility siting and design
- Structure design and materials selection
- Materials surface treatments
- Lighting design and operation
- Avoiding unnecessary disturbance
- Soil management and erosion control
- Vegetation management
- Interim and long-term reclamation
- "Good housekeeping" practices

The BLM designed the BMPs to be highly effective and neither expensive nor difficult to implement, particularly if incorporated early in the development process. Examples include successful revegetation, recontouring to match existing terrain characteristics, or painting facility components to blend with the landscape background.

Compensatory mitigation requirements of CMAs include reclamation of visual impacts on off-site lands at various ratios, based upon the Visual Resource Inventory (VRI) Class of the project-impacted area. Additional mitigation may be required where projects affect viewsheds of specially designated areas (e.g., NSHT, National Parks)

Monitoring

One critically important element of the BMPs is the requirement for development and implementation of a Visual Resource Impact Monitoring and Mitigation Compliance Plan. This plan is a detailed, project-specific document that will be prepared and submitted for approval at the onset of the project planning process, prior to individual project approval, to serve as a guide to siting and design. This allows the BLM to review and respond to the plan prior to approving the project and to establish a baseline from which to monitor.

Visual design objectives within the Monitoring and Mitigation Compliance Plan will be measurable and monitored during construction, operations, and decommissioning. The Compliance Plan will include monitoring and compliance elements that establish the requirements and thresholds for acceptable performance, and measures for corrective actions. The visual contrast rating procedures will be included for field-based compliance assessment during operations and after decommissioning to gauge compliance with the project's visual impact mitigation requirements.

Provisions for monitoring the effectiveness of the visual impact mitigation strategy will be included to ensure developers implement required visual impact CMAs and to measure their effectiveness.

By requiring the preparation, submittal, and approval of a Visual Resource Impact Monitoring and Mitigation Compliance Plan, the BLM would ensure that the DRECP CMAs for Visual Resources have been incorporated into various aspects of a proposed project prior to construction. Monitoring of compliance with the plan during construction, operation, and decommissioning require the BLM to assign personnel to monitor and report on project compliance (or to require project proponents to provide monitors). This requires not only qualified personnel (trained in Visual Resource Management), but also a database for reporting and tracking compliance, and a reporting protocol. Visual resources compliance may be tied to permit or lease renewals, regularly scheduled inspections, spot checks, and various other means to ensure compliance and accountability.

III.3 Adaptive Management Framework

Adaptive management, in concert with effectiveness monitoring, allows the DRECP LUPA to remain dynamic over time and responsive to changing conditions. The DRECP adaptive management framework is designed to accommodate new information, ongoing improvements in data collection and analysis and increased scientific information and knowledge, while providing flexibility to support new ideas. This framework is conceptual in nature. Changes to the LUPA through adaptive management may or may not result in additional NEPA analyses, depending on the content, scope, and timing of the change(s). The Adaptive Management diagram in Exhibit 1 illustrates how science and effectiveness monitoring support an adaptive management framework.

The adaptive management framework will be implemented with the monitoring component of the LUPA.

III.3.1 Adaptive Management Framework—Plan

The planning elements of the DRECP adaptive management framework include defining the problem(s), establishing the goals and objectives for the problem, developing models and other tools to link objectives to actions, and selecting actions.

