Interim Mitigation Strategy

As Required by SB X8 34

by

California Department of Fish and Game

SEPTEMBER 2010

DRECP-1000-2010-006-F

California Energy Commission

Department of Fish and Game

TABLE OF CONTENTS

List of Acronyms……*iv*

1.0 INTRODUCTION.....1

2.0 PURPOSE OF INTERIM MITIGATION STRATEGY.....2

2.1 SPECIFIC PROVISIONS OF SB 34.....3

2.2 AFFECTED PROJECTS.....4

2.3 RELATIONSHIP WITH THE DRECP.....5

2.3.1 INTERIM PROCESS ASSESSMENTS. 5

2.3.2 RELATIONSHIP TO THE DRECP DOCUMENTS. 6

2.4 BIOLOGICAL SETTING 6

2.4.1 THE MOHAVE DESERT ECOREGION 6

2.4.2 THE SONORAN DESERT ECOREGION. 7

2.4.3 THE COLORADO DESERT ECOREGION.....7

2.5 CONSERVATION GOALS.....7

2.6 IMS Mitigation Target Areas 8

2.6.1 AREA 1 – MOJAVE NATIONAL PRESERVE 10

2.6.2 AREA 2 – TRIANGLE.....10

2.6.3 AREA 3 – MOJAVE TRANSITION ZONE 10

2.6.4 AREA 4 – MOJAVE CORRIDOR.....10

2.6.5 AREA 5 – NORTH OF JOSHUA TREE 11

2.6.6 AREA 6 – COACHELLA VALLEY.....11

2.6.7 AREA 7 – WEST MOJAVE.....11

2.6.8 AREA 8 – IMPERIAL VALLEY.....11

3.0 INTERIM MITIGATION ACTIONS 13

3.1 APPROACH TO MITIGATION 13

3.1.1 RECOVERY ACTIONS. 14

3.1.2 CONSISTENCY WITH RECOVERY PLANS.. 14

***3.2* LAND ACQUISITION.** 15

3.3 ENHANCEMENT AND RESTORATION 16

3.3.1 HABITAT ENHANCEMENTS. 16

3.3.2 RESTORATION: 16

3.4 PRIMARY ENHANCEMENT AND RESTORATION CONCEPTUAL AREAS. 17

3.5 COMPENSATORY MITIGATION COST ESTIMATED 18

3.6 IMS IMPLEMENTATION 19

3.6.1 Approach 19

FIGURES

FIGURE 1: DESERT RENEWABLE ENERGY CONSERVATION PLAN (DRECP) BOUNDARY. 22

FIGURE 2: PROJECTS SEEKING ARRA FUNDING UNDER SB-34 WITHIN THE BOUNDARY OF THE DRECP 23

FIGURE 3: IMS MITIGATION TARGET AREAS DEVELOPED SPECIFICALLY FOR USE WITH THE IMS AND SB-34 PROJECTS ONLY. 24

FIGURE 4: AREAS OF CONSERVATION EMPHASIS II – CONSERVATION PRIORITY MODEL OUTPUT FOR THE MOJAVE, SONORAN, AND COLORADO DESERTS, SIERRA NEVADA, AND SOUTHERN CALIFORNIA MOUNTAINS AND VALLEYS ECOREGIONS. 25

FIGURE 5: CALIFORNIA ESSENTIAL HABITAT CONNECTIVITY CORRIDORS WITH IMS MITIGATION TARGET AREAS 26

FIGURE 6: IMS MITIGATION TARGET AREAS RELATIVE TO OTHER ALREADY PROTECTED LANDS AND CONSERVATION AREAS 27

FIGURE 7. RENEWABLE ENERGY MITIGATION IMPLEMENTATION. FLOW CHART OF OPTIONS UNDER SENATE BILL X8 34 AND THE

NATIONAL FISH AND WILDLIFE FOUNDATION MEMORANDUM OF AGREEMENT.....28

LITERATURE CITED.....29

APPENDICES

APPENDIX A. SB X8 34 QUALIFIED SOLAR THERMAL AND SOLAR PHOTOVOLTAIC PROJECTS (LOCATED WITHIN DRECP PLANNING AREA, SEEKING ARRA FUNDS).....33

APPENDIX B RECOVERY ACTIONS. 43

APPENDIX C. THE RENEWABLE ENERGY ACTION TEAM MITIGATION ACCOUNT MEMORANDUM OF AGREEMENT BETWEEN THE THE RENEWABLE ENERGY ACTION TEAM AGENCIES AND THE NATIONAL FISH AND WILDLIFE FOUNDATION 49

APPENDIX E. MITIGATION COST TABLEERROR! BOOKMARK NOT DEFINED.

LIST OF TABLES

TABLE 1. SUMMARY OF CRITICAL SENSITIVE RESOURCES PRESENT IN THE IMS MITIGATION TARGET AREAS.....12

TABLE 2. LISTED DESERT SPECIES BENEFITING FROM IMS TASKS BASED ON RECOVERY PLAN ACTIONS.....14

LIST OF ACRONYMS

ACEC	Area of Critical Ecological Concern
ACE-II	Areas of Conservation Emphasis, Phase II
ACOE	U. S. Army Corps of Engineers
AFC	Application for Certification
ARRA	American Recovery and Reinvestment Act
BIOS	Biogeographical Information and Observation System
BLM	U. S. Bureau of Land Management
CEC	California Energy Commission
CEHC	California Essential Habitat Connectivity
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CNDDB	California Natural Diversity Data Base
CVFTL	Coachella Valley Fringe-toed Lizard
CVMSCP	Coachellla Valley Multi-species Conservation Plan
CWHR	California Wildlife Habitat Relationships
CDFG	California Department of Fish and Game
DRECP	Desert Renewable Energy Conservation Plan
DWMA	Desert Wildlife Management Area
EIR	Environmental Impact Report
EIS	Environmental Impact Statement
ERDF	Energy Resources Development Fee
FTHL	Flat-tailed Horned Lizard
HCP	Habitat Conservation Plan
IMS	Interim Mitigation Strategy
MFTL	Mojave Fringe-toed Lizard
MGS	Mohave ground squirrel
MOG	Mineral, Oil, Gas
MTA	Mitigation Target Area
MOU	Memorandum of Understanding
NCCPA	Natural Community Conservation Planning Act
NEPA	National Environmental Policy Act
NFWF	National Fish and Wildlife Foundation
OHV	Off Highway Vehicle
REAT	Renewable Energy Action Team
ROW	Right of Way
RRTF	Renewable Resource Trust Fund
SB	Senate Bill
USFWS	U. S. Fish and Wildlife Service
WRMSCP	Western Riverside Multi-species Conservation Plan

1.0 INTRODUCTION

Senate Bill X8 34 (Padilla) (SB 34), was enacted on March 22, 2010 to facilitate project mitigation actions for certain proposed renewable energy projects in the California desert that are seeking federal American Recovery and Reinvestment Act (ARRA) funding. Among other things, the bill provides for eligible project developers to pay in-lieu fees that would then be used by the Department of Fish and Game (CDFG) to acquire and restore habitat lands as mitigation for project impacts to species listed as Endangered, Threatened, and Candidate species under the California Endangered Species Act (CESA). The bill authorizes CDFG, in consultation with the California Energy Commission (CEC), U.S. Bureau of Land Management (BLM), and the U.S. Fish and Wildlife Service (USFWS) (collectively the REAT Agencies) to design and implement advanced mitigation actions, including the purchase of land and conservation easements to protect, restore, and enhance the habitat of CESA listed plants and animals.

SB 34 establishes two closely related, but distinct, pathways for the CDFG and the CEC to assist in the implementation of specific mitigation actions and permit conditions required to fully mitigate the impacts of qualified solar energy projects.

SB 34 defines “qualified” projects as solar thermal and solar photovoltaic projects that:

1. Are within the boundary of the DRECP (Figure 1),

2. The developer or owner of the proposed powerplant or generation facility has applied for, and would qualify for, funding under the federal American Recovery and Reinvestment Act of 2009 (Public Law 111-5); and

3. By February 1, 2010, either:

    a. the Energy Commission determined that the application for certification was complete;
    b. or the local government in which the project is located has determined the project permit application is complete or has issued a notice of preparation of an environmental impact statement pursuant to Division 13 (commencing with Section 21000) of the Public Resources Code

Eighteen renewable energy projects currently meet these criteria (Appendix A); however as the CDFG and the other REAT Agencies become aware of additional projects, or as project status changes, the list may change.

SB 34 Mitigation implementation options include:

1. An “advance mitigation” option in which the CDFG, working with the other REAT Agencies, identifies and purchases mitigation lands that will be used as a land bank. Qualified projects can purchase credits in that land bank to meet all or a portion of their mitigation obligations. This can be implemented

through use of the $10 million dollar revolving fund established in the legislation, with expenditures to be reimbursed from the participating projects' mitigation fees.

2. An "in-lieu" fee option, whereby the CDFG, working with the other REAT Agencies, would use mitigation fees to implement the individual permit-specific project mitigation actions to assist the project proponent in completing mitigation obligations. This option would be implemented by the CDFG and the other REAT Agencies, with guidance from the IMS as required in SB 34.

Many of the projects eligible for participation in the mitigation options offered under SB 34 are undergoing environmental review through the California Environmental Quality Act (CEQA), National Environmental Policy Act (NEPA), and may be subject to review under the CEC certification process and BLM Right of Way (ROW) process. These processes may result in mitigation recommendations, including possible compensatory mitigation, separate from or in addition to the CESA mitigation addressed in SB 34. The CDFG and the other REAT Agencies anticipate that while most, if not all, of the land-based mitigation or restoration requirements arising from CESA review could be implemented as part of the land acquisition activities of SB 34, not all project proponents will choose the SB 34 option and instead will decide to implement mitigation on their own behalf.

Measures designed to avoid, minimize, and fully mitigate the take of species under CESA will be set forth in the projects' permits for certification (CEC projects) or in a stand-alone Incidental Take Permit issued to the applicant by CDFG. The IMS is intended as an efficient means of *implementing* CESA compensatory mitigation and does not prescribe mitigation ratios, define project mitigation requirements, or address other required measures such as avoidance and minimization.

At the time of this publication, there are eligible projects in various stages of review and approval, creating some uncertainty regarding actual mitigation requirements. However, land acquisition, as part of a comprehensive mitigation plan that meets the CESA full mitigation requirement, is a consistent method for offsetting project-related impacts to these species and lends some predictability to implementing an advanced mitigation program.

2.0 PURPOSE OF INTERIM MITIGATION STRATEGY

The purpose of the IMS is to develop and articulate a conceptual approach to conservation investments (land acquisition, enhancements, restoration) that guides the implementation of project mitigation required of eligible projects. The intent is to pool financial resources from eligible projects needing to mitigate impacts to CESA Listed and Candidate Species and target conservation investments to maximize protection of habitat values, connectivity, and ecological processes in the California desert region.

The CDFG, in consultation with the CEC, the USFWS, and the BLM, have designed actions, including the purchase of land and conservation easements that, when implemented, will protect, restore, or enhance the habitat of plants and wildlife and that can be used to fully mitigate the impacts of the take of Endangered, Threatened, or Candidate species, for purposes of paragraph (2) of subdivision (b) of Section 2081 and Chapter 6 (commencing with Section 25500) of Division 15 of the Public Resources Code (PRC), resulting from solar thermal and photovoltaic power plants in the DRECP planning area.

If utilized, the IMS will accomplish the following benefits for State Candidate, Threatened, or Endangered species:

- Contribute to the conservation of each species for which a State incidental take permit or functional equivalent (via the CEC process) is issued;

- Adopt a regional planning perspective that provides a foundation for, or that will complement, any conservation strategy to be developed for the DRECP;

- Implement mitigation actions within a reasonable period of time relative to project related impacts to affected Candidate, Threatened, or Endangered species, including, where feasible, mitigation occurring before, and in anticipation of, future impacts to natural resources, and;

- Describe the species that would be benefited by each mitigation action and how it would be benefited.

As previously described, the IMS is intended to guide the implementation of mitigation actions for eligible projects that utilize the optional SB 34 mechanisms. It applies only to mitigation implementation actions for those projects. The IMS should not be confused with a Conservation Strategy or other conservation planning efforts being considered as part of the DRECP.

2.1 Specific Provisions of SB 34

The following are summarized elements of SB 34 relevant to the IMS:

- Limits eligible projects to those for which a completed application was received by February 1, 2010, and the developer or owner has applied and qualifies for federal ARRA funding.

- Authorizes actions to be used as mitigation only when the CDFG has implemented the mitigation action and determined that the action has resulted in the protection, restoration, and enhancement of the habitat of one or more species that are proposed to be covered by the DRECP and that are located in the planning area; and that the action(s) fully mitigate impacts to species pursuant to Fish and Game Code Section 2081(b); or the project is identified in this IMS and meets the specified criteria.

- Requires the IMS to include specified elements, including: 1) a description of the actions to be implemented within the DRECP planning area, focusing on habitat preservation while including enhancement and restoration actions that will contribute to conservation of each species for which a permit is issued; 2) a regional planning focus; 3) implementing mitigation actions within a reasonable time period (defined by individual project permits), including where feasible, advance mitigation, and 4) description of species benefits.

- Requires the IMS to include a cost estimate for each mitigation action, based on best available science, and reviewed by the DRECP independent science advisors. Requires CDFG to seek and consider comments from the DRECP science advisors and if CDFG elects not to incorporate the comments of the advisors in mitigation actions, to explain the reasons in writing.

- Clarifies that nothing in the statute modifies the requirements of CESA, CEQA, or laws governing the siting and certification of power facilities by CEC, or affects the existing authority of CDFG to authorize mitigation actions.

- Requires the mitigation actions implemented pursuant to the statute be incorporated into the final DRECP to the extent the mitigation actions are consistent with the Plan's conservation strategy.

- Requires CDFG to monitor implementation of the mitigation actions and the progress of project construction; to report deposits and expenditures from the Energy Resources Development Fee (ERDF) and mitigation activities on its website; and that the monies be spent only for mitigation actions that are not duplicative of, and are in addition to, mitigation obtained through any other means.

- Prohibits CDFG from allowing any new use of the IMS if CDFG determines that mitigation actions are not being implemented in rough proportion to the impacts of the projects.

2.2 AFFECTED PROJECTS

Projects currently eligible for participation in the SB 34 Options are listed in Appendix A. Summaries of project descriptions and impacts were taken from CEC certification applications and local agency CEQA documents and are subject to change as each project completes the environmental review process. At the time of publication of this IMS document, the agencies already know that project descriptions have changed from what is set forth herein, and will continue to change as dialogues continue between proponents, stakeholders, and government agencies. Full project descriptions, impact analysis, and proposed mitigation requirements are available from the relevant

permitting agency. The general locations of solar projects in the DRECP planning area are shown in Figure 2.

2.3 Relationship with the DRECP

2.3.1 Interim Process Assessments. The interim process described in the DRECP Planning Agreement, together with the interim process developed here, are intended to meet the requirements of the Natural Community Conservation Planning Act (NCCPA) Section 2800 of Chapter 10 of Division 3, PRC Title 14, interim process for project review during plan development. The NCCPA requires the CDFG to evaluate each project for potential conflicts with the preliminary conservation objectives as set forth in the DRECP Planning Agreement; and to recommend mitigation measures or project alternatives that help achieve those preliminary conservation objectives. All SB 34 projects are currently in the environmental review process and are aggressively pursuing ARRA funding deadlines that may be as early as December 2010. Accordingly, potential conflicts with the preliminary conservation objectives must be determined and recommendation of mitigation measures for SB 34 eligible projects must be completed in a timely manner to avoid delays that could compromise meeting ARRA deadlines.

The CDFG evaluated the subset of SB 34 eligible projects with complete, or nearly complete, project descriptions and impact assessments for consistency with the DRECP Planning Agreement preliminary conservation objectives. Project location was considered in the context of emerging conceptual conservation areas and compensatory mitigation alternatives. We included factors such as habitat connectivity and climate change adaptation as part of our evaluation. We recommend the following mitigation measures, as required in the NCCPA for interim process review:

- Project design should maintain local and regional connectivity to maximize wildlife movement between and among conserved areas;
- Project design should seek to maintain natural ecological processes including water and sediment transfer;
- Implementation of specific project mitigation plans should support recovery of the target species i.e. CESA Listed and Candidate Species, as well as mitigating the impacts of the proposed action;

The following SB 34 qualified projects are still in development or under review by CDFG. Information is not sufficient to complete a consistency review at this time. However, to comply with the terms of the DRECP Planning Agreement, the consistency review will be completed prior to permit approval. CDFG has preliminarily deemed all other SB 34 qualified projects to be consistent with the DRECP Planning Agreement preliminary conservation goals and objectives. Projects still requiring consideration under Fish and Game Code section 2810(B)(8) are:

1. Gray Butte Solar – First Solar, Photovoltaic

2. Blythe Airport Solar 1 Project – US Solar Holdings, LLC, Photovoltaic
3. Palmdale Hybrid Power Project – City of Palmdale, Photovoltaic
4. Borrego Solar Farm – Eurus Energy, Photovoltaic
5. Tehachapi Photovoltaic Solar Project – General Electric
6. Boulevard Associates (San Bernardino Co.) -- Boulevard Associates, LLC, Photovoltaic

2.3.2 Relationship to the DRECP Documents. The IMS identifies conservation criteria for biological resources on eligible renewable energy project sites, and requires consideration of those resources early in the site selection and evaluation process. This allows follows Executive Order S-14-08 and Secretary's Renewable Energy Development Order (Order 3285) to expedite processing of applications consistent with the Interim Guidance for Desert Renewable Energy Project Development and the Planning Agreement for the DRECP. Although these criteria cover a broader range of potential project impacts than addressed by the IMS, clearly those pertaining to CESA-Listed and Candidate Species are consistent with the IMS and the project-specific compensatory mitigation measures identified by the other REAT Agencies. CDFG, working with the other REAT Agencies, will determine proper adherence to these criteria by local agencies during future and final review for consistency.

To the extent that the IMS documents an evaluation of interim process review of projects as required by the NCCPA and directs compensatory mitigation to locations maximizing mitigation and recovery of the target species, i.e. CESA Listed and Candidate species, the IMS can be viewed as an early implementation step in the creation of the Draft Conservation Strategy for the DRECP. Implementing mitigation for the eligible projects at the scale contemplated in this document will effect meaningful conservation in the California desert region.

2.4 BIOLOGICAL SETTING

The DRECP boundary closely follows the boundaries of the Mojave, Sonoran, and Colorado Deserts, and includes portions of the Sierra Nevada, and Southern California Mountains and Valleys ecological section (ecoregions, USDA 1997).

2.4.1 The Mohave Desert Ecoregion is generally characterized as having widely separated short ranges in desert plains and containing isolated mountains, plateaus, alluvial fans, playas, basins and dunes. The vegetation occurs in natural communities that include the Creosote bush, Creosote bush - white bursage, mixed saltbush, iodine bush, Joshua Tree, black bush, mesquite, California juniper, singleleaf pinyon. There are Utah juniper and White fir in the higher elevations. Exotic species such as annual grasses, reed, and tamarisk are present. Common mammalian species include desert bighorn sheep, desert kit fox, coyote, spotted skunk, spotted bat, black-tailed jackrabbit, Mohave ground squirrels, kangaroo rat and white footed mouse. Birds include golden

eagles, hawks, owls, quail, roadrunners, finches, warblers and orioles. Reptiles include desert tortoise, several species of rattlesnakes and chuckwalla and fringe-toed lizards (USDA 1997)

The Mohave Desert Ecoregion completely encompasses two desert tortoise recovery units: the eastern Mojave and the western Mojave; and part of a third: the northeastern Mojave recovery unit. The desert tortoise recovery plan (USFWS 1994) describes the vegetation communities, topography, substrate, winter burrow site preference, and denning behavior of the desert tortoise within each recovery unit.

2.4.2 The Sonoran Desert Ecoregion is characterized as widely separated short ranges in desert plains. The predominant vegetation occurs in natural communities including creosote bush, creosote bush - white bursage, mixed salt bush, blue palo verde - ironwood - smoke tree, mesquite, ocotillo and Foothill palo verde - saguaro. Exotic species include giant reed and tamarisk Common mammals are desert bighorn sheep, coyote, black-tailed jackrabbit, and pocket mouse. Birds include golden eagle, hawks, owls, quail, ravens, hummingbirds, roadrunner, finches, warblers, flickers, and woodpeckers. Reptiles include desert tortoise, fringe-toed lizard, and flat-tailed horned lizards (USDA 1997).

2.4.3 The Colorado Desert Ecoregion is characterized as having alluvial fans, basin, dunes and delta plains. Vegetation and plant communities consist of creosote bush - white bursage, mixed salt bush series, mesquite series, ocotillo and fan palm. Exotic species include annual grassland, giant reed and Tamarisk. Common mammals include desert bighorn sheep, desert kit fox, coyote, spotted skunk, spotted bat, black-tailed jackrabbit, ground squirrels, kangaroo rat and white footed mouse. Birds include eagles, hawks, owls, quail, white-winged dove, roadrunners, finches, warblers and orioles. The Salton Sea provides habitat for a wide variety of waterfowl and shorebirds. Reptiles include several species of rattlesnakes (USDA 1997).