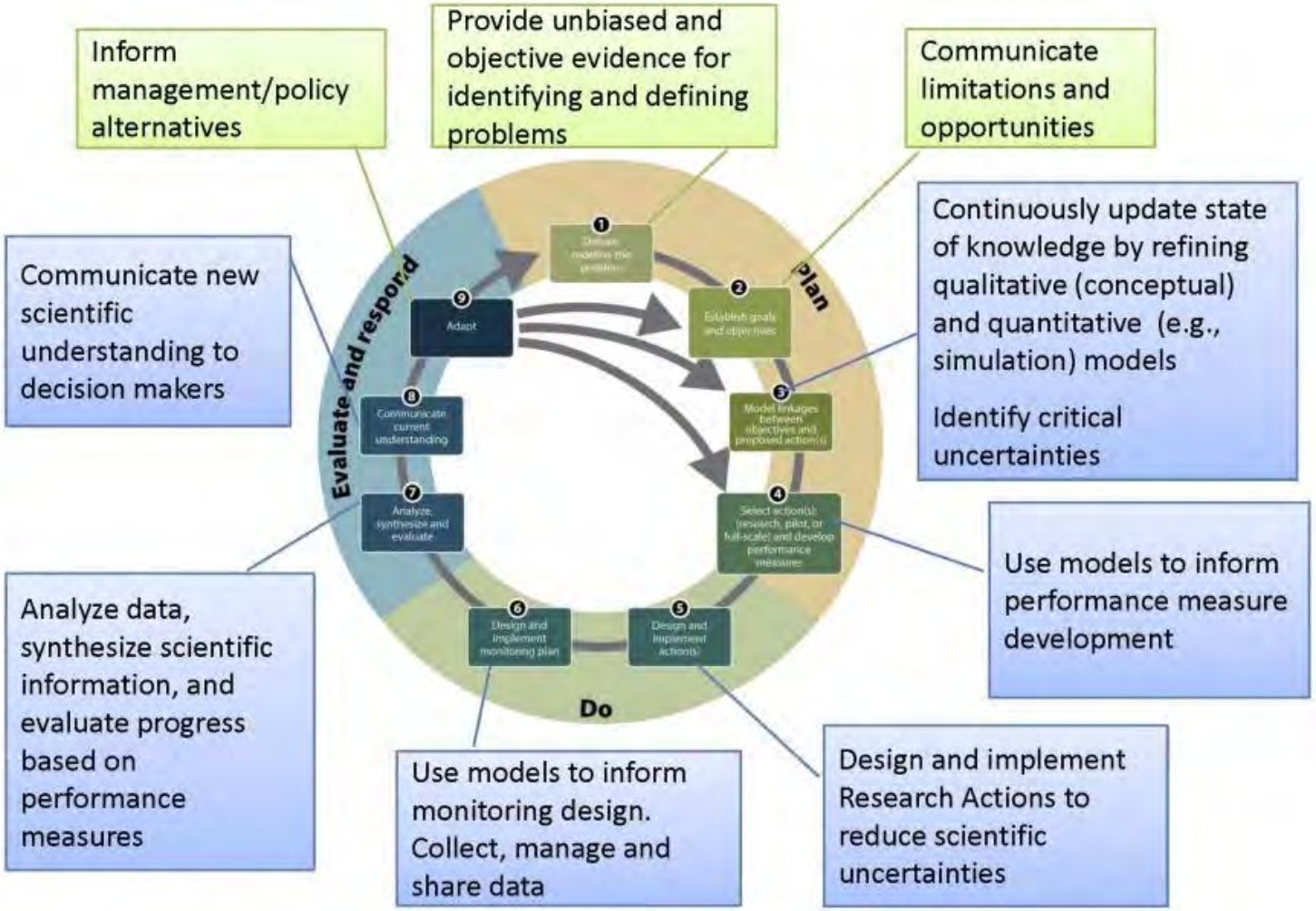
Defining the Problems

Problem statements frame the resource issue for the purposes of adaptive management. Problem statements may be broad declarations regarding specific threats and stressors to a resource that the adaptive management actions would be designed to address.

Resource Goals and Objectives

Each resource addressed in the DRECP LUPA has a set of goals and objectives providing broad guiding principles and, sometimes defined desired outcomes for management of that resource. Based on monitoring observations, a defined problem, or other, the resource goals and objectives help to guide selection and implementation of adaptive management actions to achieve the desired outcome.

Exhibit 1 A Conceptual Adaptive Management Cycle for the DRECP



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Supporting Adaptive Management Through Models

Models, including conceptual (qualitative) and quantitative models, are a key element for adaptive management because they provide a means to generate testable hypotheses, explore alternative management actions, and test other assumptions. Models also help identify interactive effects of known or hypothesized important stressors and threats (e.g., wildfire and non-native species), effects of management actions (e.g., both positive and negative unintended consequences), and attendant uncertainties of model components and management outcomes. The Draft DRECP identified a multitude of model types that could be considered during an adaptive management process.

Selecting Actions

Selecting actions to be implemented through adaptive management is the last planning element of the adaptive management process. Some of the actions selected may require additional environmental compliance, depending on their scope, context and timing.

III.3.2 Adaptive Management Framework—Implement

The implement or "Do" phase of the DRECP adaptive management framework includes design and implementation of the actions and associated monitoring, as appropriate.

III.3.3 Adaptive Management Framework—Evaluate and Respond

The evaluating and responding elements of the adaptive management framework are where feedback is provided and course adjustments are made, as needed, based on continued learning gained from feedback. The evaluating and responding phase includes the following components:

1. Analyze, synthesize, and evaluate
2. Communicate current understanding
3. Adapt

The BLM will analyze, synthesize, and evaluate new information. Using this process, as determined necessary, actions will be modified (i.e., "adapted") to better achieve the stated value of a particular land allocation (e.g., nationally significant values of a California Desert National Conservation Lands unit), resource goals, or intent of a particular individual or group of CMAs. Because effective land and resource management is adaptive, the MAMP presumes that certain changes will occur throughout the life of the DRECP LUPA. The MAMP therefore will operate throughout the life of the LUPA, and itself be revised and refined as necessary.

III.3.3.1 Adaptive Management —Ground Disturbance Threshold Ecoregion Adaptive Management- Response

The adaptive management framework is specific in relation to the response to the ground disturbance threshold ecoregion monitoring. At no time should the changes made through adaptive management compromise the nationally significant ecological, cultural or scientific values for which a California Desert National Conservation Lands unit was designated, the relevant and important values for which an ACEC was designated, or the overall DRECP LUPA biological and cultural conservation design and strategy.

The monitoring results are the total ground disturbance within the ecoregion is at or below the 1% threshold/cap. The best available data (e.g., species demographic changes, suitable habitat availability, etc.) indicates or illustrates that the resource most sensitive to ground disturbance in that ecoregion for which it was conserved (i.e., biological or cultural) are:

- Trending flat or improving – no changes in management response, no adaptive management, may be needed
- Declining – adaptive management is needed, including possible reduction of the ground disturbance caps in all or portions of the ecoregion, increases in required disturbance mitigation, changes to resource specific CMAs, or other management actions to further limit the effects of ground disturbance

The monitoring results are the total ground disturbance within the ecoregion exceeds the 1% threshold/cap. The best available data (e.g., species demographic changes, suitable habitat availability, etc.) indicates or illustrates that the resource most sensitive to ground disturbance in that ecoregion for which it was conserved (i.e., biological or cultural) are:

- Improving – then adaptive management may be considered, including increase in the ground disturbance cap in all or portions of the ecoregion, or decrease in the required disturbance mitigation; or
- Trending flat or declining – adaptive management is needed, including possible reduction of the ground disturbance caps in all or portions of the ecoregion, increases in required disturbance mitigation, changes to resource specific CMAs, or other management actions to further limit the effects of ground disturbance

III.3.3.2 Adaptive Management — Other Key Potential Responses

The BLM will consider withdrawals from mineral entry in California Desert National Conservation Lands on a case-by-case, Phased, geographic specific basis.

The BLM will consider withdrawals from mineral entry in DFAs on case-by-case, project-by-project, or DFA-specific basis.