2.5 Conservation Goals

This IMS recommends acquisition and other actions that contribute to an existing reserve system designed to address the conservation of desert species and ecosystems while providing connectivity between species and habitats, and the goals and objectives of the DRECP Planning Agreement. The specific goals of establishing the Reserve System are to:

a. Represent native ecosystem types or natural communities across their natural range of variation in a system of conserved areas.

b. Maintain or restore self-sustaining populations or meta-populations of the species included in the strategy to ensure permanent conservation so that take authorization obtained for currently listed species (animal species) and non-listed species can be covered in case they are listed in the future.

c. Sustain ecological and evolutionary processes necessary to maintain the functionality of the natural communities and habitats for the species included in the strategy.

d. Maximize connectivity among populations and avoid habitat fragmentation within conservation areas to conserve biological diversity, ecological balance, and connected populations of covered species.

The recommended Mitigation Target Areas (MTAs) (Figure 3) have been designed to support viable populations of covered species or, in the case of species that may not have viable populations in the IMS strategy area, to conserve the best habitat available for species in the IMS strategy area and support connectivity with populations both within and outside the IMS strategy area.

Participation in the IMS by eligible project applicants will reduce the likelihood that interim project development in the DRECP area would fragment high quality habitat, disrupt the essential ecological processes that sustain the habitat, and create significant edge effect problems. The IMS may also focus development away from areas of higher quality habitat, ideally to where habitat fragmentation and edge effects are already negatively influencing habitat quality.

2.6 IMS Mitigation Target Areas

Identification of generalized target sub-regions within which to designate MTAs for initial priority acquisition under the IMS was developed through collaboration between desert land trust experts, BLM, and CDFG biologists[1]. These sub-regions were known to contain high-quality habitat with parcels that may potentially be available for acquisition under the provisions of SB 34. The selected MTAs are intended only for habitat acquisition under the provisions of SB 34 and do not necessarily correspond with mitigation areas yet to be defined after more detailed analyses under the DRECP Conservation Strategy. However, it is anticipated that the DRECP Conservation Strategy conservation areas will include portions of the areas designated here as IMS MTAs.

The MTAs were developed using ArcGIS 9.3. The sub-regions were selected using 25 square mile hexagons (one of the methods used to display composite spatial data by CDFG – e.g., Bird Species of Special Concern data (WFO 2008)). To identify appropriate MTAs within these sub-regions, the areas were further refined using a

1 The Western Mojave subregion was selected by CDFG biologists to include Mohave ground squirrel population centers (Leitner 2008a). The remaining areas were selected by BLM staff (A. Fesnock), and a group of desert land trust staff representing Mojave Desert Land Trust, Sierra Club Friends of the Desert, Friends of the Desert Mountains, Coachella Valley Mountains Conservancy, Coachella Valley Conservation District, Coachella Valley Conservation Commission, California Council of Land Trusts, Transition Habitat Conservancy, Shelton Douthit Consulting, and Kelly Group Consulting working with CDFG staff (A. Gonzales).

standardized, sequential comparison with a series of GIS data layers to select the hexagons with the highest conservation value. The process included examination of the following data:

Hexagons that intersected at least one of the following GIS layers were retained:

1. Areas of Conservation Emphasis II (ACE II) – The DRECP includes portions of the ACE II ecoregions: Mojave, Sonoran, and Colorado Deserts, Sierra Nevada, and Southern California Mountains and Valleys. Areas with the highest biological value were retained. (CDFG 2010b; Figure 4).
2. California Essential Connectivity Areas (CEHC) (Spencer et al 2010a; Figure 5).
3. Potentially available lands for conservation – hexagons with unclassified or State-owned lands in BLM's Federal and State Surface Estate layer were retained (BLM 2010a).
4. Mohave ground squirrel core areas and corridors.(Leitner 2008a, b; Figure 6)
5. Active Bighorn sheep range (CDFG unpublished data).
6. California Condor final critical habitat and historic range (USFWS 1974).
7. Coachella Valley Multiple Species Habitat Conservation Plan (CVMSHCP) (CVAG unpubl. data; Figure 6).
8. BLM Areas of Critical Environmental Concern (ACEC), Desert Wildlife Management Areas (BLM 2010b)
9. BLM Wildlife Habitat Management Areas (WHMA): dunes and playas, dry wash woodlands, bighorn sheep, and multiple-species (BLM unpubl. data).
10. USFWS Critical Wildlife Habitat: arroyo toad (USFWS 2005), California condor (1974), Coachella Valley fringe-toed lizard (USFWS 1980), desert tortoise (USFWS 1994), and Penisular big horn sheep (USFWS 2009; Figure 6)
11. TNC Ecologically Essential Habitat – Ecologically Essential and Ecologically Intact areas were retained (TNC 2010).
12. Biological input from CDFG and USFWS staff.

Hexagons were dropped that overlapped entirely with the following:

13. Fully protected lands (Black and Veatch 2008).
14. Military lands; hexagons were cropped at military land boundaries
15. CDFG owned lands

Hexagons were also examined against known proposed renewable energy projects. Depending on the area, hexagons were dropped if they overlapped more than 50% with proposed solar projects, BLM Solar Energy Zones, and proposed wind energy projects. Due to the scale size of the hexagons i.e. 25 square miles, some hexagons were retained even though they had more than a 50% renewable energy project footprint if there were no other options to maintain connectivity or reduce fragmentation for target CESA Listed and Candidate Species. Acquisition immediately adjacent to renewable energy projects may be appropriate in some cases, and will be approved by CDFG on a case-by-case basis. The following layers were examined:

16. Solar Energy Study Areas for the Bureau of Land Management (BLM 2009).
17. Renewable Energy Project Applications in California (BLM 2010c).
18. Competitive Renewable Energy Zones (CREZ) (CEC 2010a).

19. Solar Projects (CEC 2010b).
20. Wind Projects (CEC 2010c).
21. Department of Fish and Game Renewable Energy Project Applications (CCDFG 2010e).

The resulting IMS MTAs are displayed in Figure 3 - 6. Within these areas, individual parcels will be evaluated for potential value as mitigation for target CESA Listed and Candidate Species. Acquisition/restoration/enhancement areas will be further refined and prioritized for desert tortoise using the USFWS's desert tortoise spatial decision support system.

The following descriptions are keyed to areas identified in Figure 3:

2.6.1 Area 1 – Mojave National Preserve. Area 1 is in eastern San Bernardino County between Highway 15 and Highway 40, in and around the Mojave National Preserve. Acquisition in this area would contribute to retaining habitat connectivity within the Preserve. Target mitigation areas include private lands within the Preserve boundaries. The area includes Desert Tortoise Critical Habitat, active Bighorn Sheep range, BLM Bighorn Sheep Wildlife Habitat Management Areas, TNC Ecologically Essential habitat, and an Essential Connectivity Area (CEHC).

2.6.2 Area 2 – Triangle. Area 2 is in central San Bernardino County spanning the area between Highway 15 and Highway 40. The area includes Desert Tortoise Critical Habitat, active bighorn sheep range, a Proposed Bat Conservation Area, TNC Ecologically Essential and Intact habitat, and Essential Connectivity Areas (CEHC). The area also supports rare plants, golden eagle, and burrowing owl. Acquisition in this area would contribute to retaining habitat connectivity north-south along the Cady Mountains, and east-west between Fort Irwin and the Mojave National Preserve and would connect BLM protected areas including Afton Canyon ACEC, Cronese Basin ACEC, Mesquite Hills/ Crucero ACEC, Mojave Fringe-toed Lizard ACEC, Ord-Rodman DWMA, and Superior-Cronese DWMA.

2.6.3 Area 3 – Mojave Transition Zone. Area 3 runs along the transition between the Mojave Desert and the San Bernardino Mountains at the southern end of Antelope Valley in northeastern Los Angeles County, and includes a small area in southern Kern County and southwestern San Bernardino County. The area includes active California Condor Final Critical Habitat, active bighorn sheep range, Arroyo Toad Final Critical Habitat, Essential Connectivity Areas (CEHC), and important linkages identified by the South Coast Missing Linkages Project. The area also supports desert tortoise, Mohave ground squirrel, golden eagle, Swainson's hawk, rare plants, Joshua tree woodland, and dune systems.

2.6.4 Area 4 – Mojave Corridor. Area 4 runs along eastern Riverside County and San Bernardino County and connects with Area 1 in the Mojave National Preserve. The area includes Desert Tortoise Critical Habitat, active bighorn sheep range, Essential Connectivity Areas (CEHC), and TNC Ecologically Essential and Intact habitat. Additional special status species include burrowing owl, American badger, Mojave fringe-toed lizard, and rare plants. Acquisition in this area would contribute to retaining

essential habitat connectivity north-south from the Chocolate Mountains in Imperial County up through the Old Woman Mountains and Iron Mountain. It would connect BLM protected areas including Bighorn Sheep WHMA, Dunes and Playas WHMA, Multiple Species WHMA, Dry Wash Woodlands WHMA, Alligator Rock ACEC, Amboy Crater ACEC, Chemehuevi DWMA, Chuckwalla DWMA, Corn Springs ACEC, Marble Mountain Fossil Bed ACEC, Mojave Fringe-toed Lizard ACEC, and Pinto Mountains DWMA.

2.6.5 Area 5 – North of Joshua Tree. Area 5 runs spans northern Riverside County and southern edge of San Bernardino County along the northern edge of Joshua Tree National Park, connecting with the western edge of Area 4. The area includes Desert Tortoise Critical Habitat, active bighorn sheep range, Essential Connectivity Areas (CEHC), and TNC Ecologically Essential and Intact moderately degraded habitat. Additional special status species include burrowing owl, and American badger. Acquisition in this area would connect BLM protected areas including Bighorn Sheep WHMA, and Pinto Mountains DWMA.

2.6.6 Area 6 – Coachella Valley. Area 6 includes portions of the Coachella Valley Multi-Species Conservation Plan area in Central Riverside County and the margins of the Salton Sea. Acquisition in this area would help to maintain habitat connectivity along the east and west sides of the valley. The area includes Desert Tortoise Critical Habitat, active bighorn sheep range, Essential Connectivity Areas (CEHC), Peninsular Bighorn Sheep Final Revised Critical Habitat, Coachella Valley Fringe-toed Lizard Final Critical Habitat, and Arroyo Toad Final Critical Habitat. The area also supports desert pupfish, burrowing owl, American badger, shorebirds and waterfowl, and dune systems. Acquisition in this area would connect BLM protected areas including Bighorn Sheep WHMA, Dry Wash Woodlands WHMA, Big Morongo Canyon ACEC, Chuckwalla DWMA, Dos Palmas ACEC, and Whitewater Canyon ACEC.

2.6.7 Area 7 – West Mojave. Area 7 includes portions of eastern Kern County, western San Bernardino County, and northeastern Los Angeles County. The area includes Mohave ground squirrel core habitat and corridors, Desert Tortoise Critical Habitat, active bighorn sheep range, Essential Connectivity Areas (CEHC), and TNC Ecologically Essential and Intact moderately degraded habitat. The area also supports Tui chub, burrowing owl, shorebirds and waterfowl, Joshua tree woodland, and rare plants. Acquisition in this area would contribute to retaining habitat connectivity for Mohave ground squirrel and would connect BLM protected areas including Black Mountain ACEC, Coolgardie Mesa ACEC, Fossil Falls ACEC, Fremont-Kramer DWMA, Jawbone/Butterbredt ACEC, Kelso Creek Monkeyflower ACEC, Last Chance Canyon ACEC, Rainbow Basin/Owl Canyon ACEC, Rose Spring ACEC, Superior-Cronese DWMA, West Paradise ACEC, and Western Rand Mountain Expansion ACEC.

2.6.8 Area 8 – Imperial Valley. Area 8 spans southeastern Riverside County and northeastern Imperial County south of Highway 10 and connects with the southeastern end of Area 4. It includes Desert Tortoise Critical Habitat, active bighorn sheep range, and an Essential Connectivity Area (CEHC). The area also supports Mojave fringe-toed lizard. Acquisition in this area would contribute to retaining habitat connectivity along the east side of the Chocolate Mountains, and would connect BLM protected areas

including Dry Wash Woodlands WHMA, Bighorn Sheep WHMA, Chuckwalla DWMA, Corn Springs ACEC.

Table 1. Summary of Critical Sensitive Resources Present in the IMS Mitigation Target Areas [2].

Sensitive Resources Present [3]	Area 1	Area 2	Area 3	Area 4	Area 5	Area 6	Area 7	Area 8
IMS Focal Species								
Burrowing Owl		X	x	x	x	x	x	
California Condor			x					
California Condor Final Critical Habitat			x					
Desert Tortoise	x	X	x	x	x	x	x	x
Desert Tortoise Critical Habitat	x	X		x	x	x	x	x
Coachella Valley Fringe-toed Lizard						x		
Mohave Ground Squirrel			x				x	
Coachella Valley Fringe-toed Lizard Final Critical Habitat						x		
Mohave Ground Squirrel Core Area and Corridor							x	
Additional Resources								
Arroyo Toad Final Critical Habitat			x					
American Badger	x	X	x	x	x	x	x	x
Bat Conservation Area – Proposed		X						
Bighorn Sheep - Active Range	x	X	x	x	x	x	x	x
Bighorn Sheep - Peninsular Bighorn Sheep Final Revised Critical Habitat						x		
Bighorn Sheep – Peninsular Bighorn Sheep						x		
Golden Eagle		x					x	x
Joshua Tree Woodlands	x	x	x	x	x	x	x	x

[2] This is not intended to be an exhaustive list of all the resources present in each of the Mitigation Target Areas.

[3] Sources: BLM 2010 a, b; California Natural Diversity Database (CCDFG 2010d), CCDFG unpubl. data, Leitner 2008a, Spencer et al 2010a; USFWS 1974, 1980, 1994, 2005, 2009; and regional experts from desert land trusts, CCDFG, USFWS, and BLM.

Sensitive Resources Present [3]	Area 1	Area 2	Area 3	Area 4	Area 5	Area 6	Area 7	Area 8
Mojave fringe-toed lizard	x	x		x				x
Prairie Falcon		x	x	x		x	x	x
Desert Pupfish						x		
Rare Plants	x	x	x	x	x	x	x	x
Shorebirds and waterfowl						x	x	
Swainson's Hawk		x	x					
Tui Chub	x	x					x	
Dunes / Sand Source and Sand Transport			x			x	x	
Essential Connectivity Areas - CEHC	x	x	x	x	x	x	x	x

3.0 INTERIM MITIGATION ACTIONS

The IMS has been crafted to address mitigation based on assessments completed to date by CDFG, working with the other REAT Agencies. For projects developed before the IMS was released, or if projects change to the extent of potentially conflicting with the preliminary conservation objectives of the DRECP, the CDFG, working with the other REAT Agencies will recommend additional mitigation measures that will aid or contribute to habitat connectivity and recovery of CESA Listed and Candidate Species and will help achieve the preliminary conservation objectives of the DRECP. Projects inconsistent with the IMS include 1) projects that change location or have substantially increased potential impacts and that are not adequately mitigated, 2) projects that potentially conflict with connectivity or essential corridors, 3) projects that substantially conflict with conceptual conservation areas identified by the CDFG working with the other REAT Agencies.

3.1 Approach to Mitigation

The approach to mitigation outlined in the IMS addresses impacts to listed species where project applicants have agreed, as a condition of permit approval, to fund acquisition of land in fee title or conservation easement and land enhancement or restoration for the benefit of CESA Listed and Candidate Species. Most of the eligible projects are regulated by more than one of the other REAT Agencies and these agencies have differing statutory, regulatory and policy requirements. The approach to mitigation must be flexible enough to accommodate these differences while meeting the legal requirements of CESA, ESA, and other applicable statutes. The other REAT Agencies have agreed that compensatory mitigation can consist of land acquisition, enhancement, and/or restoration, to most effectively address mitigation and recovery. Compensatory mitigation actions for a given project may include one or more of these mitigation actions in various combinations depending on project-specific circumstances, as determined by CDFG and other applicable state and federal agencies.

A majority of the California desert is comprised of public lands that are essential to the recovery of declining and vulnerable desert species. For example, the Desert Tortoise Recovery Plan identifies several actions including fencing along major roads and highways, retiring grazing leases and related actions as critical to recovering desert tortoise populations. Nearly 75% of the range of the known MGS population is on public land. As a result, private land acquisition alone will not fully realize meaningful target species population recovery.

As previously stated, most of the renewable energy eligible projects are at various stages of environmental review. Despite this limitation, we could not complete the assessment required under SB 34 without estimating the possible mitigation obligations for eligible projects and, based on experience, also providing preliminary estimates of the costs associated with the compensatory mitigation measures on a per acre basis contemplated in the IMS.

Based on the available information about impacts expected from eligible projects, we have also set forth below the types of mitigation that would likely be used to mitigate each type of impact. For purposes of these estimates, we assumed acquisition to be some combination of actual land acquisition and other actions such as enhancement and restoration on public lands.

3.1.1 Recovery Actions. The IMS is consistent and compatible with the recovery actions identified in the species-specific recovery plans for listed desert species such as desert tortoise, and Coachella Valley Flat-Tailed Lizard. This is achieved through referencing, and incorporating into the IMS, actions that have been identified as necessary to recover the species. Specifically, habitat loss and degradation have been identified as the greatest threat to desert species. Recovery actions that can be addressed through land acquisition, habitat enhancement and restoration, have been identified as high priorities in the IMS**.**

3.1.2 Consistency with Recovery Plans*.* The recovery actions for desert species covered by the IMS as summarized in Appendix B of the IMS, will benefit from the mitigation actions of the IMS (Table 2).

Table 2. Listed Desert Species benefiting from IMS Tasks based on recovery and other management plan actions.

	Listed Desert Species					
IMS Tasks	BUOW	MGS	Desert Tortoise	Ca. Condor	Bighorn	FTHL
Land Acquisition	X	X	X	X	X	X
Habitat Enhancement	X	X	X	X	X	
Habitat Restoration	X	X		X	X	
Land Management	X	X	X	X	X	X

3.2 Land Acquisition.

Advance land acquisition using the revolving fund established through SB 34 is a key feature of creating an effective reserve design. The CDFG and the other REAT Agencies have identified MTAs that exceed the total acreage of lands potentially affected by project implementation. Advanced acquisition through use of the $10 million dollar revolving fund will allow conservation of mitigations lands that will then be available as a bank, to be credited towards qualified projects to meet all or a portion of their mitigation obligations. Acquired lands will be permanently protected through conservation easements or deed restrictions in-perpetuity.

The DRECP Planning Agreement addresses how land acquisition for project mitigation could contribute to the goals and objectives of the DRECP. Assuming project actions are consistent with these goals and objectives, the CDFG working with the other REAT Agencies may credit natural resource protection, in accordance with their biological value, toward the habitat protection, enhancement, and restoration requirements of the DRECP, as appropriate, provided these resources support listed species and natural communities; are appropriately conserved, restored or enhanced; and contribute to the DRECP conservation strategy.

The goals for land acquisition, as described in the IMS, are to further the conservation objectives and recovery actions for species and habitats within the DRECP boundaries. Focused MTAs for acquisition are identified in Figure 4, together with ACE-II, and areas of high biological value and mitigation target area are identified together with CEHC (Figure 5). Acquisition in these areas would conserve recovery lands and facilitate improved movement between isolated populations of desert tortoise, bighorn sheep, Coachella Valley Flat Tailed Lizard, Mohave Ground Squirrel, and several plants; plus many non-listed special status species such as golden eagle, Mojave Flat Tailed Lizard, Flat Tailed Horned Lizard, burrowing owl, and numerous other species of reptiles, birds, mammals, and plants; provide lands important for species recovery; and provide improved connectivity between habitats benefiting these species. Desert species will benefit from acquisition in any of the areas identified as MTAs that also have high biological value and contribute to conservation and connectivity of essential corridors (Figures 4 and 5).

3.3 Enhancement and Restoration.

Enhancement and restoration may occur in any areas identified for acquisition in the IMS but must meet the intent of enhancement and restoration activities included in the IMS.

The purpose of enhancement is to improve marginal or degraded habitat or habitats that are not functioning to the highest capacity for dependent species. Restoration is intended to recreate habitats that are either no longer functioning as habitat for native species, or habitats that provide no benefits to native species. Enhancement and restoration activities should strive to remove or minimize stressors to species and habitats and build capacity for species resiliency and recovery by making improvements to the structure, composition, and function of habitats and more broadly to ecosystems.

It is the intent of the IMS that enhancement and restoration investments, especially on public lands, are maintained in such a way to provide the on-going habitat quality benefits relied upon for permit and certification findings. Moreover, where enhancement and restoration consists of site re-vegetation, maintenance beyond an initial establishment period should be minimal, and long-term management should consist of limiting habitat degradation.

3.3.1 Habitat Enhancements. Enhancement can occur in and between areas of suitable habitats for listed species. Enhancement proposals should be prepared by incorporating project-specific closure/decommissioning or abandonment plans, as appropriate, and should meet permitting agency approval. Proposals can focus, for example, on the following enhancement activities:

a. Removal of invasive weeds or non-native plant species. These actions should be planned to the extent possible addressing a regionwide approach for control of invasive species.

b. Permanent removal of non-native species including cattle, burros, horses, and sheep. This can be accomplished by permanently retiring grazing leases.

c. Reclaiming areas of disturbed soil using certified weed free native vegetation and topsoil salvaged from excavations and construction activities.

d. Removing barriers and obstacles that interfere with or prohibit wildlife movement. This could include constructing culverts and land bridges that provide connectivity across roads and highways, between areas of highly suitable habitat.

e. Construct barrier fencing along highways and other high traffic volume roads to prevent/minimize road kill related to prevent the mortality of desert tortoise.

3.3.2 Restoration. Examples of project specific restoration and revegetation that may meet the approval of permitting agencies and could be carried out on acquired

conservation lands to support adaptation and species resiliency include the following restoration activities:

a. Removal of unauthorized roads and access points. Creating barriers to unauthorized access and disturbance.

b. If a site has been terraced or otherwise substantially altered from its natural contour, recontouring back to natural pre-disturbance condition.

c. Restore soil profiles so that topsoils will establish and maintain native plant communities in a natural pre-disturbance condition.

d. Restoring wildlife habitat and promoting the re-establishment of native plant and wildlife species in small marginal or degraded areas within otherwise pristine habitats. This measure may be especially relevant in areas acquired to provide connectivity or movement corridors between intact native habitats.

e. Restoring vegetation cover, composition, and diversity to values commensurate with the natural ecological setting. Where possible, use local seed sources that will benefit native species and species recovery.

3.4 Primary Enhancement and Restoration Conceptual Areas.

Enhancement and restoration should be targeted to achieve the maximum benefit to target CESA Listed and Candidate Species. MTAs have the greatest opportunities to benefit target species while providing ancillary habitat improvement benefits for the entire suite of wildlife and plant resources. Priority should be given to locating enhancement and restoration projects in areas identified for acquisition or in areas that are identified as critical habitat for recovering listed species or stabilizing populations of declining or vulnerable species, and that may be adjacent to already preserved lands. This can reduce fragmented, isolated habitat and promoting species movement between disjunct habitat patches.

Within the areas identified as critical habitat for desert tortoise, the Final Critical Habitat for the Mojave Population of the Desert Tortoise (*Gopherus agassizii*) in California (USFWS 1994) identifies principles to enhance or recover degraded habitats and provide insight into potential enhancement activities that benefit CESA species as well as multiple other species. The overarching stressor affecting the recovery of target CESA Listed and Candidate Species, as well as most non-listed species, is loss or degradation of habitat. Both of these stressors are remedied in part through implementation of the IMS and the protection and conservation of quality habitat throughout the DRECP region. The following measures are important aspects of species recovery but may not necessarily qualify as compensatory mitigation for impacts associated with development of solar renewable energy projects. These measures are nonetheless critical components necessary so specific species can achieve identified recovery goals and include:

1. Control and manage activities that degrade active desert sand fields. In particular, control and manage the primary threats to the sand community, including OHVs and other factors that contribute to the loss or stabilization of active fields.
2. Identify actions to reduce impacts from, and control where feasible, invasive species if it is determined from monitoring results that there are impacts to the active desert sand field community.
3. Implement monitoring to track, and ultimately distinguish between, changes due to human or natural causes. Significant variables may include sand compaction, native ant numbers, live perennial shrub abundance, and invasive exotic plant abundance

The Coachella Valley fringe-toed lizard recovery plan (USFWS 1985) and the flat-tailed horned lizard rangewide management strategy (Foreman 1997) identified measures that would benefit recovery of these species. They are:

1. Remove and/or eliminate Russian thistle and other exotic species.
2. Remove windbreaks in areas to be restored.
3. Rehabilitate abandoned agricultural areas as appropriate.
4. Implement other rehabilitation procedures as appropriate. Evaluate success of restored habitats and modify
5. Rip and scarify compacted surfaces to alleviate soil compaction and improve water infiltration along abandoned roads.

3.5 Compensatory Mitigation Cost Estimated

The intent of the IMS is to provide options to mitigate project impacts that require acquisition, enhancement, or restoration of habitat for primarily listed species, although there will be indirect benefits to all species that may require mitigation pursuant to CEQA. SB 34 requires total cost accounting to be used when determining the amount of fees to be paid by project developers. Total cost accounting includes acquisition or conservation easement costs, or costs associated with the purchase transaction, appraisal, escrow, and title insurance including mineral, oil, and gas rights (MOG); initial enhancement that includes signs, fencing, and boundary/property line surveys; or restoration actions such as removal of exotic species, roads, decommissioning unneeded infrastructure; management for ongoing activities such as public access and enforcement; and monitoring the implementation, effectiveness, and compliance of conservation measures with the goals and objectives of the IMS; and administration of contracts, easements, staff, budgets, and reporting. Estimates consist of preliminary calculations by agencies preparing project environmental analysis at the time the IMS was prepared and do not represent the total mitigation requirements for any one project. Additional measures have or will be identified and will be required to fulfill mitigation obligations identified through environmental review i.e. CEQA process.

The estimated number of acres of compensatory mitigation required for eligible projects is described in the CEC Staff Assessments, BLM EIS, or local agency CEQA documents as of the effective date of the IMS or will be subsequently identified through

these review processes. The mitigation requirements and associated costs set forth in the final permit or certification will overrule the preliminary estimates included in this IMS. The final permit or certificate issued by the agency having jurisdiction will determine the final mitigation requirements.

Due to uncertainty in the State's economy and the real estate market in general, and the concomitant effect of rising property values resulting from large scale acquisitions for conservation, a conservative approach to setting the per acre fee/costs estimates is justified. The REAT Agencies have developed an MOU with the NFWF (Appendix C) and the Biological Resources Compensation/Mitigation Cost Estimate Breakdown (Appendix E) that together provide a comprehensive accounting of potential costs. These estimates may apply in their totality to many individual projects, or to none depending on the mitigation option chosen by the project developer. Individual project developers may also choose to complete the required mitigation by combining different aspects of the options available under SB 34. Project applicants choosing to implement compensatory mitigation through the IMS utilizing an in-lieu fee approach should consult Appendix E to establish these costs for the project. The CDFG will move quickly to secure purchase options in advance of project certifications to provide project developers greater certainty regarding fee estimates.

SB 34 fees will go into a fund to complete specific mitigation actions that embrace a regional planning perspective. Fees are to be paid on a per acre basis, which can include a mitigation ratio, but nothing in SB 34 reflects any legislative intent to have separate fee structures for each project. Accordingly, the IMS addresses the collective project-specific impacts and identifies actions that are intended to mitigate those impacts. The mitigation actions are intended to be collective in their benefits and specifically identified to assure that each project's impacts are addressed.

3.6 IMS Implementation.

Fish and Game Code Section 2069 and 2099 describe the process for implementation of the IMS. The IMS options i.e. advanced mitigation and in-lieu fee, for mitigating impacts from desert renewable energy projects within the boundaries of the DRECP, apply to those projects that meet the criteria stipulated in SB 34. Statute establishes the Renewable Resource Trust Fund (RRTF) and directs the CDFG to use the RRTF pursuant to paragraph (1) of subdivision I of Section 2069, to purchase mitigation lands or conservation easements, and to cover related restoration, monitoring, and transaction costs incurred in advance of the receipt of fees.

3.6.1 Approach Eligible project applicants have the option of participating in the advance mitigation option or funding CDFG's implementation of mitigation through payment of in-lieu fees (Figure 7). In addition, when project developers are implementing mitigation actions on their own behalf, lands acquired to satisfy required mitigation for endangered, threatened, and candidate species must be reviewed by the CDFG and receive concurrence that these lands provide adequate compensatory mitigation benefits. Project developers will be required to:

- Submit proposed survey protocols to USFWS, CDFG and appropriate lead agencies for review, comment, and approval. Surveys and inventories of special status species should follow protocols recognized by CDFG and appropriate lead agencies. Also, to ensure the quality of the protocol surveys, the names and qualifications of the surveyors should be provided to USFWS, CDFG and the lead agencies for review at least two weeks prior to initiating surveys.
- Complete all wetland delineations for waters of the state and US and provide verification that the wetlands delineations are acceptable to the appropriate state (CDFG) and federal (Army Corps of Engineers) regulatory agencies.
- Provide copies of the completed and, when applicable, correspondence from CDFG deeming application(s) as complete for an Incidental Take Permits and Streambed Alteration Agreements, if one or both will be required.
- Include a draft common raven (*Corvus corax*) management plan for the project site in applications to appropriate lead agencies; provide verification that agency consultation occurred during development of the draft raven management plan.
- Consult with USFWS and CDFG to determine the need for and/or feasibility of conducting desert tortoise translocation to minimize potential for direct take, or to lessen or mitigate project impacts, if desert tortoises are known to occur within the proposed project area. Development and implementation of a translocation plan may require, but not be limited to: additional surveys of potential recipient sites; disease testing and health assessments of translocated and resident tortoises; monitoring protocols; and consideration of climatic conditions at the time of translocation. Because of the potential magnitude of the impacts to desert tortoises from proposed renewable energy projects, USFWS and CDFG must evaluate translocation efforts on a project by project basis in the context of cumulative effects.
- Provide a draft habitat compensation plan, when deemed appropriate by the fish and wildlife agencies, which describes the acquisition schedule relative to expected project groundbreaking, endowment funding strategy and amount, so that adequate funds will be available to fund the management of the compensation lands in perpetuity. Identify the location and suggested amount of compensation habitat and the rationale for the suggested habitat compensation location(s).

The Department has been working to fully develop the mechanisms available to eligible project applicants to utilize SB 34 for implementing mitigation. As of the date of publication of this IMS, all eligible projects are working through the environmental review and permitting phase of the process and are not all prepared to take advantage of the SB 34 provisions. Concurrent with development of the IMS, the Department has taken the following actions to ensure SB 34 provisions will be operational:

1) Established, through the NFWF MOU, processes to accept and manage mitigation funds received for compensatory mitigation and that CDFG can authorize money to be disbursed from the trust account into NFWF's REAT account under CDFG's authority to contract with 3rd parties to implement the mitigation actions.

2) Created a network of third-party land acquisition, management, and land conservation organizations (e.g., land trusts, conservancies, etc.) and linked these parties with the NFWF to act as agents in acquiring and managing lands purchased through the in-lieu fee provisions of SB 34

3) Identified and documented approximately fifty thousand acres of land currently available or available in the near future that could be acquired under the revolving fund provision of SB 34 for advance mitigation purposes. Current revolving funds could purchase up to half of these lands as an advance mitigation action.

4) Established processes internally to provide for efficient granting of the revolving fund dollars to third-party partners to effect these acquisitions. We estimate having advance mitigation land purchase options or purchases moving to escrow within 60 days of the final IMS

Figure 1: Desert Renewable Energy Conservation Plan (DRECP) boundary.

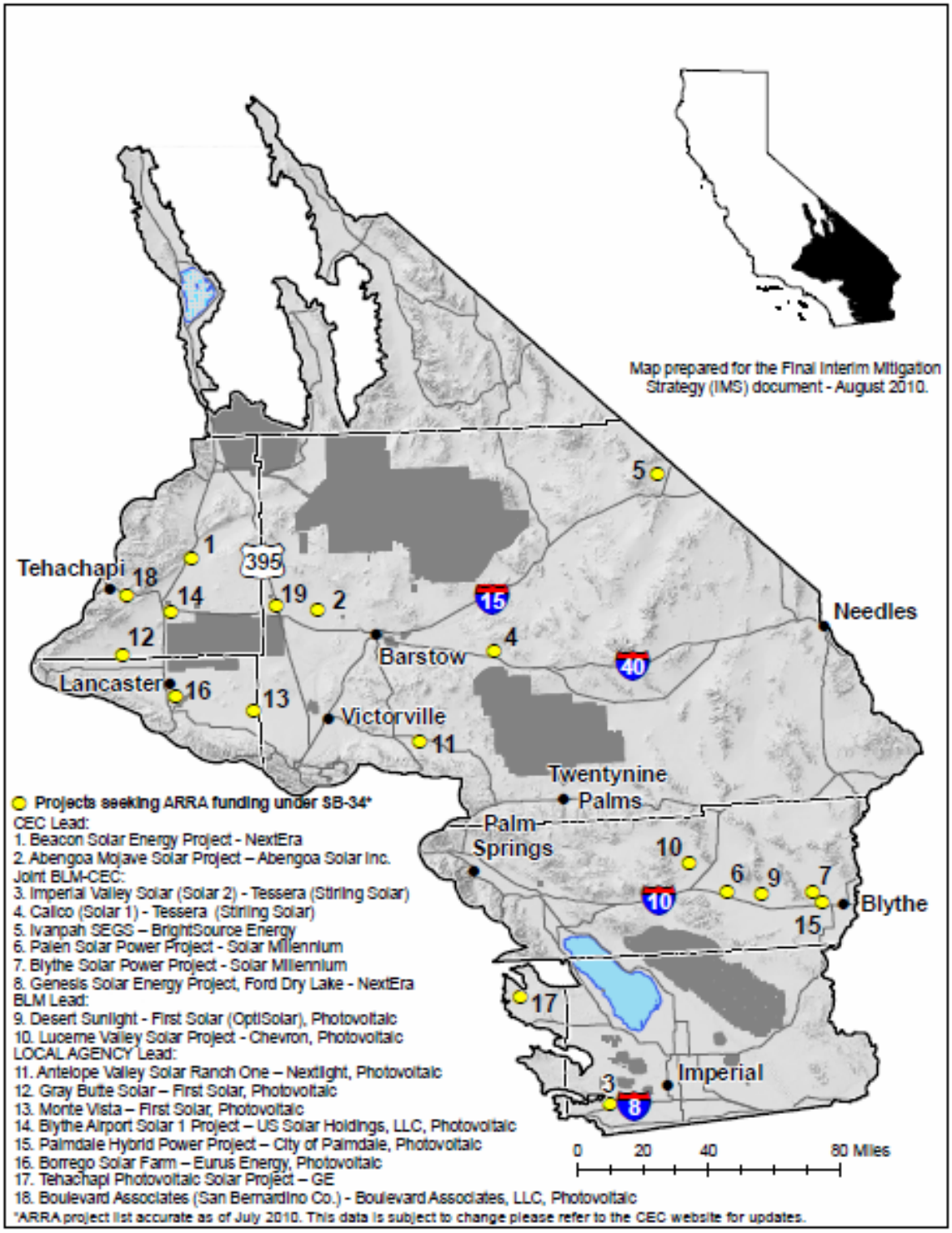

Figure 2: Projects seeking ARRA funding under SB-34 within the boundary of the DRECP.

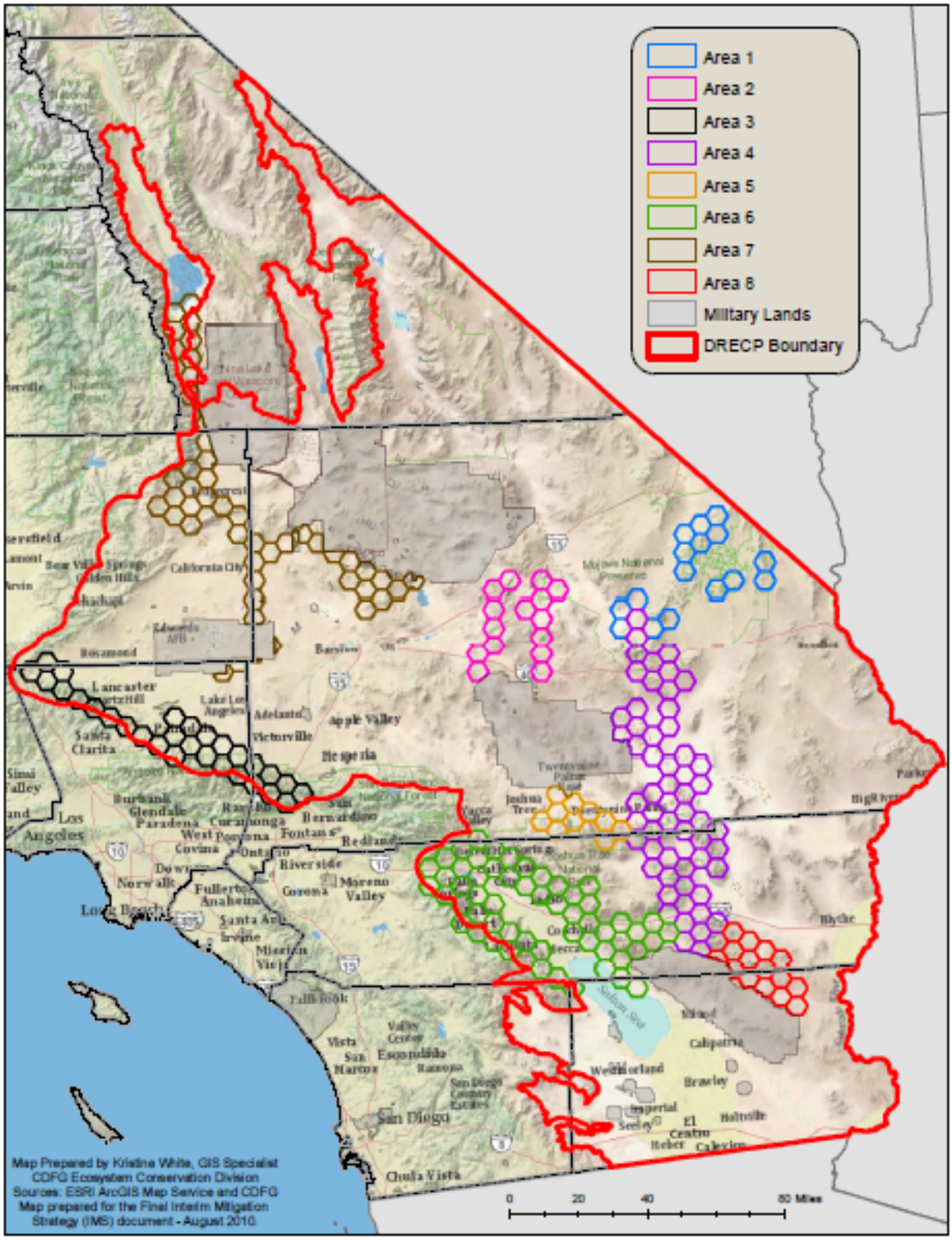

Figure 3: IMS Mitigation Target Areas developed specifically for use with the IMS and SB-34 projects only.

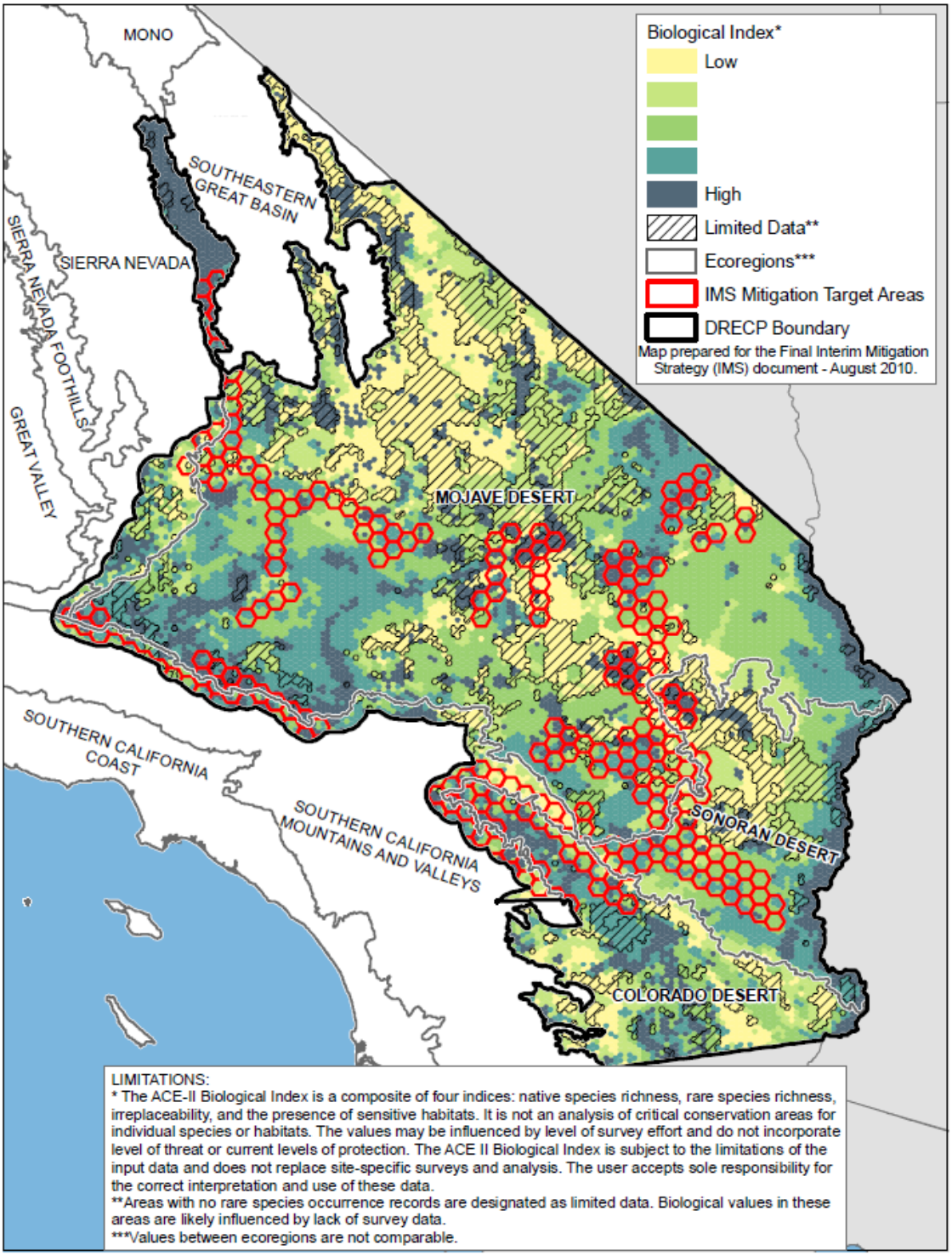

Figure 4: Areas of Conservation Emphasis II – conservation priority model output for the Mojave, Sonoran, and Colorado Deserts, Sierra Nevada, and Southern California Mountains and Valleys ecoregions.