IV LUPA IMPLEMENTATION

IV.1 Overview

The BLM LUPA is a comprehensive land use plan amendment that applies to specified activities on public land administered by BLM within the Decision Area, including, but not limited to, renewable energy projects. It addresses a full range of impacts, including, but not limited to, impacts to plant, wildlife, vegetation types, recreation, and cultural resources. Under federal law, BLM is solely responsible for implementation of the LUPA, and all activities that take place on BLM-administered public lands will ultimately require BLM authorization. BLM will continue to implement its land use plans, as amended by the LUPA, according to applicable federal laws, regulations and policies. BLM's ongoing responsibilities regarding land use plan implementation include, among other things:

- Formal tribal consultation
- Protection of cultural properties
- Community outreach
- Management for threatened and endangered species
- Management for recreation resources
- Coordination with conservation and management organizations
- Implementation of the California Desert Advisory Committee chartered under the Federal Advisory Committee Act

Certain land use plan decisions, such as land use allocations and CMAs restricting use on BLM-administered lands, are effective immediately upon approval of the Record of Decision. Activities to implement land use plan decisions, such as approval of site-specific, proactive conservation measures or approval of land use authorizations require additional, site-specific analysis and approval by the BLM.

When the BLM considers an activity, whether initiated by the BLM or by a third party, it must determine whether that activity is in conformance with the existing land use plan. An activity is in conformance with the land use plan if the plan specifically identifies a resource management action or (if not) the action is consistent with the terms, conditions, and decisions in the approved plan (43 CFR 1601.0-5(b)).

If the BLM determines that the proposed activity is not in conformance with the land use plan, the BLM can deny the proposal without further review. This decision is subject to appeal to IBLA. The BLM may also consider redesigning the proposed activity to bring it into conformance with the land use plan, or amending the land use plan. Any land use plan

amendment would be subject to the land use planning process and NEPA review, both of which include a public participation process.

The BLM will continue to coordinate and cooperate with the REAT agencies as it implements the renewable energy and biological conservation elements of the DRECP LUPA. Under NEPA, federal agencies should invite federal, state, and local agencies, and tribes, to be cooperating agencies if those agencies have jurisdiction by law or special expertise (40 CFR 1501.6). The BLM recognizes that the REAT agencies have special expertise in renewable energy activities and biological conservation within the DRECP LUPA Decision Area. There may also be some cases where the REAT agencies have jurisdiction by law over components of renewable energy and transmission activities.

In addition, BLM recognizes that with changing science and technology, there may be alternative methods to meet the purpose and objectives of the CMAs. As part of subsequent project-specific NEPA analyses, a project proponent may be able to propose alternative methods for compliance with a particular CMA. The BLM California State Director will review such requests, in collaboration with USFWS, CEC, and CDFW, and may analyze, as appropriate, whether any proposed alternative approach or design feature to avoid, minimize, or mitigate impacts: (i) meets the goals and objectives for which the CMA was established, (ii) and provides for a similar or lesser environmental impacts. Such alternate methods would be addressed as part of any subsequent project-specific approvals.

The BLM may change the DRECP LUPA in several ways. Land use plan decisions and supporting components can be maintained to reflect minor changes in data or refining, documenting, or clarifying a previously approved decision incorporated into the plan. (43 CFR 1610.5-4) Maintenance must not expand the scope of resource uses or restrictions or change the terms, conditions, and decisions of the approved plan. Plan maintenance is not considered a plan amendment.

In addition, the DRECP LUPA includes some policy decisions, such as some of the incentives for developers in DFAs. Policy decisions are not land use plan decisions, therefore a plan amendment is not required to change them.

Finally, if any of the core components of the DRECP LUPA are to be changed, they must be changed through the land use plan amendment process. The BLM must follow the land use plan amendment process, as detailed in 43 CFR 1610.5-5. This process includes several opportunities for public notification and public involvement, based on the potential impacts of the amendment. Any amendment to the DRECP LUPA is also subject to the consistency requirements under 43 CFR 1610.3-2. Under these requirements, BLM land use plans should be consistent with official approved or adopted resource related plans of other federal agencies, state and local governments, and Indian tribes, so long as those plans are consistent with the purposes, policies and programs of federal laws and

regulations applicable to public lands. This includes any plans regarding biological conservation and renewable energy and transmission activities developed by the REAT agencies or counties and local governments. The BLM will coordinate with state and local governments within the LUPA Decision Area to ensure that any amendments to the DRECP LUPA are consistent with renewable energy and biological conservation planning.