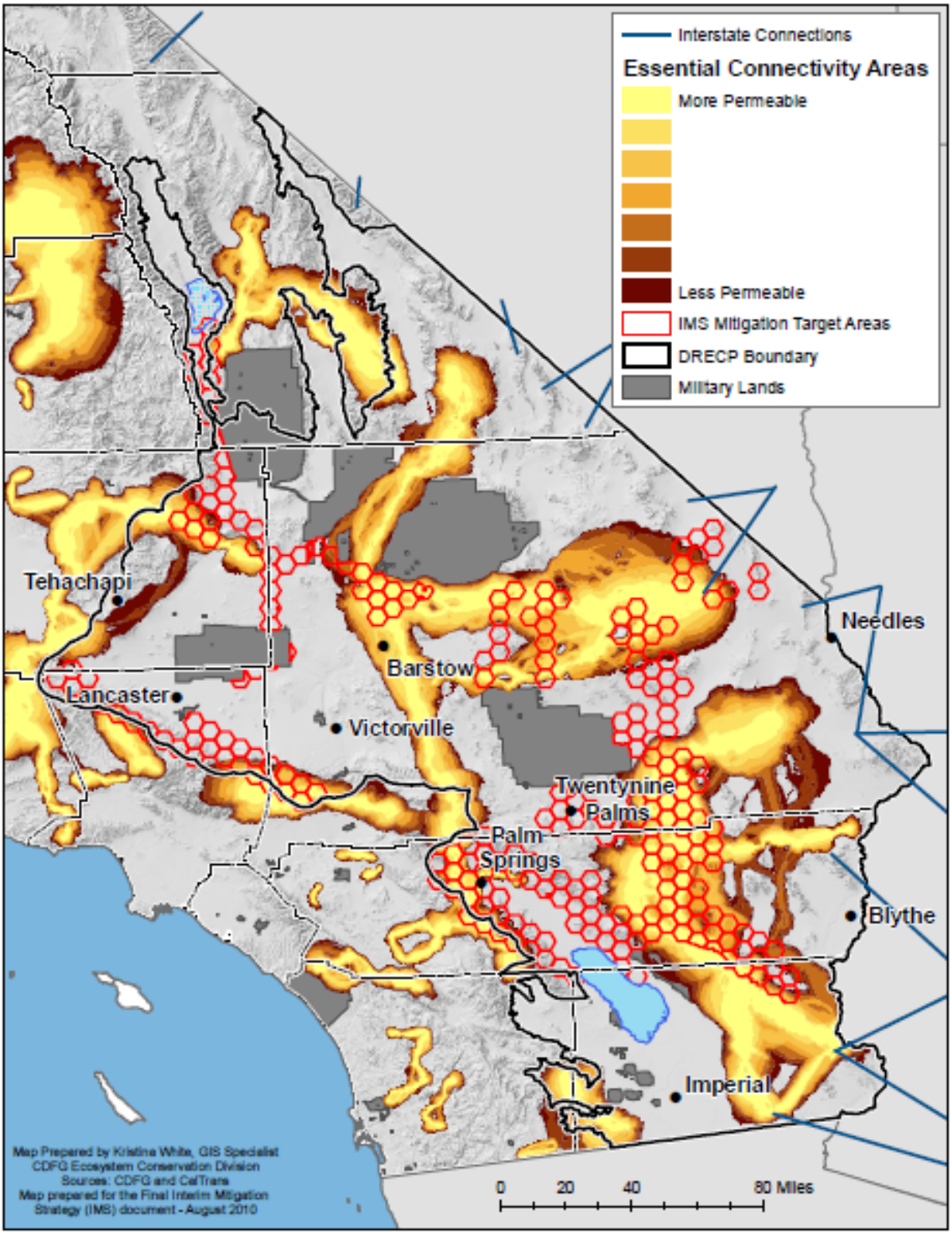

Figure 5: California Essential Habitat Connectivity corridors with IMS Mitigation Target Areas.

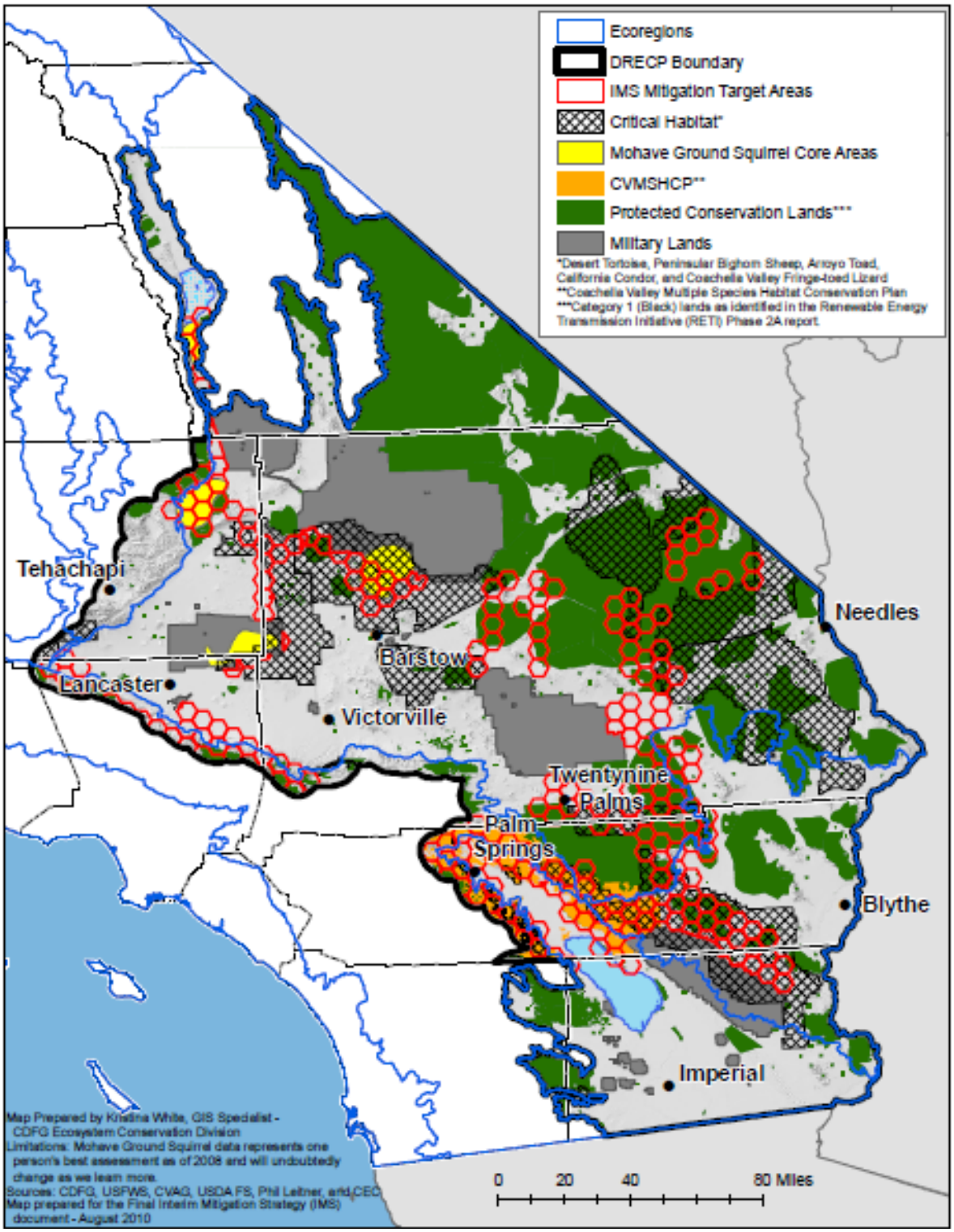

Figure 6: IMS Mitigation Target Areas relative to other already protected lands and conservation areas.

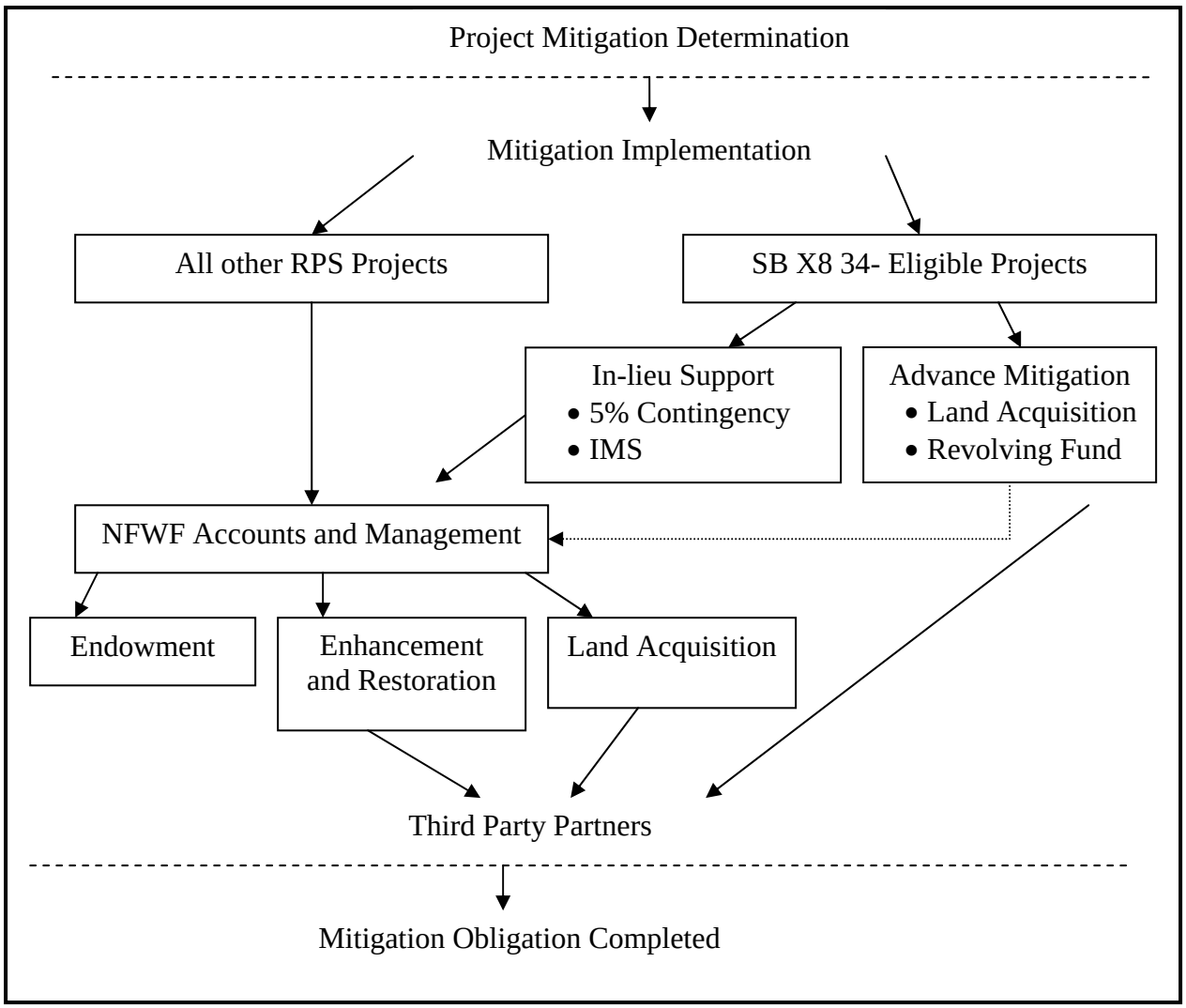

Figure 7. Renewable Energy Mitigation Implementation. Flow chart of options under Senate Bill X8 34 and the National Fish and Wildlife Foundation Memorandum of Agreement.

LITERATURE CITED

Black and Veatch. 2008. Environmental Blackout Areas (RETI). Prepared for the California Energy Commission. Online Linkage: http://www.energy.ca.gov/reti/documents/index.html

Bureau of Land Management (BLM). 2009. Solar Energy Study Areas for the Bureau of Land Management. Vector digital data. Argonne National Laboratory. Argonne, Illinois. Online Linkage: http://solareis.anl.gov/eis/maps/index.cfm

Bureau of Land Management (BLM). 2010a. Federal and State Surface Estate. Vector digital data. Sacramento, California. June. Online Linkage: http://www.blm.gov/ca/gis/

Bureau of Land Management (BLM). 2010b. Area of Critical Environmental Concern. Vector digital data. July. Online Linkage: http://www.blm.gov/ca/gis/

Bureau of Land Management (BLM). 2010c. Renewable Energy Project Applications in California. Vector digital data. June. Online Linkage: http://www.blm.gov/ca/gis/

Bureau of Land Management (BLM). Unpublished data. Wildlife Habitat Management Areas. Vector digital data.

California Department of Fish and Game (CDFG). 2010a. DRECP Planning Boundary. Vector digital data.. Renewable Energy Support and Climate Change Branch. Sacramento, California. Online Linkage: http://bios.dfg.ca.gov

California Department of Fish and Game (CDFG). 2010b. Areas of Conservation Emphasis II (ACE II). Vector digital data. ACE II Technical Team. Sacramento, California.

California Department of Fish and Game (CDFG). 2010c. California Department of Fish and Game Owned Lands (DFG Owned Lands). Vector digital data. Wildlife Programs Branch. Sacramento, California. March. Online Linkage: http://www.dfg.ca.gov/biogeodata/gis/clearinghouse.asp

California Department of Fish and Game (CDFG). 2010d. California Natural Diversity Database (CNDDB). Biogeographic Data Branch. Sacramento, California. July. Online Linkage: http://www.dfg.ca.gov/biogeodata/cnddb/

California Department of Fish and Game (CDFG). 2010e. Renewable Energy Project Applications (DFG). Vector digital data. Available from CDFG.

California Department of Fish and Game (CDFG). Unpublished data. Active Bighorn Sheep Range. Vector digital data. Region 6 – Inland Deserts Region. Bishop, California.

California Energy Commission (CEC). 2010a. Competitive Renewable Energy Zones (CREZ). Vector digital data. Sacramento, California. March. Online Linkage: http://www.energy.ca.gov/reti/documents/index.html

California Energy Commission (CEC). 2010b. Solar Thermal Projects. Vector digital data. Sacramento, California. March. Online Linkage: http://www.energy.ca.gov/reti/documents/index.html

California Energy Commission (CEC). 2010c. Wind Projects. Vector digital data. Sacramento, California. March. Online Linkage: http://www.energy.ca.gov/reti/documents/index.html

Coachella Valley Association of Governments (CVAG). Unpublished data. Coachella Valley Multiple Species Habitat Conservation Plan (CVMSHCP) Conservation Areas. Vector digital data. Palm Desert, California.

Foreman, L. D. (ed). (1997) Flat-tailed horned lizard rangewide management plan. Report of interagency working group. 61 pp.

Leitner, P. 2008a. Mohave ground squirrel - Core Areas and Populations. Vector digital data. California State University – Stanislaus. Stanislaus, California. Online Linkage: http://bios.dfg.ca.gov

Leitner, P. 2008b. Mohave Ground Squirrel Potential Corridors. Vector digital data. California State University – Stanislaus. Stanislaus, California. Online Linkage: http://bios.dfg.ca.gov

Monson, G., and L. Sumner, eds. 1980. The desert bighorn: its life history, ecology, and management. Univ. Arizona Press, Tucson. 370pp.

Shihadeh, K. and N. Thorngate. 2007. Presence and movements of California condors near proposed wind turbines. Final Report prepared for HT Harvey and Associates. Unpublished report, 21 pp.

Spencer, W.D., P. Beier, K. Penrod, K. Winters, C. Paulman, H. Rustigian-Romsos, J. Strittholt, M. Parisi, and A. Pettler. 2010a. Essential Connectivity Areas – CEHC. Vector digital data. California Essential Habitat Connectivity Project: A Strategy for Conserving a Connected California. Prepared for California Department of Transportation, California Department of Fish and Game, and Federal Highways Administration. Online Linkage: http://bios.dfg.ca.gov.

Spencer, W.D., P. Beier, K. Penrod, K. Winters, C. Paulman, H. Rustigian-Romsos, J. Strittholt, M. Parisi, and A. Pettler. 2010b. Interstate connections. Vector digital data. California Essential Habitat Connectivity Project: A Strategy for Conserving a Connected California. Prepared for California Department of Transportation, California Department of Fish and Game, and Federal Highways Administration. Online Linkage: http://bios.dfg.ca.gov

The Nature Conservancy. 2010. Mojave Desert Ecological Assessment. Map Service. California South Coast & Deserts Program. California.

U. S. Department of Agriculture. 1997. Ecological subregions of California, section and subsection descriptions. USDA Forest Service, Pacific Southwest Region, San Francisco, CA. USA.

U.S. Department of Agriculture, Forest Service. 2007. Ecological Subregions: Sections and Subsections of the Conterminous United States. Vector digital data. Pacific Southwest Region - Remote Sensing Lab. Sacramento, California.

U.S. Fish and Wildlife Service (USFWS). 2009a. Final Revised Critical Habitat for the Peninsular Bighorn Sheep (*Ovis canadensis nelsoni*). Vector digital data. U.S. Fish and Wildlife Service, Carlsbad Fish and Wildlife Office. Carlsbad, California, USA. Federal Register, April 14, 2009, Vol. 74, No. 70, pages 17288-17365. Online Linkage: http://criticalhabitat.fws.gov

U.S. Fish and Wildlife Service (USFWS). 2005. Final Critical Habitat for the Arroyo Toad (*Bufo californicus*). Vector digital data. U.S. Fish and Wildlife Service, Carlsbad Fish and Wildlife Office, Carlsbad, California, USA. Federal Register (70 FR 19562), April 13, 2005. Online Linkage: http://criticalhabitat.fws.gov.

U. S. Fish and Wildlife Service (USFWS). 1994. Desert tortoise (Mojave population) Recovery Plan. U.S. Fish and Wildlife Service, Portland, Oregon. 73 pages plus appendices.

U.S. Fish and Wildlife Service (USFWS). 1994. Final Critical Habitat for the Mojave Population of the Desert Tortoise (*Gopherus agassizii*) in California. Vector digital data. U.S. Fish and Wildlife Service, Carlsbad Fish and Wildlife Office, Carlsbad, California, USA. Federal Register, February 8, 1994, Vol. 59, No. 26, pages 5820-5866. Online Linkage: http://criticalhabitat.fws.gov.

U.S. Fish and Wildlife Service. 1996. California Condor Recovery Plan, Third Revision, Portland, Oregon, 62 pp.

U.S. Fish and Wildlife Service. 1985. Coachella Valley fringe-toed lizard recovery plan. U. S. Fish and Wildlife Service, Portland, Or, USA. 60 pp.

U.S. Fish and Wildlife Service (USFWS). 1980. Final Critical Habitat for the Coachella Valley Fringe-toed Lizard (*Uma inornata*). Vector digital data. U.S. Fish and Wildlife Service, Carlsbad Fish and Wildlife Office, Carlsbad, California, USA. Federal Register, September 25, 1980, Vol. 45, No. 188, pages 63812-63820. Online Linkage: http://criticalhabitat.fws.gov

U.S. Fish and Wildlife Service (USFWS). 1974. Final critical habitat for the California Condor (*Gymnogyps californianus*). Vector digital data. U.S. Fish and Wildlife Service, Ventura Fish and Wildlife Office, Ventura, CA. Online Linkage: http://criticalhabitat.fws.gov/docs/crithab/zip/fch_42fr47840_caco_2009.zip

Western Field Ornithologists (WFO). 2008. Bird Species of Special Concern. Vector digital data. Western Foundation of Vertebrate Zoology, Camarillo, CA 93012. Online Linkage: http://bios.dfg.ca.gov

APPENDIX A

SB X8 34 Qualified Solar Thermal and Solar Photovoltaic Projects

(Located within DRECP Planning Area, Seeking ARRA Funds)

The following plan descriptions are summaries derived from CEC Staff Reports and other sources as of August 31, 2010. The CDFG is aware there may be additional projects that have since qualified pursuant to SB 34, not being processed by CEC. Future revision of the IMS will incorporate these additional project descriptions.

1. Beacon Solar Energy Project – NextEra

Beacon Solar proposes to develop and operate a 250-megawatt thermal trough solar energy facility called Beacon Solar Energy Project in Kern County east of State Route 14. The project would use reclaimed wastewater for wet cooling. The project site is previously disturbed from past agricultural activities, which ceased in the early 1980s. The site is relatively flat, with elevations ranging from approximately 2,220 feet above mean sea level in the southwest to 2,025 feet in the northeast. Pine Tree Creek, a desert wash trends south-southwest to north-northeast through the center of the site. The site is situated in the Fremont Valley, just east of the southernmost portion of the Sierra Nevada, in the northwestern Mojave Desert. The project includes the plant site (solar array, power generating equipment, support facilities, evaporation ponds, and access roads) and the project's linear facilities (transmission line and switchyard). The power block and solar arrays would occupy approximately 1,266 acres of the 2,012-acre plant site. The total area that would be fenced and subject to disturbance is 2,012 acres and includes an engineered channel, evaporation ponds, access road, administration buildings and other support facilities, and bioremediation areas.

The Beacon project is anticipated to result in the following impacts to species and habitats that qualify for mitigation implementation pursuant to SB 34:

a) Permanent loss of breeding and foraging habitat for resident burrowing owls; potential loss of eggs and young; degradation and fragmentation of remaining adjacent habitat from edge effects; disturbance of nesting and foraging activities.
b) Potential take of Mohave ground squirrel (MGS) and desert tortoise during construction and operation and construction; increased risk of

predation from ravens and other predators; increased road kill hazard from construction and operations traffic.

2. Abengoa Mojave Solar Project—Abengoa Solar Inc.

The proposed Abengoa Mojave Solar project consists of two 125 MW solar thermal trough power plants that would use ground water for cooling and would occupy approximately 1,765 acres in the West Mojave Desert adjacent to the western margin of Harper Dry Lake in unincorporated San Bernardino County. The proposed project footprint and size were iteratively modified by the Applicant to avoid continuous stands of undisturbed native vegetation, conservation areas, and high quality wildlife habitat. As a result approximately 90% of the habitat within the project area is developed, disturbed, fallow or active agricultural lands. Overall, the proposed project area is composed of degraded habitat, which is of marginal suitability for special-status species and does not support a diverse assemblage of native plants and wildlife. However, the proposed project area is adjacent to the Harper Dry Lake Area of Critical Environmental Concern and otherwise surrounded by known populations of listed species (e.g., desert tortoise, MGS, desert cymopterus), desert tortoise critical habitat, Desert Wildlife Management Area, and MGS Conservation Area. Therefore, transient individuals of special-status species may be occasionally present onsite as they move between areas of suitable habitat adjacent to the proposed project and potentially within areas of suitable habitat presently re-establishing at the edges of the proposed project area.

The Abengoa project is anticipated to result in the following impacts to species and habitats that qualify for mitigation pursuant to SB 34:

a) Potential loss of breeding and foraging habitat for resident burrowing owls; potential loss of eggs and young; degradation and fragmentation of remaining adjacent habitat from edge effects; disturbance of nesting and foraging activities.
b) Potential loss and fragmentation of desert tortoise habitat, disruption of movement corridors, potential take of individuals during operation and construction; increased risk of predation from ravens and other predators; increased road kill hazard from construction and operations traffic.

3. Imperial Valley Solar (Solar 2) – Tessera (Stirling Solar)

The proposed Solar Two Project would be a nominal 750-megawatt Solar Stirling Engine project, with development proposed in two phases: 350 MW and 400 MW. The 6,500-acre project site is located on approximately 6,140 acres of public land managed by the BLM and approximately 360 acres of privately owned land.

Within the project boundary, the SunCatchers in Phase I require approximately 2,600 acres and those in Phase II require approximately 3,500 acres. The total area required for both phases, including the area for the operation and administration building, the maintenance building, and the substation building, is approximately 6,500 acres. The 230-kV transmission line required for Phase I

would parallel SDG&E's existing Southwest Powerlink transmission line adjacent to the designated ROW.

The Imperial Valley project is anticipated to result in the following impacts to species and habitats that qualify for mitigation pursuant to SB 34:

a) Potential take of flat-tailed horned lizard individuals; permanent loss of flat-tailed horned lizard habitat (Sonoran creosote bush scrub; increased risk of predation; increased road kill hazard from construction and operations traffic.
b) Potential loss of hydrological, geomorphic, and biological functions and values to ephemeral desert washes, resulting in permanent impacts to jurisdictional state waters and to Waters of the U.S.
c) Loss of foraging habitat for big horn sheep.

4. Calico (Solar 1) – Tessera (Stirling Solar)

The proposed Calico (Solar 1) Project would be a nominal 850-megawatt Solar Stirling Engine project. The project is proposed for development in two phases. Phase I includes 11,000 SunCatchers located on approximately 2,320 acres (3.6 square miles) to produce 275 MW. Phase II would include an additional 23,000 SunCatchers on an additional approximately 5,910 acres (9.2 square miles) to produce an additional 575 MW for the total 850 MW planned production. The total area required for both phases, including the area for the operation and administration building, the maintenance building, and the substation building, is approximately 8,230 acres.

The primary equipment for the generating facility would include approximately 34,000 SunCatchers, their associated equipment and systems, and their support infrastructure. The project site covers 8,230-acres (13 square miles) and is located on public land managed by the BLM. No private lands are located within the 8,230 acres under BLM application.

The Calico (Solar 1) project is anticipated to result in the following impacts to species and habitats that qualify for mitigation pursuant to SB 34:

a) Potential loss and fragmentation of desert tortoise habitat, disruption of movement corridors, potential take of individuals during operation and construction; increased risk of predation from ravens and other predators; increased road kill hazard from construction and operations traffic.
b) Potential mortality and disturbance to Mojave fringe-toed lizard, loss of habitat, and habitat fragmentation, disruption of movement corridors.
c) Potential loss of hydrological, geomorphic, and biological functions and values to ephemeral desert washes, resulting in permanent impacts to jurisdictional state waters.
d) Rare plants

5. Ivanpah Solar Electric Generating System – Bright Source

The applicant proposes to develop the ISEGS project as three thermal solar tower power plants in separate and sequential phases that are designed to generate a total of 400 megawatts of electricity. The project would use dry cooling Since filing the Application for Certification and ROW Application, the applicant's proposed project plans have been updated for design optimization and for two revisions associated with storm water management approaches. The applicant has proposed to locate the 3,583 acre ISEGS project in the Mojave Desert, near the Nevada border in San Bernardino County, California, on land administered by the BLM. The proposed project site is located 4.5 miles southwest of Primm, Nevada, and 0.5 mile northwest of the Primm Valley Golf Club, which is located just west of the Ivanpah Dry Lake.

The Ivanpah project is anticipated to result in the following impacts to species and habitats that qualify for mitigation pursuant to SB 34:

a) Potential loss and fragmentation of desert tortoise habitat, disruption of movement corridors, potential take of individuals during construction and operation; increased risk of predation from ravens and other predators; increased road kill hazard from construction and operations traffic.
b) Potential loss of hydrological, geomorphic, and biological functions and values to ephemeral desert washes, resulting in permanent impacts to jurisdictional state waters.

6. Palen Solar Power Project – Solar Millennium

PSPP would consist of two adjacent, independent, and identical solar thermal trough units of 250 megawatt nominal capacity each for a total nominal capacity of 500 megawatts. The power plant would be dry cooled. The applicants are seeking a ROW grant for approximately 5,200 acres of land administered by the BLM Palm Springs-South Coast Field Office. Construction and operation of the project would disturb a total of about 2,970 acres. The project site is located approximately 0.5 mile north of U.S. Interstate-10 (I-10) and approximately 10 miles east of Desert Center, in an unincorporated area of eastern Riverside County.

The Palen project is anticipated to result in the following impacts to species and habitats that qualify for mitigation pursuant to SB 34:

a) Potential loss of breeding and foraging habitat for resident burrowing owls; potential loss of eggs and young; degradation and fragmentation of remaining adjacent habitat from edge effects; disturbance of nesting and foraging activities.
b) Potential mortality and disturbance to Mojave fringe-toed lizard loss of habitat, and habitat fragmentation, disruption of movement corridors.
c) Habitat loss and fragmentation to desert tortoise, disruption of movement corridors, potential take of individuals during construction and operation; increased risk of predation from ravens and other predators; increased road kill hazard from construction and operations traffic.

d) Potential loss and fragmentation of rare plant habitat, potential loss of individuals or populations.
e) Potential loss of hydrological, geomorphic, and biological functions and values to ephemeral desert washes, resulting in permanent impacts to jurisdictional state waters.

7. Blythe Solar Power Project – Solar Millennium

BSPP would consist of four adjacent, independent, and identical solar thermal trough units of 250 megawatt nominal capacity each for a total nominal capacity of 1,000 megawatts. The project is proposed to be located in the southern California inland desert, approximately eight miles west of the city of Blythe and two miles north of the Interstate-10 freeway in Riverside County. The applicants are seeking a right-of-way grant for approximately 9,400 acres of lands administered by the BLM Palm Springs-South Coast Field Office. Construction and operation of the project would disturb a total of about 7,030 acres.

The Blythe project is anticipated to result in the following impacts to species and habitats that qualify for mitigation pursuant to SB 34:

a) Potential loss of breeding and foraging habitat for resident burrowing owls; potential loss of eggs and young; degradation and fragmentation of remaining adjacent habitat from edge effects; disturbance of nesting and foraging activities.
b) Potential mortality and disturbance to Mojave fringe-toed lizard loss of habitat, and habitat fragmentation, disruption of movement corridors.
c) Habitat loss and fragmentation to desert tortoise, disruption of movement corridors, potential take of individuals during operation and construction; increased risk of predation from ravens and other predators; increased road kill hazard from construction and operations traffic.
d) Potential loss of hydrological, geomorphic, and biological functions and values to ephemeral desert washes, resulting in permanent impacts to jurisdictional state waters

8. Genesis Solar Energy Project, Ford Dry Lake – NextEra*

The Genesis Solar Energy Project at the Ford Dry Lake site is proposed for development in the Sonoran Desert approximately 25 miles west of Blythe. The project is proposed to be two 125 MW solar thermal trough power plants that is proposed to be wet cooled with ground water. The total area in the BLM ROW application is 4,640 acres. The actual proposed facility would be located on approximately 1,800 acres. Surrounding land uses include the McCoy Mountains to the east, the Palen Mountains (including the Palen Mountains Wilderness Area) to the north, and the Blythe Airport about 15 miles to the east. Interstate 10 is located about 2 miles south of the southernmost border of the proposed ROW area.

The Genesis project is anticipated to result in the following impacts to species and habitats that qualify for mitigation pursuant to SB 34:

a) Habitat loss and fragmentation to desert tortoise, disruption of movement corridors, potential take of individuals during operation and construction; increased risk of predation from ravens and other predators; increased road kill hazard from construction and operations traffic.
b) Potential loss of hydrological, geomorphic, and biological functions and values to ephemeral desert washes, resulting in permanent impacts to jurisdictional state waters.;

9. Desert Sunlight – First Solar (OptiSolar), Photovoltaic.

Desert Sunlight Holdings, LLC, a wholly owned subsidiary of First Solar Development, Inc., proposes to construct and operate a 550-megawatt, nominal capacity, alternating current, solar photovoltaic, energy-generating project known as the Desert Sunlight Solar Farm. The Project consists of the Solar Farm, most of the corridor for the associated 220-kilovolt generation interconnection transmission line, and one of two potential sites being considered for a new substation. The Project would be located on lands administered by the Bureau of Land Management. The three main project components will require a total of about 4,410 acres – 4,090 acres for the Solar Farm, 230 acres for the transmission corridor, and 90 acres for the substation.

Permanent removal of 4,327 acres of creosote bush scrub, 62 acres of desert dry wash woodland, 6 special status plant species, and 253 acres of jurisdictional resources (includes desert dry wash woodland). Construction would result in permanent habitat loss for wildlife, including special status wildlife and breeding and foraging habitat for non-special status species. Construction would also result in the permanent disturbance of 131.6 acres of the Chuckwalla DWMA and 137.8 acres of the Chuckwalla desert tortoise CHU. Trash and debris generated by construction activities could attract predators of desert tortoise, common ravens, to the site.

A Draft EIS is currently out for public review until November 25, 2010.

10. Lucerne Valley Solar Project-Chevron, Photovoltaic.

Chevron Energy Solutions, the applicant, has submitted an application to BLM for a right-of- way to develop a 45-megawatt solar photovoltaic plant and associated facilities on 516 acres of federal land managed by the BLM. The site of CES's Proposed Action is located on unincorporated land in the Mojave Desert, approximately eight miles east of Lucerne Valley. Also included in the proposal is an interconnection to an existing Southern California Edison distribution line located north of the site. The project would also reroute a portion of Zircon Road to allow its continued public use. The proposed project would be built in two phases. Phase I would be 20 MW, with construction beginning in late 2010. It would interconnect to the existing Southern California Edison 33-kilovolt (kV) transmission line located immediately north of the site across Foothill Road and could be built without upgrading the existing line. Phase II would be contingent upon available transmission capacity and future power sales.

The BLM has issued a Final EIS on this project and the FWS has issued a Biological Opinion. Lucerne project is anticipated to result in the following impacts to species and habitats that qualify for mitigation pursuant to SB 34:

a) Potential loss of breeding and foraging habitat for resident burrowing owls; potential loss of eggs and young; degradation and fragmentation of remaining adjacent habitat from edge effects; disturbance of nesting and foraging activities.
b) Habitat loss and fragmentation to desert tortoise, disruption of movement corridors, potential take of individuals during operation and construction; increased risk of predation from ravens and other predators; increased road kill hazard from construction and operations traffic.

12. Antelope Valley Solar Ranch One – Nextlight, Photovoltaic.
The proposed Antelope Valley Solar Ranch One project site is located in northeastern Los Angeles County, approximately 23 miles east of Palmdale and adjacent to the General Atomics Gray Butte Flight Operations Facility. The project consists of approximately 5,400 acres and is located approximately 1 mile to the west of the Los Angeles County – San Bernardino County jurisdictional boundary.

The Project site is currently in agricultural production or fallow. The area surrounding the Project site is similar to the site itself and generally consists of agricultural or undeveloped land with occasional residential or farm-related structures. Most of the land surrounding the Project site is privately owned.

The proposed Project generation-tie line is approximately 10 miles long and generally extends from the southeast corner of the Project site to an interconnection point along Palmdale Road. A small part of the generation-tie line ROW would be constructed within public lands managed by the BLM. These properties are located approximately 3 miles and 8 miles from the Project site along the proposed generation-tie line route.

The site may be suitable habitat for sensitive species such and the desert tortoise, Mohave ground squirrel, and burrowing owl, as well as a number of sensitive plants.

The Antelope Valley project is currently under review by the local CEQA lead agency. Project impacts and proposed mitigation measures will be disclosed in the Draft Environmental Impact Report/Statement.

13. Gray Butte Solar – First Solar, Photovoltaic. The proposed Gray Butte Solar Array site consists of a nominal 150 megawatt, alternating current solar photovoltaic facility on approximately 1,100 acres in rural northeastern Los Angeles County, approximately 23 miles east of Palmdale and adjacent to the General Atomics Gray Butte Flight Operations Facility. The Project site is located approximately 1 mile to the west of the Los Angeles County – San Bernardino County jurisdictional boundary.

The Project site is currently in agricultural production or fallow. The southern parcel of the Project site and portions of the access road and connecting generation-tie line are located within the Desert-Montane Transect Significant Ecological Area #55, and the central and northern parcels of the Project site are located immediately north of and adjacent to SEA #55. Most of the land surrounding the Project site is privately owned. The nearest public land area consists of scattered parcels to the southwest of the site, which is managed by the BLM.

There are some areas of natural habitat within the disturbed land May be habitat for sensitive or rare species, including desert tortoise, burrowing owl, and Mohave ground squirrel. Surrounding area includes potential habitat for Clokey's cryptantha (a special status plant species) as well as other rare plant species.

The Gray Butte project is currently under review by the local CEQA lead agency. Project impacts and proposed mitigation measures will be disclosed in the Draft Environmental Impact Report/Statement.

14. **Blythe Airport Solar 1 Project –** US Solar Holdings, LLC, Photovoltaic. This is a proposal to construct and operate a 100 megawatt solar photovoltaic renewable energy facility (to be built in 20 megawatt phases) on 640 acres within an 829-acre area on the grounds of Blythe Airport. The project site is located on the grounds of Blythe Airport, 750 feet easterly of the centerline of Runway 17-35 and 750 feet northerly of the centerline of Runway 8-26, in portions of Sections 20 and 29 of Township 6 South, Range 22 East. Blythe Airport is located northerly of Interstate 10 and Hobsonway and easterly of Mesa Drive, in unincorporated Riverside County.

    The Blythe Airport project is currently under review by the local CEQA lead agency. Project impacts and proposed mitigation measures will be disclosed in the Draft Environmental Impact Report/Statement.

15. **Palmdale Hybrid Power Project – City of Palmdale, Photovoltaic.** The proposed site for the PHPP project is located approximately 60 miles north of downtown Los Angeles and in the northernmost portion of the city of Palmdale. The proposed PHPP would require permanent use of 333 acres at the power plant site, located immediately north and west of the combined facilities of Los Angeles/Palmdale Regional Airport and Air Force Plant 42. The PHPP will be developed on a vacant and undeveloped site in an industrial area of the city of Palmdale. The site is currently zoned industrial. The site is relatively flat with the main population base of the community of Palmdale approximately 4 miles to the south.

    Development of the power block and linear facilities would result in the permanent loss of 416.11 acres of native and non-native plant communities. Joshua Tree Woodland, Mojave Juniper Scrub, and Mojave Desert Wash Scrub

are considered sensitive and would require compensation to reduce impacts to less than significant levels.

The Palmdale project is anticipated to result in the following impacts to species and habitats that qualify for mitigation implementation pursuant to SB 34:

a. Potential take of Mohave ground squirrel (MGS) during construction and operation; increased risk of predation from ravens and other predators; and increased road kill hazard from construction and operations traffic.

16. Borrego Solar Farm – Eurus Energy, Photovoltaic. The San Diego Community College District has approved a 20-year agreement with Borrego Solar to construct and maintain a photovoltaic system that will provide about 2.4 megawatts of green energy across the district. This project is one of the largest of its kind for a college or university system in the nation. The photovoltaic program calls for the solar panels to be installed on building rooftops, parking structures and atop new solar panel shade structures on parking lots throughout the District.

The Borrego project is currently under review by the local CEQA lead agency. Project impacts and proposed mitigation measures will be disclosed in the Draft Environmental Impact Report/Statement.

17. Tehachapi Photovoltaic Solar Project – GE. Information on the status of this project was unavailable at the time the interim strategy was being developed.

The Tehachapi project is currently under review by the local CEQA lead agency. Project impacts and proposed mitigation measures will be disclosed in the Draft Environmental Impact Report/Statement.

18. Boulevard Associates (San Bernardino Co.) – Boulevard Associates, LLC, Photovoltaic. Boulevard Associates proposes to construct and operate a 20 Megawatt photovoltaic solar energy facility on the west side of U.S. Highway 395; approximately 2.5 miles North of Highway 58, adjacent to the existing NextEra Energy Resources, LLC's Solar Energy Generating Systems III-VII solar energy generation facility near Kramer Junction, in unincorporated San Bernardino County.

The proposed Kramer Junction Solar Energy Center shall be constructed on a 191-acre portion of a 313.8-acre parcel and is designed to produce approximately 60,000 megawatt-hours of renewable energy annually. The project site is situated within the Mojave Desert and is essentially flat with approximately one percent gradient overall.

An abandoned railroad berm crosses the proposed project site in a generally north-south direction. The tracks have been removed but the berm remains and is elevated approximately two feet above the surrounding grade. The abandoned

railroad property would be acquired and the raised berm graded flat to allow for the installation of the facility.

The Boulevard Associates project is currently under review by the local CEQA lead agency. Project impacts and proposed mitigation measures will be disclosed in the Draft Environmental Impact Report/Statement.

APPENDIX B

Recovery Actions.

The IMS and DRECP will directly benefit the recovery of covered species (listed and non-listed) and contribute to the conservation of sensitive species by reducing threats and building capacity for resiliency in species populations and habitats. The IMS has focused on the recovery actions for endangered, threatened, and candidate species that pursuant to SB 34. It is anticipated impacts to other species of birds, mammals, invertebrates, reptiles, and plants will also benefit from implementation of the IMS (see below). The following recovery actions have been identified in the specific recovery/management plans referenced. While all actions listed are important for species recovery, all may not quality as compensatory mitigation for impacts associated with solar renewable energy development, and are not here represented as such.

California Condor: The California condor recovery plan identified specific criteria related to wind turbines, recognizing the inherent risk of these structures to condor survival. Monitoring of condor activity near wind turbines near Pinnacles National Monument concluded wind turbines pose a risk to condors that exhibited many features that may cause wind turbine-related mortality including: (1) high wing loading; (2) social foraging; (3) curiosity for novel objects; (4) k-selected reproductive strategy; and (5) foraging preference for sloped grassland sites (Shihadeh and Thorngate. 2007).

The California condor is fully protected by the State and cannot be taken. Take cannot be authorized at any risk level. Projects that have the potential to take condors cannot be approved by CDFG.

Actions listed in the Recovery Plan for California Condors (USFWS 1996) to achieve recovery include, besides those measures for captive breeding, and reintroduction of the species to the wild:

Recovery actions include:

- Reestablish extirpated native ungulate populations on historical foraging habitats.
- Preserve key foraging areas near nests and roosts.
- Encourage land managers and owners to leave dead livestock on rangelands in appropriate circumstances.
- Minimize Mortality Factors in the Natural Environment.
- Determine effects of various poisons and contaminants, especially lead and copper on surrogate species.
- Implement management measures to eliminate or reduce the effects of environmental contaminants on California condor.