IV.2 Tribal Consultation

Tribal governments have a special status under federal law. The BLM will continue to consult with federally recognized tribes on a government-to-government basis as it implements the DRECP.

IV.3 Partnership with Local Governments

The BLM has been committed to coordinating with local governments throughout its land use plan amendment process. The BLM will continue to partner with interested local governments in the implementation of the DRECP LUPA. The BLM will encourage counties and other local governments to coordinate their planning efforts with the BLM to better achieve the goals and objectives of the DRECP and DRECP LUPA. The BLM recognizes that LUPA only applies to BLM-administered lands, however, landscape goals can best be achieved when plans are implemented across ownership. Therefore, the BLM will continue to engage with counties and local governments as they develop future renewable energy and transmission, and biological conservation plans within the DRECP area. As part of its ongoing evaluation of its plans under Section V of the BLM Land Use Planning Handbook, the BLM will consider whether adjustments to the LUPA are necessary based future planning in the DRECP area.

In partnership with San Bernardino County, the BLM will assist in implementation of the maintenance and management strategy for Historic Route 66 through BLM land. The BLM will facilitate the planning and environmental compliance for maintenance and management actions consistent with the Historic Route 66 and applicable land allocations.

IV.4 Avoiding Conflicts with Military Operations, Training, and Testing

The Department of Defense has provided a matrix identifying potential military operational constraints that could result from the construction and operation of renewable energy and transmission activities within DFAs. The matrix identifies potential constraints by renewable energy technology and is accompanied by several maps with color codes that depict the extent of the potential constraint on military operations (see Appendix E).

Red areas on the maps represent locations where there is a **significant likelihood of an unacceptable risk** to national security, and the technology identified might impact military operations, testing, and training.

Orange areas represent locations where there is a **likelihood of an unacceptable risk** to national security, and the technology identified might impact military operations, testing, and training.

Yellow areas represent locations where there is **some likelihood of an unacceptable risk** to national security, but the technology identified probably will not impact military operations, testing, and training.

In order to use the DRECP's BLM LUPA streamlined process for renewable energy in DFAs and transmission, proponents of these activities must first consult with appropriate representatives of the Department of Defense to ensure the proposed renewable energy and/or transmission activity will not cause an unacceptable risk to national security. Specifically, the following process will be implemented:

- For renewable energy and transmission activities proposed in red areas, the DRECP BLM LUPA streamlined process will not be available unless a letter is obtained from the Department of Defense Siting Clearinghouse stating that military impacts have been mitigated.
- For renewable energy and transmission activities proposed in orange or yellow areas, the DRECP BLM LUPA streamlined process will be not be available until Department of Defense representatives at the regional level have been consulted and have been provided a minimum of 30 days to assess potential mission impacts. If the regional representatives conclude within the 30 day period that there is a significant possibility that a proposed activity presents an unacceptable risk to national security, the BLM will not streamline the proposed activity process and will require additional environmental analysis regarding Department of Defense impacts, unless a letter is obtained from the Department of Defense Siting Clearinghouse stating that military impacts have been mitigated.

IV.5 Renewable Energy and Transmission Activity Streamlining

To facilitate streamlining of renewable energy and transmission applications under the DRECP BLM LUPA, applicants must follow BLM policies for pre-application meetings, Plans of Development, etc., and at a minimum the project application must include the following information, consistent with applicable laws, regulations and policies:

General Project Information

The Project Proposal must include at least the following components:

- Project applicant information
- Project type and brief project description
- Project location, including county, ecoregion subarea, Assessor's Parcel Numbers, and/or legal description
- Map of the project location
- Map of the project site
- Site ownership (e.g., private, BLM)
- Project size, including proposed development footprint acreage
- Project schedule

For projects within DOD pre-review areas, as identified in the DRECP, Project Proposals must include evidence of the completed pre-review by DOD (see Section IV.4 and Appendix E).