Desert Tortoise: Recovery actions for Desert Tortoise in the IMS are consistent with the Desert tortoise (Mojave Population) Recovery Plan (USFWS 1994). The goals of the recovery plan are recovery and delisting of the desert tortoise through recovery. The recovery criteria represent the best assessment of the conditions that would most likely result in a determination that delisting of the desert tortoise is warranted for the Mojave: northern Colorado, eastern Colorado, upper Virgin River, eastern Mojave, northeastern Mojave, and western Mojave populations based on meeting the following criteria:

1. As determined by a scientifically credible monitoring plan, the population within a recovery unit must exhibit a statistically significant upward trend or remain stationary for at least 25 years (one desert tortoise generation);
2. enough habitat must be protected within a recovery unit, or the habitat and desert tortoise populations must be managed intensively enough to ensure long-term viability;
3. provisions must be made for population management within each recovery unit so that discrete population growth rates (lambdas) are maintained at or above 1.0.
4. regulatory mechanisms or land management commitments must be implemented that provide for long-term protection of desert tortoises and their habitat; and
5. populations in each recovery unit reach the point of not needing protection under the Endangered Species Act in the foreseeable future.

Fringe toed Lizard. Recovery action identified in the Coachella Valley fringe-toed lizard Recovery Plan (USFWS 1985).

Recover actions include:

- Secure habitat for preservation of the CVFTL.
- Study the biological requirements of the CVFTL
- Monitor CVFTL populations throughout the Coachella Valley to determine trends in numbers and areas inhabited.
- Study the effects of habitat modifications on CVFTL.
- Study the feasibility of restoration of CVFTL habitat through rehabilitation..

Flat-tailed Horned Lizard. As detailed in the Flat-tailed Horned Lizard Rangewide Management Strategy (Foreman 1997), recommended recovery actions include:

- Conserve sufficient habitat to maintain viable populations of flat-tailed horned lizards in five management areas.
- Maintain a “long-term stable” or increasing population trend in all management areas. A population that is stable over the long term exhibits no downward trend in numbers or densities of animals after the effects of natural demographic and environmental stochasticity are removed.

- Encourage the protection through strong conservation management of one additional management area in the Coachella Valley.
- Outside of management areas, limit the loss of habitat and effects on populations of flat-tailed horned lizards through the application of effective mitigation and compensation.
- Establish a research area of no less than 60,000 acres in which research related to the flat-tailed horned lizard will be conducted and encourage other research anywhere that promotes conservation of the species.
- Encourage adoption of a flat-tailed horned lizard conservation program in Mexico.

Mohave ground squirrel. The Mohave ground squirrel is listed as threatened in California and is a candidate species for listing by the UFSWS. A recovery plan has not been written for this species but Leitner (2008) has made management recommendations.

These measures include:

- Protect habitat and core areas from modification or development
- Conduct predator control in areas of high MGS concentrations.
- Remove livestock from public lands where MGS exist.
- Conduct research on MGS abundance and status.

Burrowing Owl. The burrowing owl is not formally listed under CESA or ESA. The Coachella Valley Multi Species Habitat Conservation Plan includes conservation measures for this species.

These measures are:

- Ensure species persistence throughout its current range in the Plan Area by conserving burrowing owl habitat.
- Ensure conservation of burrowing owl by maintaining the long-term persistence of self-sustaining populations or metapopulations.
- Control and manage activities that degrade burrowing owl Habitat,
- Identify actions to reduce impacts from, and control where feasible, invasive species.
- Encourage the presence of burrowing owls in agricultural areas by allowing them to remain at burrows established in levees and dikes,
- Evaluate the need and potential for, and impacts of, establishment of artificial burrows in Conservation Areas.
- Consider whether a restriction on human access to occupied habitat during the breeding season is appropriate.

Desert bighorn sheep. Three subspecies occur: California bighorn sheep (O. c. californiana), peninsular bighorn sheep (O. c. cremnobates), and Nelson bighorn sheep (O. c. nelsoni). Up to 1979, California bighorns consisted of 2 native herds

in the southern Sierra Nevada (Mt. Baxter and Mt. Williamson herds). Subsequently, Mt. Baxter herd has been used as a source for reintroductions, into Inyo Co., and into the South Warner Wilderness (Modoc Co.). Peninsular bighorns occur in the Peninsular Ranges from the San Jacinto and Santa Rosa Ranges (Riverside Co.) south into Mexico. Nelson bighorns (also called desert bighorns) occur in desert mountain ranges from White Mts. of Mono and Inyo cos., south to San Bernardino Mts., thence southeastward to the Mexican border. An isolated population occurs in the San Gabriel Mts. Habitats used include alpine dwarf-shrub, low sage, sagebrush, bitterbrush, pinyon-juniper, palm oasis, desert riparian, desert succulent shrub, subalpine conifer, perennial grassland, montane chaparral, and montane riparian (Monson and Sumner 1980).

Recovery Objective for the Peninsular bighorn sheep population are to secure and manage habitat in order to alleviate threats so that population levels will increase to the point that this species may be reclassified to threatened status, and ultimately delisted.

Recovery actions include:

- As determined by a scientifically credible monitoring plan, at least 25 ewes must be present in each of the 9 regions of the Peninsular Ranges.
- The range-wide population must average 750 individuals (adults and yearlings) with an overall stable or increasing population trend over the same period of 12 consecutive years approximately 2 generations) as in delisting criterion 1.
- Regulatory mechanisms and land management commitments have been established that provide for long-term protection of Peninsular bighorn sheep and all essential habitat.

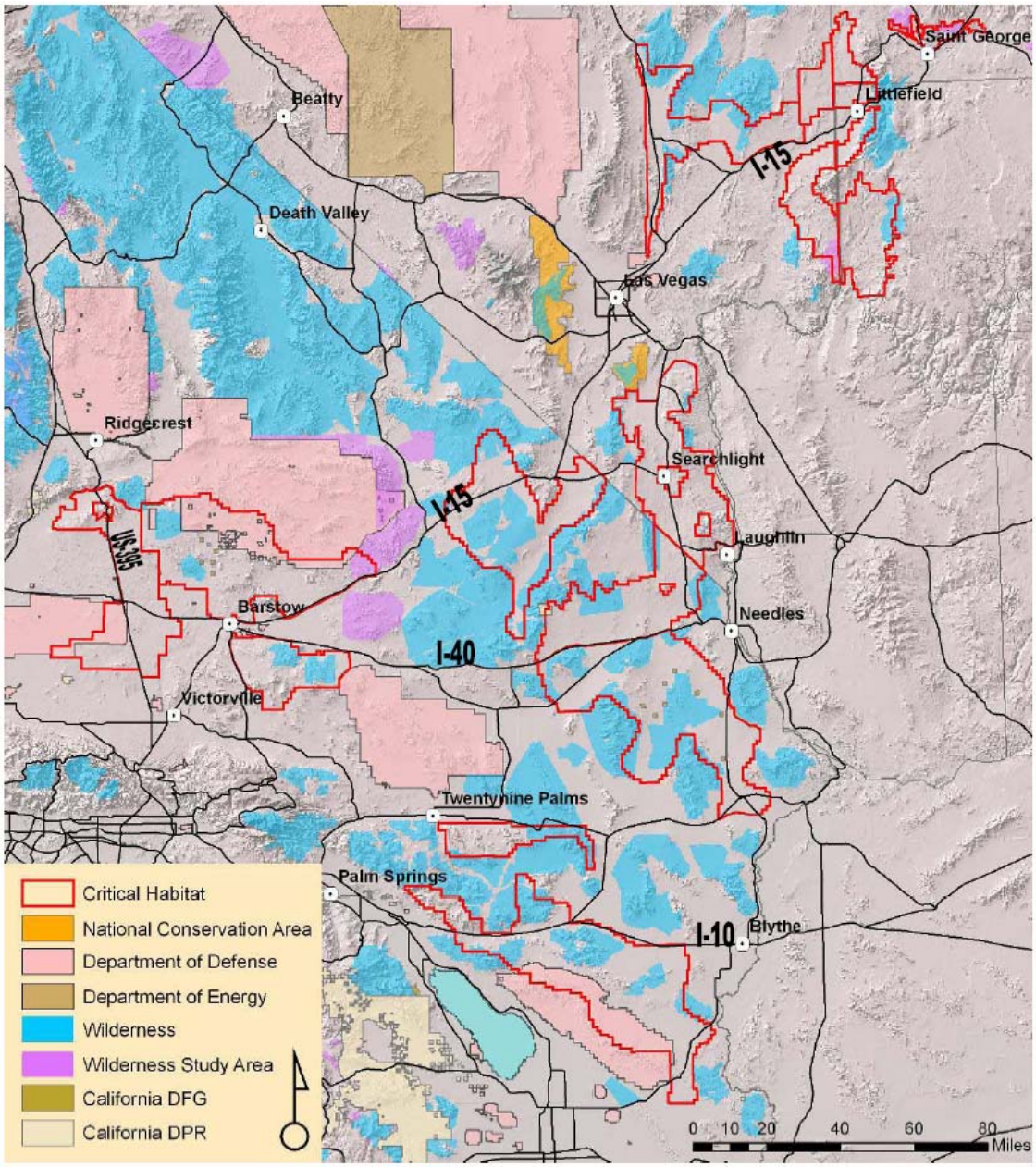

Figure B1. Desert tortoise conservation areas (see Box 2) = Desert Wildlife Management Area: ACEC = Area of Critical Environmental Concern; DTCC = Desert Tortoise Conservation Center

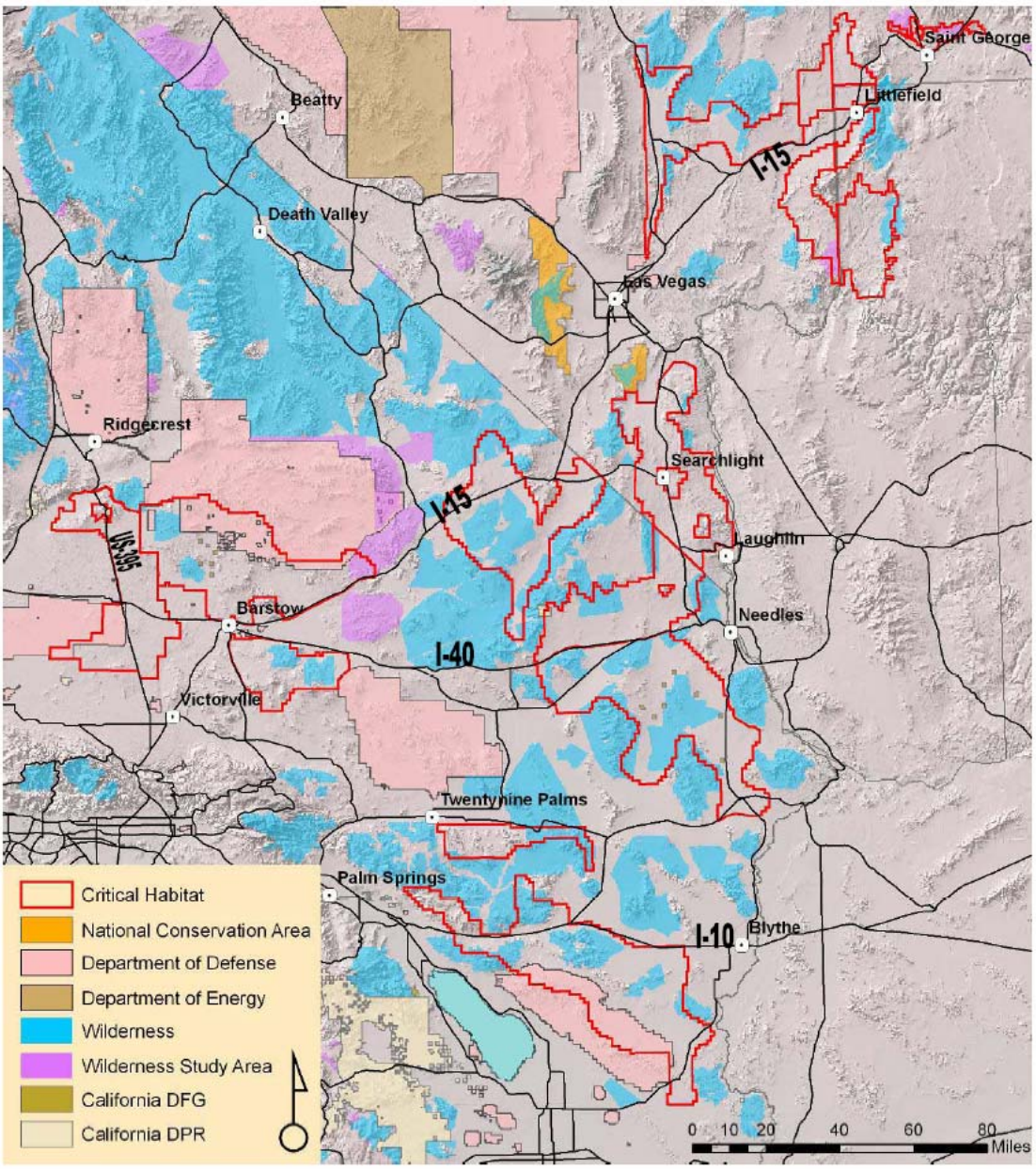

Figure B2. Additional land designations providing conservation benefits to the desert tortoise in relation to critical habitat and major highways. Conservation areas for other species not shown (e.g. Mohave ground squirrel, Mojave monkeyflower) may provide benefits to the desert tortoise. CDFG = Department of Fish and Game; DPR = Department of Parks and Recreation.

APPENDIX C

The Renewable Energy Action Team Mitigation Account

Memorandum of Agreement

Between the Renewable Energy Action Team Agencies and the

National Fish and Wildlife Foundation

April 2010

The Renewable Energy Action Team Mitigation Account
Memorandum of Agreement
between the Renewable Energy Action Team Agencies and the
National Fish and Wildlife Foundation

PREAMBLE

This Renewable Energy Action Team ("REAT") Mitigation Account Memorandum of Agreement (this "Agreement") is entered into by the State and Federal agencies comprising the REAT, namely the California Department of Fish and Game (the "DFG"), the California Energy Commission (the "CEC"), the United States Bureau of Land Management (the "BLM"), and the United States Fish and Wildlife Service (the "USFWS") (collectively referred to as "REAT" or "REAT Agencies" and individually as a "REAT Agency"), and the National Fish and Wildlife Foundation (the "Foundation") (together, the "Parties," and individually, a "Party"), as of the date of the signature of the last Party to sign (such date, the "Effective Date").

I. PURPOSE

The REAT's primary mission is to streamline and expedite the permitting processes for renewable energy projects in the Mojave and Colorado Desert regions within the State of California, while enhancing and maximizing environmental protection. To that end, the purpose of this Agreement is to establish a financial account, comprised of Sub-Accounts, to be held, managed, and administered by the Foundation (the "REAT Account") to receive monies paid in connection with impacts associated with renewable energy projects subject to the jurisdiction of one or more of the REAT Agencies. These monies will be used to accomplish specified conservation, protection, enhancement, restoration, or related purposes as specifically identified in BLM right-of-way grants, associated biological opinions, avian protection plans, raven mitigation plans; the CEC certification; DFG's permits, consistency determinations, and Lake and Streambed Alteration agreements; and other approval documents (collectively referred to as "Decision Documents"). The Parties contemplate that the types of activities for which the REAT Account will be used include, but are not limited to, studies, monitoring, conservation, land acquisition, enhancement, restoration, preservation, clean-up, data sampling and analysis, and adaptive management designed to mitigate the impacts of renewable energy projects on the health of fish, wildlife, plant, and habitat resources in the Mojave and Colorado Desert regions within the State of California. Use of the REAT Account will be limited by the amount of money available in the REAT Account at any given time, and by the stated purposes as described in the Deposit Document (see Section IV. below). Funds in the REAT Account will be disbursed in accordance with the Deposit Document.

This Agreement does not establish a mitigation strategy or an in-lieu mitigation fee program. The REAT Agencies are cooperatively developing a comprehensive mitigation strategy which will include an in-lieu fee mitigation component for renewable energy projects in the Mojave and Colorado Desert regions within the State of California. The mitigation strategy will guide the REAT Agencies' utilization of the REAT Account.

II. AUTHORITY

A. The REAT is the Renewable Energy Action Team, consisting of the DFG, CEC, BLM, and USFWS, which was identified to include these four agencies in the Memorandum of Understanding between the State of California and the Department of the Interior on Renewable Energy, signed by the Governor of California and the Secretary of the U. S. Department of the Interior in October 2009. Its mission is to streamline and expedite the permitting processes for renewable energy projects, while enhancing and maximizing environmental protection. The State and Federal agencies comprising the REAT are guided by the California Governor's Executive Order S-14-08, the October 2009 Memorandum of Understanding referenced above, and associated Memoranda of Understanding among several State and Federal agencies, with Federal participation in the REAT supported by the Secretary of Interior's Secretarial Order 3285 (March 2009) which directs all Department of the Interior agencies and departments, including BLM and USFWS, to encourage timely and responsible development of renewable energy, while protecting and enhancing the nation's water, wildlife, and other natural resources.

B. The Foundation is a charitable non-profit corporation established in 1984 by the National Fish and Wildlife Foundation Establishment Act, 16 U.S.C. § 3701 *et seq.*, as amended (the "Establishment Act"), and is recognized as a tax exempt organization under Section 501(c)(3) of the Internal Revenue Code. The established purpose of the Foundation is to accept and administer private gifts of property in connection with activities and services of the USFWS in order to further the conservation and management of fish, wildlife, plants and other natural resources. In addition, the established purpose of the Foundation is to undertake and conduct other activities that will further the conservation and management of fish, wildlife, and plant resources of the United States for present and future generations of Americans and is authorized to accept funds from any legal source to further its mission.

C. The agencies comprising the REAT are authorized to enter into this Agreement pursuant to Federal and State laws including, but not limited to, the following authorities:

1. BLM: Section 307(b) of the Federal Land Policy and Management Act of 1976 (43 U.S.C. §1737(b));

2. USFWS: The Endangered Species Act of 1973 (16 U.S.C. §§ 1531-1544), the Bald and Golden Eagle Protection Act (16 U.S.C. §§ 668-668c), Migratory Bird Treaty Act (16 U.S.C. §§ 703-712), and the Fish and Wildlife Coordination Act (16 U.S.C. §§ 661- 666c);

3. CEC: Public Resources Code §§ 25218(d) and (e), 25219, and 25500 *et seq.*; and

4. DFG: Fish and Game Code §§ 1600, *et seq.*, 1802, and 2050, *et seq.*, (CESA), Fish and Game Code §§ 2800 *et seq.*, Code of California Regulations, Title 14, Fish and Game Commission Policies.

III. DEFINITIONS

A. "Administrative Costs" shall mean those fees or costs associated with the Foundation's administration of the REAT Account, or Sub-Accounts, associated with each proposed project. Such costs include standard fees for each project such as Annual Fees, a Per Deposit Fee, and any bank charges; and project-specific fees like an RFP fee or necessary discretionary fees such as land appraisals, title research, or special studies. All Administrative Costs will be determined by the REAT in consultation with the Foundation, and will be based on a project-by-project assessment and described in the Deposit Document. Administrative Costs will be paid by the project proponent.

B. "Agreement" shall have the meaning assigned to such term in the Preamble to this Agreement.

C. "Annual Fee" is addressed within Section III.A. and VII.C.

D. "Decision Document" shall have the meaning assigned to such term in the Purpose section of this Agreement.

E. "Deposit Document" shall have the meaning assigned to such term in Section IV. of this Agreement.

F. "Effective Date" shall have the meaning assigned to such term in the Preamble to this Agreement.

G. "Establishment Act" shall have the meaning assigned to such term in Section II.B. of this Agreement.

H. "Fiscal Year" shall mean the fiscal year of the Foundation which, as of the date of this Agreement, commences on October 1st of each calendar year and runs through September 30th of the immediately following calendar year.

I. "Foundation" shall have the meaning assigned to such term in the Preamble to and Section II.B. of this Agreement.

J. "Foundation Representative" shall mean the designated staff person for the Foundation (or his or her alternate, acting in the place of the primary Foundation Representative) responsible for primary communications and administration related to this Agreement.

K. "Party" shall have the meaning assigned to such term in the Preamble to this Agreement.

L. "Per Deposit Fee" is addressed within Section III.A. and VII.B.

M. "REAT" shall have the meaning assigned to such term in the Preamble to and Section II.A. of this Agreement.

N. "REAT Account" shall have the meaning assigned to such term in Section I. of this Agreement.

O. "REAT Agencies" and "REAT Agency" shall have the meanings assigned to such terms in the Preamble to and Section II.A. of this Agreement.

P. "REAT Representatives" shall mean the designated staff persons for each of the four REAT Agencies (or their respective alternates, acting in the place of the primary REAT Representatives) responsible for primary communications and administration related to this Agreement. If and to the extent a REAT Agency elects to designate a representative other than its REAT Representative for a particular Sub-Account under this Agreement (such person, a "Sub-Account Representative"), the REAT Agency shall so notify the Foundation and the other REAT Representatives in writing of such election and, thereafter, the Sub-Account Representative shall function as the "REAT Representative" for that REAT Agency hereunder for purposes of the relevant Sub-Account.

Q. "Recipient" shall mean any entity that receives monies from the REAT Account for the performance of a project as set forth in a Recipient Agreement.

R. "Recipient Agreement" shall mean a contract, grant agreement or other written agreement between the Foundation and a Recipient for the performance of a project to be funded through a Sub-Account within the REAT Account, as approved by the REAT in accordance with the applicable Deposit Document(s).

S. "RFP" shall have the meaning assigned to such term in Section V.D.3. of this Agreement.

T. "Sub-Account" shall mean each individual project account within the REAT Account. Each Sub-Account will be tracked and accounted for by the Foundation in a manner that allows the funds on deposit in, and the account activity related to, each Sub-Account to be distinguishable within the overall REAT Account. Within each Sub-Account all monies deposited by the State, a project proponent, or, if applicable, the federal government, and all interest earned on the Sub-Account, will be maintained in a manner that allows all transactions (e.g. deposits, withdrawals, adjustments) to be tracked by each mitigation measure specified in the Deposit Document.

IV. DEPOSIT DOCUMENT

A. The Deposit Document shall be a standard form created by REAT Agencies that contains, at a minimum, the following information:

1. project name;
2. project location;
3. land ownership of the project site;
4. project proponent and parent company;
5. for each specific mitigation and minimization measure contained in a Decision Document and other measures agreed to by the project proponent in the project description (for the purposes of this agreement only, collectively referred to herein as "mitigation measures") that are to be funded from the monies deposited into the Sub-Account for the project:

a. a citation (e.g., page, section, condition number) to the applicable Decision Document(s);

b. an implementation schedule;

c. which of the REAT Agencies has the authority over implementation of each specific mitigation measure, and will serve as the point of contact for such measure;

d. the amount of money being deposited into the Sub-Account to cover specified measures and any other applicable Administrative Costs; and the amount of money being deposited into the Sub-Account designated for the costs of long-term management of land acquired as a mitigation measure, which amount shall be managed as a long-term investment intended to (1) exist indefinitely and (2) fund necessary land management activities, to the extent practicable, from investment earnings on the amount rather than from the initial amount itself.

B. A copy of each agency Decision Document containing the specified mitigation measures for the project will be submitted to the Foundation with the Deposit Document.

V. REAT RESPONSIBILITIES

A. Each REAT Agency shall appoint its respective REAT Representative and an alternate, who shall represent the REAT Agency on the REAT in carrying out the REAT's obligations under this Agreement. The four REAT Representatives and alternates shall be the only persons authorized to approve deposits into or disbursements from the REAT Account. The REAT Agencies agree that their primary objective under this Agreement will be to insure that the mitigation measures identified in the Deposit Document are fully completed using the monies deposited with submission of the Deposit Document. Actions of the REAT in carrying out the REAT's obligations under this Agreement shall require unanimity among the REAT Representatives, unless the Deposit Document provides otherwise. All directions from the REAT or a REAT Representative and all actions undertaken by the REAT or a REAT Representative with respect to funds from a Sub-Account shall be in accordance with the applicable Deposit Document.

B. The appropriate REAT Agency will transmit to the Foundation the completed

Deposit Document and supporting documents. The funds to complete the mitigation measures identified in the Deposit Document will be sent directly from the project proponent, the State, or if applicable, the Federal government, to the Foundation by electronic funds transfer or such other means as is agreed upon.

C. The REAT Representatives shall direct the Foundation by way of the Deposit Document to enter into Recipient Agreements for the performance of mitigation measures to be funded, in whole or in part, with monies in Sub-Accounts within the REAT Account in accordance with the applicable Deposit Document(s). The REAT Representatives may review and approve (1) Recipient Agreements, including any amendments thereto, prior to their execution and (2) requests from Recipients for disbursements of funds from the REAT Account, prior to such disbursements being made.

D. Prior to directing the Foundation to enter into Recipient Agreements, the REAT Agency(ies) may determine the need for a call for proposals and may choose to utilize one or more of the following processes:

1. The REAT or a REAT Agency, as appropriate, may issue a call for proposals and select from the submissions.

2. The REAT or a REAT Agency, as appropriate, may select projects submitted in response to one of the Foundation's regularly scheduled general calls for proposals.

3. The REAT or a REAT Agency, as appropriate, may retain the Foundation to conduct one or more specific requests or calls for proposals (each, an "RFP") for projects to be funded by the relevant Sub-Account(s), and select one or more projects submitted in response to any such RFP. The REAT or a REAT Agency, as appropriate, and the Foundation shall enter into separate agreements governing the performance of any such RFPs. After consultation with the Foundation, the REAT shall identify in the Deposit Document the RFP fee ranging generally between $15,000 and $30,000, to be determined based on RFP-specific factors.

E. The REAT may elect to use money from the REAT Account for projects to be carried out by a REAT Agency rather than by a third-party Recipient. The applicable REAT Agency would enter into a written agreement with the Foundation to utilize this process. In such instances, the REAT Representatives will transmit to the Foundation Representative a project budget and associated payment procedures for transfer of money from the REAT Account to the applicable REAT Agency as payment for performance of the relevant project. However, as set forth in Section VII.I. below, in no event shall the REAT direct the payment of money from the REAT Account, including any Sub-Account, for any purpose other than the implementation of the project to be funded in accordance with the applicable Deposit Document.

F. The REAT shall participate with the Foundation in annual technical reviews to

evaluate the progress and results of projects funded by the REAT Account. If the REAT determines that termination or cancellation of a particular project is warranted, the REAT Representatives will so inform the Foundation Representative in writing.

G. The REAT agencies agree that the Foundation may join funds in multiple Sub-Accounts to complete mitigation measures that result in a cost savings or increased conservation benefit provided that each specific mitigation measure is completed, and the mitigation measures and the funds can be independently accounted for. In certain circumstances the REAT may direct the Foundation, in writing, to apply this approach.

H. If any funds remain in a project Sub-Account after the REAT Agencies have determined that all project-specific mitigation measures associated with such Sub-Account are completed, the REAT Agencies may direct the Foundation to transfer the remaining funds to the project's long-term management purposes. In the event there is no long-term management purpose established for the applicable project, the REAT Agencies may direct the Foundation to transfer the remaining funds to a separate Sub-Account which will be expended at the direction of the REAT Agencies for the purpose of enhancing and maximizing environmental protection in the Mohave and Colorado desert regions.

I. Upon notification by the Foundation that additional funds are needed to fully complete the mitigation measures identified in the Deposit Document, the REAT Agencies may require a project proponent to ensure that additional funds are deposited into the project Sub-Account to cover the short-fall, in accordance with applicable law.

VI. FOUNDATION RESPONSIBILITIES

A. The Foundation shall appoint the Foundation Representative and an alternate, who shall represent the Foundation in carrying out its obligations under this Agreement. Such appointments shall require the concurrence of the REAT Agencies.

B. The Foundation understands and agrees that all monies deposited in the REAT Account, including all Sub-Accounts, shall be maintained in an interest bearing or investment account at one or more financial institution(s) that is a member of the Federal Deposit Insurance Corporation. In consultation with third parties and/or the Foundation, the REAT will determine the appropriate investment strategy to apply to each Sub-Account within the REAT Account. For accounting purposes, the REAT Account shall be distinguishable from all other accounts maintained by the Foundation. The Foundation shall also ensure that all Sub-Accounts within the REAT Account are distinguishable from each other, and finally, that funds deposited in each Sub-Account are tracked by each mitigation measure specified in the Deposit Document.

C. The Foundation shall invest and reinvest the principal and income of the REAT Account consistent with Section VI.B. of the Agreement and applicable State and Federal laws and in accordance with investment guidance determined by the REAT Representatives and communicated to the Foundation in writing for implementation by

one or more financial institutions retained by the Foundation. In addition, if requested by the REAT, the Foundation shall invest the principal and income of any Sub-Account within the REAT Account in a distinct investment pool to reflect a specified purpose and tenure of the relevant funds as identified by the REAT in the applicable Deposit Document. Day-to-day investment decisions, consistent with the REAT's investment guidance, will be made by the professional investment advisor or bank with which the Foundation has established or will establish an investment advisory relationship. The Foundation may rely on the advice of any such adviser, and may delegate investment decision-making authority, consistent with applicable State and Federal law and REAT guidance, to such adviser with respect to management of the REAT Account or any Sub-Account. Investment income accruing to the REAT Account shall be apportioned *pro rata* to each Sub-Account (and credited thereto) based on the respective balances on deposit in each Sub-Account, and shall be used to carry out the purposes of the various Sub-Accounts as set forth in the Deposit Document.

D. For investment purposes only, the Foundation is authorized to commingle any or all of the assets existing in the REAT Account with other funds held or managed by the Foundation that are subject to identical investment restrictions. The intent of this authorization is to allow the Foundation to pool funds subject to identical investment restrictions for collective management, such that all participating funds may benefit from efficiencies of scale. Any funds from the REAT Account commingled in this manner shall at all times remain subject to the investment guidance specified by the REAT for such funds. In addition, notwithstanding this authorization, and in accordance with Section VI.B. above, funds in the REAT Account and the Sub-Accounts shall at all times be distinguishable and uniquely identifiable within the Foundation's internal account system from all other funds maintained or managed by the Foundation.

E. The Foundation shall administer the REAT Account consistent with Section VII., below.

F. If requested by the REAT, under separate agreements with the REAT and in accordance with Section V.D.3. above, the Foundation shall prepare one or more RFPs for projects to be selected by the REAT and funded, in whole or in part, with monies in the REAT Account. This process may also be utilized if after full implementation of the Deposit Document, the Sub-Account has remaining funds.

G. The Foundation shall pay Recipients' requests for disbursements as approved by the REAT or a REAT Agency, as appropriate, in writing and in accordance with the procedures set forth in the respective Recipient Agreements.

H. The Foundation shall participate with the REAT in annual technical reviews to evaluate the progress and results of projects funded by the REAT Account. The Foundation will take appropriate steps to terminate or cancel a project if directed to do so by the REAT.

I. If requested by the REAT, the Foundation shall retain one or more land acquisition consultants for selected projects and programs at the direction of the REAT Representatives. Services to be procured by the Foundation in this respect may include review of acquisition plans, appraisal reviews, site visits, land negotiations, and other related services as the REAT shall deem necessary.

VII. ACCOUNT ADMINISTRATION

A. Within forty five (45) days after the Effective Date, the Foundation shall establish the REAT Account. Sub-Account(s) shall be created and funded within the REAT Account as and when Sub-Account funds are received by the Foundation. In connection with their creation and funding, each Sub-Account shall be given unique identifying information by the Foundation. If and to the extent that, prior to the Foundation's establishment of the REAT Account, the Foundation has received funds for deposit into any Sub-Account, the Foundation shall deposit such funds into a Foundation general account (account "NA5000") as an interim measure. If funds are so deposited, then promptly after establishment of the REAT Account the Foundation shall transfer from account NA5000 into the REAT Account the relevant funds for crediting to the appropriate Sub-Account(s).

B. Upon receipt of each new deposit of funds into the REAT Account or any Sub-Account, the Foundation shall assess and collect the Per Deposit Fee against the appropriate Sub-Account as provided within the Deposit Document as described within Section III.L.

C. As described in Section III.C., the Foundation shall assess and collect the Annual Fee either quarterly or annually (based on the Foundation's Fiscal Year), at the Foundation's election, during each Fiscal Year in which the REAT Account is in existence. The annual fee will be assessed and collected against the appropriate Sub-Account as provided within the Deposit Document.

D. Bank charges assessed by any financial institution will be assessed and collected against the appropriate Sub-Account as provided within the Deposit Document.

E. Unless directed otherwise by the REAT in writing, the Foundation shall submit REAT Account activity reports to the REAT Representatives semi-annually by June 15 and December 15 of each year the REAT Account is in existence. The Foundation shall report on deposits, disbursements, fees, and investment income during each semi-annual period, with a reconciliation of the remaining unobligated balance in each Sub-Account. The reports will also include the current status of all active Recipient Agreements. At the REAT's written request, the Foundation shall provide to the REAT Representative copies of its audited financial statements.

F. If requested by the REAT, the Foundation shall participate in an annual audit of its management of the REAT Account, all Sub-Accounts and any other accounts holding REAT monies. The audit will be conducted by an auditor selected by the REAT. The

Foundation will fully cooperate with such audit process. The cost for the annual audit shall be collected as an administrative fee assessed against each project proponent.

G. The Parties agree and acknowledge that, at their mutual election, they may enter into further agreements regarding the establishment, maintenance, and/or operation of additional Sub-Accounts created within the REAT Account. If and to the extent that any such further agreements contain terms or conditions different from those set forth in this Agreement, the terms of such further agreements shall be deemed to supersede the provisions of this Agreement.

H. No funds disbursed from the REAT Account may be used by any Recipient to pay for lobbying activities, litigation, or any illegal activities.

I. No funds disbursed from the REAT Account may be used by any Recipient (including but not limited to the REAT Agencies) to unlawfully augment any REAT Agency's federal appropriations, whether in violation of the United States Constitution, Title 31, U.S.C. § 1301(a) (the "Purpose Statute"), Title 31, U.S.C. § 1341 (the "Anti-Deficiency Act"), Title 31, U.S.C. § 3302(b) (the "Miscellaneous Receipts Act"), or other applicable law.

VIII. TERMINATION OF AGREEMENT

A. This Agreement shall terminate when all monies in the REAT Account have been disbursed and/or the Parties agree to termination of this Agreement in writing. If this Agreement is terminated pursuant to this Section, the REAT may request a full and complete accounting of all REAT Account activity, including deposits, disbursements, fees, and investment income, with a reconciliation of the remaining balance, if any, in the REAT Account, and the Foundation shall provide such accounting within ninety (90) days after receipt of such request. In conjunction with such accounting, the Foundation shall submit to the REAT for approval any final payment requests from Recipients.

B. In the event of termination of this Agreement prior to all monies in the REAT Account having been expended, the Foundation shall immediately (unless otherwise directed by the REAT in writing) undertake all reasonable steps to wind down the REAT Account cooperatively with the REAT, which steps shall include but not be limited to the following:

1. Direct Recipients to stop any unfunded work;

2. Direct Recipients to place no further work orders or enter into any further contracts for materials, services, or facilities, except as necessary to complete work as specified in the REAT's notice;

3. Enter into no further contracts with Recipients and terminate all pending contracts (to the extent such contracts allow) for project work that has not yet commenced;

4. Promptly take all other reasonable steps to minimize the additional obligation of REAT Account funds;

5. Deliver or make available to the REAT all data, drawings, specifications, reports, summaries, and such other information and material as may have been developed under this Agreement or any project documents, whether completed or in progress; and

6. Disburse remaining funds in the REAT Account according to the REAT's written direction and in accordance with applicable law, withholding an amount sufficient to pay outstanding obligations that remain after steps (1) through (5) above have been completed.

IX. CONTACT INFORMATION/COMMUNICATIONS

A. No obligations may be incurred, and no funds disbursed, except in accordance with the applicable Deposit Document(s). All approvals, notices and reports required or permitted under this Agreement shall be in writing and delivered by first-class mail, overnight mail, facsimile or electronic pdf format. Each Party agrees to notify the other promptly after any change in named representative, address, telephone, or other contact information.

B. All deposits made to the REAT Account by check shall be delivered to the Foundation's headquarters office at 1133 15th Street, NW, Suite 1100, Washington, D.C. 20005, to the attention of the Chief Financial Officer. All deposits made to the REAT Account by electronic funds transfer shall be made in accordance with wire instructions provided by Foundation in writing to the depositor.

C. The individuals named below shall be the REAT Representatives and the Foundation Representative for purposes of this Agreement. Contact information for the REAT Representatives and Foundation Representative, respectively, is as follows (it being agreed and acknowledged that contact information for deposits to the REAT Account shall be as set forth in Section IX.B. above):

If to the REAT:

DFG:
Scott Flint
Renewable Energy Program Manager
California Department of Fish and Game
1416 Ninth Street
Sacramento, CA 95814
Phone: 916-653-9719
Facsimile: 916-653-2588
Email: sflint@dfg.ca.gov

If to the Foundation:

Liz Epstein
Senior Manager, IDEA
National Fish and Wildlife Foundation
90 New Montgomery Street
Suite 720
San Francisco, CA 94105
Phone: 415-243-3102
Facsimile: 415-778-0998
Email: liz.epstein@nfwf.org

DFG Alternate:
Bronwyn Hogan
Renewable Energy Science Coordinator
California Department of Fish and Game
1416 Ninth Street
Sacramento, CA 95814
Phone: 916-445-0726
Facsimile: 916-445-1768
Email: bhogan@dfg.ca.gov

CEC:
Terry O'Brien
Deputy Director
1516 Ninth Street
Sacramento, CA 95814
Phone: 916-654-4421
Facsimile: 916-654-4421
Email: Tobrien@energy.state.ca.us

CEC Alternate:
Roger Johnson
Program Manager
1516 Ninth Street
Sacramento, CA 95814
Phone: 916-654-5100
Facsimile: 916-654-4421
Email: Rjohnson@energy.state.ca.us

BLM:
Tom Pogacnik
Deputy State Director
2800 Cottage Way, Room W-1623
Sacramento, CA 95825
Phone: 916-978-4637
Facsimile: 916-978-4657
Email: Tom_Pogacnik@blm.gov

BLM Alternate:
Vicki L. Campbell
Wildlife Biologist
2800 Cottage Way, Room W-1623
Sacramento, CA 95825
Phone: 916-978-4320
Facsimile: 916-978-4657
Email: Vicki_L_Campbell@blm.gov

Foundation Alternate:
Jay Wright
Manager, IDEA
National Fish and Wildlife Foundation
1133 15th Street, NW
Suite1100
Washington, DC 20005
Phone: 202-595-2468
Facsimile: 202-857-0162
Email: jay.wright@nfwf.org

USFWS:
Mike Fris
Assistant Regional Director-Endangered Species
2800 Cottage Way, Room W-2606
Sacramento, CA 95825
Phone: 916-414-6475
Facsimile: 916-414-6462
Email: Michael_Fris@fws.gov

USFWS Alternate:
Darrin Thome
Deputy Assistant Regional Director-Endangered Species
2800 Cottage Way, Room W-2606
Sacramento, CA 95825
Phone: 916-414-6533
Facsimile: 916-414-6462
Email: Darrin_Thome@fws.gov

X. MISCELLANEOUS PROVISIONS

A. No Assignment. No Party may assign this Agreement, in whole or in part, to any individual or other legal entity without the prior written approval of the other Parties.

B. Amendments. This Agreement may be amended only in writing agreed to and signed by all Parties.

C. No Additional Support. In establishing the REAT Account, the REAT assumes no obligation to provide further funding or support to the Foundation beyond the terms stated in this Agreement.

D. Compliance with Laws; Insurance.

1. The Foundation agrees to contractually require that all Recipients comply with all applicable Federal, State, and local laws, regulations, and ordinances and secure all appropriate and necessary public or private permits and consents in carrying out projects financed by the REAT Account.

2. The Foundation agrees to contractually require Recipients to obtain and maintain all appropriate insurance, with the Foundation and the REAT named as additional insureds to the extent practicable, against liability for injury to persons or property from any and all activities undertaken by such Recipients in carrying out projects financed by the REAT Account.

E. Publicity. At the REAT's request, the Foundation agrees to require Recipients to include the REAT or REAT Agency's names or logos in all press releases, publications,

annual reports, video credits, dedications, and other public communications regarding any of the projects financed with funds from the REAT Account.

F. Severability. If any provision of this Agreement is held to be unlawful or invalid by any court of law with duly established jurisdiction over this Agreement, the Parties intend that the remainder of this Agreement shall remain in full force and effect notwithstanding the severance of the unlawful or invalid provision(s).

G. Responsibility for Conduct. Each Party shall be responsible for the consequences of its own actions or inaction, willful misconduct, gross negligence, and/or breach of obligations in connection with this Agreement, and in connection with any work undertaken in accordance with this Agreement.

H. Dispute Resolution. The Parties will cooperate in good faith to achieve the objectives of this Agreement and to avoid disputes. The Parties will use good faith efforts to resolve disputes at the lowest organizational level and, if a dispute cannot be so resolved, the Parties will then elevate the dispute to the appropriate officials within their respective organizations.

I. Disclaimers. Unless otherwise directed by the REAT, the Foundation shall ensure that all information submitted for publication or other public releases of information regarding this Agreement or any project funded by the REAT Account shall carry the following disclaimer:

> The views and conclusions contained in this document are those of the authors and should not be interpreted as representing the official policies or opinions of the State of California or U.S. Government. Mention of trade names or commercial products does not constitute their endorsement by the State of California or U.S. Government.

J. Appropriations Not Obligated. Nothing in this Agreement may be construed to obligate the United States or any REAT Agency to any current or future expenditure of money in advance of the availability of appropriations for such purposes from the U.S. Congress or other appropriating authority.

K. No Limitation on REAT Responsibilities. Nothing contained in this Agreement is intended to limit the authority of the REAT or any REAT Agency to fulfill its statutory or regulatory responsibilities or to otherwise limit the powers afforded to the REAT and each REAT Agency by applicable law.

L. No Third-Party Rights. This Agreement shall not be the basis of any claims, rights, causes of action, challenges or appeals by any person or entity not a Party to this Agreement. Nothing in this Agreement shall be construed to create privity of contract between the REAT and any third parties, including Recipients whose projects are financed by the REAT Account.

M. Withdrawal from Agreement. Any Party may withdraw from the Agreement upon sixty (60) days written notice to the other Parties without terminating the Agreement.

N. Members of Congress Not to Benefit. No member of Congress shall benefit from the provisions of this Agreement.

O. Duplicate Originals. This Agreement may be executed in any number of duplicate originals. A complete original of this Agreement shall be maintained in the official records of each of the Parties hereto.

The Parties have executed this Agreement as of the last date signed below.