General Setting and Existing Conditions

The Project Proposal must include a general description of the existing project setting and physical conditions, including at least the following:

- Physical setting (e.g., topography, major rivers or drainages)
- Existing or authorized land uses
- Known or potential biological resources in the project vicinity
- Identification of DRECP LUPA-specific requirements and status
- Identification of Agency-specific application requirements and status (e.g., BLM [Plan of Development], CEC specific requirements, USFWS, CDFW).

Project-Level Studies

Based on BLM policies and the DRECP LUPA requirements, the Project Proposal must report the status and/or results of all project-level studies required for the site, including biological studies (e.g., habitat assessment, vegetation mapping, focused species surveys) and cultural surveys. The Project Proposal must describe how the studies do or will meet the requirements of the DRECP LUPA CMAs.

Applicants may not be provided access to BLM lands for project-level studies until a formal application process is underway.

IV.6 Compensation/Mitigation Implementation

For the purpose of resource compensation/mitigation, including but not limited to biological and cultural, the BLM will use and allow the use of the enhancement and restoration on BLM conserved lands (e.g., California Desert National Conservation Lands and ACEC for biological and cultural resources, and SRMA and ERMAs for recreational resources), and acquisition or donation of private land.

The BLM anticipates that a majority of the overall compensation/mitigation for activities on BLM land will be in the form of enhancement or restoration on BLM conserved lands. In all circumstances, the compensation/mitigation requirements must be met, regardless of which method or combination thereof, is used.

Criteria for Land Acquisition

The BLM, in coordination with other agencies as appropriate, will be responsible for determining the private lands most suitable for acquisition based on a variety factors, including existing resource value, future value with management (including restoration and enhancement), and practical considerations, such as availability (i.e., willing sellers), management feasibility, and cost. All land acquisitions from private property owners will be from willing sellers only.

The factors that will be used to determine the private lands that are most suitable for acquisition include the following:

- Selection of acquisition sites will be based on consideration of ability of the site to effectively compensate/mitigate the effects of the activity on the resource, as well as management feasibility, cost and availability (i.e., willing sellers).
    - Provide important landscape functions including habitat linkages, wildlife movement, sand transport, and hydrologic integrity
    - Have high ecological value
    - Have high landscape intactness
    - Are resistant to climate change and/or offering most climate refugia value (i.e., areas identified as important for accommodating climate change-related shifts such as higher elevation refuges for plant and animal communities)
- Ability to be effectively and efficiently managed for long-term conservation.

- Acquisition should occur in the same ecoregion subarea as where the impact occurs. In cases where the impacts span more than one subarea, acquisition can be wholly or partially in those subareas.

IV.6.1 State-Recognized Compensatory Mitigation

On October 2, 2015, the BLM and CDFW agreed to coordinate to allow for State-recognized compensatory mitigation for biological impacts to take place on BLM-managed lands. The agreement, known as the "Durability Agreement," recognizes that BLM-managed lands play an important role in conserving sensitive species and their habitats, and plant communities. The cornerstone of the agreement is the ability for CDFW to utilize BLM-managed conservation lands (e.g. California Desert National Conservation Lands, ACECs, and Wildlife Allocations) for project-level mitigation. The impacts being mitigated for may take place on BLM-managed land, or on private or state land. While this agreement is not limited to the DRECP LUPA Decision Area, and applies state-wide, the BLM is committed to using this agreement within the DRECP Decision Area in partnership with CDFW.

IV.7 Area-Specific Withdrawal from Mineral Entry Considerations

In accordance with FLPMA and following applicable BLM regulations, policies and procedures, BLM will consider withdrawals from mineral entry on:

- California Desert National Conservation Lands on a case-by-case, geographic specific area basis, in coordination with tribes, county(s), and other partners
- DFAs on a case-by-case, project specific, or DFA-specific basis in coordination with county(s) and other partners

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