RENEWABLE ENERGY ACTION TEAM

By: _____ Date: 4/12/1

John McCamman, Director, DFG

By: _____ Date: _____

Karen Douglas, Chairman, CEC

By: _____ Date: _____

Jim Wesley Abbott, State Director, Acting, BLM

By: _____ Date: _____

Ren Lohoefener, Regional Director
Pacific Southwest Region, USFWS

NATIONAL FISH AND WILDLIFE FOUNDATION

By: _____ Date: _____

Jeff Trandahl, Executive Director

	APPENDIX D Summary of Responses to Draft IMS		
	Comment C	**omment er(s)**	**Response**
1	Too short of review period	BLM	SB 34 required the DFG to prepare the IMS within 60 days of enactment. Implementation of the advance mitigation requires the IMS to be in place to guide implementation. Together, with the interim nature of the IMS, and its short term relevance, expediting the IMS seemed appropriate.
2	Reference to REAT should be REAT Agencies	BLM	Change incorporated
3	The appropriate reference for desert tortoise is the 1994 Recovery Plan	BLM, CBD	Change incorporated
4	Should emphasize off-site compensatory management activities over limited on-site activities	BLM, CBD, Defenders, NRDC, TNC, TWS	Change incorporated. The activities presented as mitigation in the enhancement and restoration section and that are actually avoidance or minimization measures have been removed.
5	Should include off-site enhancement as acceptable	BLM	Change incorporated
6	The Keyhole area in eastern San Bernardino County should not be included as a target mitigation area. This area is northeast of the preserve, and not west. The area is not within the preserve but managed by BLM and proposed for inclusion in the preserve. There are no in holdings in this area.	BLM, CBD, OCE, CWEA	Error noted and corrected in the current document
7	Eastern San Bernardino County is not occupied MGS habitat.	BLM	Error noted and corrected in the current document
8	MGS does not have critical habitat	BLM	Error noted and corrected in the current document
9	Estimates for mitigation actions are unreasonably low as represented in the REAT-NFWF Biological Resource Compensation/Mitigation Cost Estimate Table. The 5% contingency is too low. The $10 million revolving fund is insufficient to deal with the tens of thousands of acres of qualified projects.	CBD, JT, DW, NRDC, TNC, TWS	The estimates presented in the REAT-NFWF Biological Resource Compensation/Mitigation Cost Table apply to only those projects that qualify under SB 34 and that will be permitted prior to the completion of the DRECP. There are no reliable methods to precisely estimate costs in advance given the varied current land values across the DRECP area and the high likelihood of inflationary pressures once acquisitions begin. The estimates in the current document (modified from the earlier draft) are based on past land acquisition, enhancement, and restoration costs and represent the REAT agencies best approximation given the uncertainty involved. The 5% contingency and $10 million revolving fund are in statute and not discretionary. There are four mitigation options available to applicants. SB 34

	APPENDIX D Summary of Responses to Draft IMS		
	Comment C	**omment er(s)**	**Response**
			includes three, 1) advance mitigation where the applicant pays for mitigation based on the number of acres identified in their CEC/BLM permits and the cost estimates in the IMS in advance of receiving a permit from CEC/BLM; 2) in-lieu fee option where the applicant pays for mitigation based on the number of acres identified in their CEC/BLM permits and the cost estimates in the IMS or updated costs estimates at the time of permitting plus a 5% contingency for cost overruns; 3) applicant pays for mitigation following NCCP guidelines (DFG Code Section 2800) through NFWF outside the realm of SB 34; 4) the applicant purchases mitigation land, enhancement, and restoration properties on their own, pays the LTMM fee through NFWF.
10	The standards in the BLM land use plan (NEMO, NECO, WEMO) fail to capture the diversity and cover of pre-disturbance conditions.	CBD	This comment is more appropriately relevant to the DRECP Conservation Strategy and not the IMS.
11	The target mitigation areas and California Essential Habitat Connectivity Corridors do not identify connectivity with other states and countries. Connections should also be included for the Los Angeles County SEA and the Desert Transect SEA, and west through Antelope Valley and the Poppy Preserve.	CBD	Corridors and connections suggestions will be more appropriately addressed in the Conservation Strategy and DRECP.
12	Other species that will benefit from conservation (in addition to desert tortoise and Mohave ground squirrel) need to be identified as targets for the "primary acquisition conceptual areas".	CBD, DW, NRDC, TNC, TWS	SB 34 states the IMS is intended to implement mitigation for impacts to rare, threatened, and endangered species. The areas suggested for target acquisition have been reevaluated and changed where appropriate based on our analysis. Additional species besides rare, threatened, and endangered species will be more appropriately addressed in the DRECP. Table 1 identifies species within each MTA unit, including non-listed species, that will likely benefit from habitat acquisition and long-term conservation.
13	The Mojave Fringe-toed lizard is not a listed species.	CBD	Error noted and corrected in the current document
14	The Flat-tailed horned lizard continues to decline despite new recommendations in the range-wide management strategy (2003)	CBD	This comment is more appropriately relevant to the DRECP Conservation Strategy and not the IMS.

	APPENDIX D Summary of Responses to Draft IMS		
	Comment C	**omment er(s)**	**Response**
15	The statement that the bulleted list of activities required of project applicants to comply with CEQA/CESA "should be required" should be changed to "will be required".	CBD	Error noted and corrected in the current document
16	"Rough-step proportionality" and "reasonable period of time" need to be defined in the IMS	JT, DW, NRDC, TNC, TWS	Error noted and corrected in the current document
17	Land valuation estimates should be revised every six months	JT, DW, NRDC, TNC, TWS	Noted
18	Essential Habitat Connectivity corridors with Mitigation Target Areas" raises several questions. What was the basis for this map? Was the science panel consulted? Does the map take into account the need for climate change adaptation, as mandated by the Department of Resources' Climate Change Adaptation Strategy?	JT	The DRECP area is not expected to have severe increases in precipitation or increases in mean ambient temperature as a result of climate change (PRBO 2009). However, the mitigation target areas in the draft IMS have been reevaluated by the DFG. The new target areas are consistent with the DFG climate change adaptation strategy by proposing large reserves that will facilitate species resiliency.
19	Figure 5 does not contemplate broad alluvial plain connectivity from Joshua Tree National Park to Mojave National Preserve, although Figure 6 identifies "conservation opportunity" in this large gap. Nor does Figure 5 propose adequate connectivity from eastern California desert areas over to the Colorado River, except south of Blythe.	JT	See comment 10
20	"Areas of Conservation Emphasis II" is somewhat misleading. It uses the ACE model to designate vast portions of the plan areas as low biological value. Designation of biological value should be deferred until there is specific guidance from the Science Advisors, plus adequate	JT	The ACE-II model is intended to help inform what areas to target for mitigation under SB34. The IMS and ACE are not intended to be the final word on what areas have high biological value.

	APPENDIX D Summary of Responses to Draft IMS		
	Comment C	**omment er(s)**	**Response**
	surveys to make a meaningful determination on this important issue.		
21	The IMS is missing an overall framework of how temporary and permanent impacts requiring compensatory mitigation covered by the IMS will be established, how mitigation for these impacts will be evaluated against and integrated with other required mitigation especially avoidance and minimization requirements, how state and federal mitigation requirements will fit together, how cumulative impacts and ratios will be handled, and details about how priorities among compensatory mitigation options are set	DW, NRDC, TNC, TWS	The IMS is intended to guide implementing compensatory mitigation for eligible projects within the DRECP plan area. It supports the overall objectives of the SB 34 legislation to provide an efficient means to implement compensatory mitigation prescribed by the regulatory agencies in environmental and permit documents. It is not a comprehensive assessment of cumulative or individual project impacts or a framework for driving compensatory mitigation for all projects within the plan area. The comment would be more appropriate for the Conservation Strategy that will be developed as part of the DRECP process.
22	The IMS Needs to Follow the Mitigation Protocol/Hierarchy	DW, NRDC, TNC, TWS	SB 34 requires the IMS to adopt a regional planning perspective that provides a foundation for, or that will complement, any conservation strategy to be developed for the Desert Renewable Energy Conservation Plan. The IMS does not establish mitigation requirements for any project. Mitigation is identified by the CEQA/NEPA lead agencies. The IMS guides implementation of required mitigation through the purchase of land and conservation easements, to protect, restore, or enhance the habitat of plants and wildlife that can be used to fully mitigate the impacts of the take of endangered species, threatened species, or candidate species
23	The Differences in Mitigation Requirements Must be Resolved.	DW, NRDC, TNC, TWS	See response to 22
24	The DRECP Starting Point Map Needs Additional Refinement	DW, NRDC, TNC, TWS	The DRECP starting point map is a DRECP product and has been removed from the IMS.

	APPENDIX D Summary of Responses to Draft IMS		
	Comment C	**omment er(s)**	**Response**
25	The Primary Conceptual Conservation Acquisition Areas Contain Errors, Lack Detail and Miss the Opportunity to Build the Framework of a Conservation Reserve Design	DW, NRDC, TNC, TWS	The Primary Conceptual Conservation Acquisition Areas have been re-evaluated and changed and described to more accurately reflect those areas that can be adopted into the regional conservation strategy.
26	The IMS Fails to Show that the Mitigation Actions will Contribute to Species Conservation or How Species will Benefit From the Mitigation Actions.	DW, NRDC, TNC, TWS	See response to 26
27	Mitigation based on Restoration or Enhancement of Soils is Inappropriate.	DW, NRDC, TNC, TWS	The 1994 Desert Tortoise Recovery Plan recommends (2c) Restore disturbed areas. Surface disturbance in DWMAs should be restored to pre-disturbance conditions (defined as the topography, soils, and native vegetation that exist in adjacent undisturbed or relatively undisturbed areas). This includes such actions as closing access to non-designated roads and restoring non-designated roadbeds to their pre-disturbance state.
28	The Draft IMS Must Be Reviewed the DRECP Independent Science Advisors.	DW, NRDC, TNC, TWS	Noted
29	The Analysis of Qualified Renewable Energy Projects Needs to Be Updated.	DW, NRDC, TNC, TWS	Document modified to fully address this comment.
30	The CDFG and BLM need to clarify that the applicants can make land contributions to the Advanced Mitigation Fund, and draw from it; moreover, these agencies need to clarify that lands which an applicant contributes as mitigation in the Advanced Program are acceptable for a project within the DRECP boundary, if the lands meet the quality and species mitigation requirements, even if the mitigation lands are a few hundred miles from the project site	FS	Fish and Game Code Section 2099(b)(1) states "The department shall collect a fee from the owner or developer of an eligible project that elects to use mitigation actions developed and approved by the department pursuant to Section 2069..." and section 2069(c)(2)(A)(iii)states the IMS shall "(iii) Implement mitigation actions within a reasonable period of time relative to the impact to the affected candidate species, threatened species, or endangered species, including, where feasible, advance mitigation. For purposes of this clause, “advance mitigation” means mitigation implemented before, and in anticipation of, future impacts to natural resources." SB34 does not state land may be contributed to the advance mitigation fund although developers may purchase land that meets the mitigation requirements identified in their permits at any time. In kind mitigaion lands fulfill the requirement for a regional approach to conservation and may be situated anywhere within the DRECP boundry.D36

	APPENDIX D Summary of Responses to Draft IMS		
	Comment C	**omment er(s)**	**Response**
31	It is unclear why these Conservation Opportunity Areas are referred to as “unprotected” lands, when most lie within an ACEC or a DWMA, and thus have a surface disturbance of less than 1%. The document needs to be clear here regarding the intended use for lands within current DWMAs or other lands that fall within the designated “Conservation Opportunity “ (CO)	FS	See response to 25. Because CESA has a different standard (“fully mitigate”) than the federal standard (“mitigate to the maximum extent practicable”) requirements for land protection vary. The IMS document assumes BLM lacks the authority to prevent a right-of-way application for an incompatible use in areas where the state or federal governments have made significant restoration or enhancement investments as part of project mitigation.
35	Currently DWMAs adjacent to certain proposed solar farms are being considered as allowable Desert Tortoise Relocation Areas, and if this is one type of "Management Action being proposed it would help to spell it out. Moreover, it would help clarify the issue to provide examples of “management actions” referred to above and how those might be implemented.	FS	See Response to 25
36	We recommend that the next draft incorporate more detailed maps of the overlay areas depicted in Figure 3. Perhaps breaking it into counties would help, as it is hard to tell at times what is under the Solar Study Areas. It is also recommended that coordination with the similar work on Solar Study Areas being fully coordinated with the Federal Solar PEIS.	FS	See response to 25

	APPENDIX D Summary of Responses to Draft IMS		
	Comment C	**omment er(s)**	**Response**
37	We would strongly recommend 1. That numbers be revised to more accurately reflect the land costs based on known and current appraisals 2. These very high numbers of between $5500 and 8000 either be deleted, or provided with a clear explanation of where they came from. 3. revised numbers reflecting remote, more environmentally valuable, larger parcel lands which will likely be used for mitigation	FS	The estimated compensatory mitigation areas and Table 1. Mitigation costs from existing conservation plans have been replaced with the current Biological Resource Compensation/Mitigation Cost Estimate Breakdown for use with the REAT-NFWF Mitigation Account Table of Estimated Cost, This new cost table is based on the best information available to the REAT Agencies and represent estimates. Estimates can be described as the calculated approximation of a result which is usable even if input data may be incomplete or uncertain and are subject to change as new information becomes available. The DRECP area is vast and many variables including location, size, condition, and biological value all contribute to land costs.
38	We recommend that additional clarification with examples be provided to enable an applicant faced with mitigation obligations to better understand how the compensatory mitigation actions might apply to them.	FS	Noted
39	Management Actions required should be consistent with the quality of land impacted, as compared to the mitigation land being provided. That is, if the mitigation land is equally good or better habitat, only minimal management measures in addition to purchase should be required.	FS	The mitigation requirements are conditions of permit approval by the CEQA/NEPA lead agencies. The IMS implements the required mitigation.

	APPENDIX D Summary of Responses to Draft IMS		
	Comment C	**omment er(s)**	**Response**
40	Given the already expected high costs of mitigation land, the potential for rampant speculation in the Desert, and the already high BLM land rents developers are facing, the mitigation lands have the potential to undo a number of solar projects economically. Adding miles of tortoise fencing to a project's land mitigation burden, for example, could be economically infeasible	FS	See response to 39
41	The better lands for habitat preservation are in-holdings of the BLM, are generally remote and high quality habitats, tend to be larger parcels than any of the examples here, and importantly are often high quality habitats which require less management, oft times little or no enhancements or management since they are in the middle of large DWMS or other protected lands.	FS	Noted
42	If enhancement opportunity can be identified which accomplishes improved connectivity on public lands, and benefits key listed species, the DRECP should consider allowing such enhancements as substitutes for purchasing mitigation lands where costs are comparable.	FS	The CDFG has jurisdiction over endangered, threatened, or candidate species. The CDFG is committed to ensuring impacts resulting from the authorized take of endangered, threatened, or candidate species shall be minimized and fully mitigated. The measures required to meet this obligation shall be roughly proportional in extent to the impact of the authorized taking on the species. Mitigation must result in the protection, restoration, or enhancement of the habitat of one or more species that are proposed to be covered by the DRECP. Based on CDFG analysis, in many cases corridor habitat may not necessarily contain the same high biological values and the habitats being connecting, but are nonetheless valuable for maintaining the connection. CEQA/NEPA lead agencies establish the relative value of mitigation lands used for enhancement purposes and not the IMS.

	APPENDIX D Summary of Responses to Draft IMS		
	Comment C	**omment er(s)**	**Response**
43	While restoration is an admirable goal, there is very little evidence in the desert to indicate that one can restore a highly impacted desert site to anything close to its natural state, recognition of this cost, should provide a basis for much higher credit value for restored land, especially in connectivity corridors.	FS	See response to 37
44	Because most ARRA projects are on a very similar timeline, it is unlikely that the transaction time for this fund will enable turnover more than a few times, ultimately the fund is more likely to represent less than 30-40% maximum of the total mitigation burden of just the ARRA Fast-track projects, not to mention the MW needed to meet the 2020 33% renewable objective	FS	The $10 million revolving fund established by SB 34 is intended for advanced mitigation land purchases, conservation easement, restoration and enhancement of habitat for covered species. It is not expected that every qualified project will pursue the advanced mitigation option.
45	Research on the costs of desert habitat restoration is likely to indicate costs of up to and well above $20,000, based on the activities of biological firms in the desert providing such services.	FS	The current Biological Resource Compensation/Mitigation Cost Estimate Breakdown for use with the REAT-NFWF Mitigation Account Table of Estimated Cost estimates the costs for restoration and enhancement of lands acquired for mitigation purposes. Actual costs may be higher or less than the estimates provided in Appendix E.
46	Given the probable limited effect of the $10 million SB 34 fund for mitigation to provide adequate lands for the ARRA projects, we recommend that the agencies provide to the solar companies as soon as possible any details they have on available priority lands under this 43,500 acre area, so private sector purchases can be expedited, something likely to happen much more quickly than will be possibly by public agencies.	FS	The target mitigation areas map (Figures 3-6) have been revised to better reflect locations where mitigation could best be accomplished.

	APPENDIX D Summary of Responses to Draft IMS		
	Comment C	**omment er(s)**	**Response**
47	Provide an options where the developer purchases the mitigation lands themselves, and turns it over to the DFG, NFWF, or a 3rd party (in lieu of paying fees for the land and/or its management) to manage the lands or allow for variable management requirements depending on the land provided, its habitat quality, and its location.	FS	The IMS provides a strategy for implementing mitigation required by CEQA/NEPA lead agencies as conditions of permit approval for renewable energy projects. Developers have the option of using one of the options provided by the IMS, or they can choose to implement the mitigation themselves. The mitigation must meet the criteria established by the lead agencies for CEQA/NEPA impacts, and CESA for impacts to endangered, threatened and candidate species.
48	For the proposed Mitigation Target Areas (MTAs), it appears that no effort was taken to avoid lands containing high wind resource potential	CWEA	The Mitigation Target Areas were redrawn based on an analysis that attempted to avoid areas where energy development (wind and solar) are planned. However, in some instances the 25 square mile MTA hexagons unavoidably contain or overlap planned energy development areas. The MTAs are intended to direct mitigation to areas of high biological value and/or areas that provide connectivity and wildlife movement between intact habitat areas and not to discourage or prohibit energy development. Because of the size of the hexagons, both development and biological value can coexist meeting both priorities.
49	The IMS must be consistent with the emerging DRECP, and as the scientific and deliberative work of the DRECP has just begun, it is necessary to hold off on any decisions on MTAs until substantial further discussion takes place	CWEA	Fish and Game Code section 2069(g) states "The mitigation actions implemented pursuant to this section shall be incorporated into the Desert Renewable Energy Conservation Plan upon the finalization of the plan, to the extent the mitigation actions are consistent with the plan's conservation strategy." While the DFG and other REAT Agencies have attempted to anticipate the DRECP conservation goals and identify mitigation that will be consistent with the emerging DRECP, the IMS is intended to be an early interim strategy for implementing SB 34 only and by definition must be completed prior to the DRECP itself over a much shorter time line. The DRECP may incorporate the IMS mitigations actions but is not obligated to do so if the actions are not consistent with the emerging conservation strategy.

	APPENDIX D Summary of Responses to Draft IMS		
	Comment C	**omment er(s)**	**Response**
	The relationship of the IMS to projects that are not qualified for consideration under SB 34 (i.e., wind energy projects) should be clarified. We expect that there may be some tendency for the REAT agencies, under the DRECP Planning Agreement, to apply the provisions of the IMS to non-SB 34 projects during interim review despite the quite clear distinction in the Planning Agreement in the treatment of those different categories of projects	CWEA	Document modified in response to this comment
50	The Draft IMS recognizes the importance of habitat connectivity, the description of the primary clusters of mitigation areas for acquisition and the areas of high movement permeability representing corridors (pages 17 and 18) does not provide for connectivity between Joshua Tree National Park and the Mojave National Preserve.	MNPC	See response 25
51	The IMS fails to make a distinction between it's use for listed and non-listed species	CEC	SB 34 is an amendment to CESA and as such is intended to address state listed species. To the extent mitigation requirements between listed and non-listed species overlap, the IMS could indirectly apply.
52	Concern that types of mitigation provided in the IMS as illustrative examples might differ from those actually in certification documents	CEC	The IMS describes tools that may be used to more efficiently implement project mitigation. It does not prescribe mitigation.

	APPENDIX D Summary of Responses to Draft IMS		
	Comment C	**omment er(s)**	**Response**
53	The draft IMS lacks a basis for the stated range of mitigation costs for land acquisition or how an endowment cost, if required, would be estimated	CEC	The current version of the IMS reflects the cost basis and clearly identifies the endowment costs.
54	Roles of respective permit agencies is unclear and some IMS statements appear intrusive to CEC's exclusive jurisdiction over certain types of power plants.	CEC	The current document is clearer with respect to agency roles and responsibilities.

Legend: BLM: Bureau of Land Management; CBD: Center for Biological Diversity; CWEA: California Wind Energy Association; DW: Defenders of Wildlife; FS: First Solar; JT: Joan Taylor; MNPC: Mojave National Preserve Conservancy; NRDC: Natural Resources Defence Council; OCE: Oal Creek Energy; TNC: The Nature Conservancy; TWS: The Wilderness Society; CEC: California Energy Commission

APPENDIX E

Senate Bill 34
Interim Mitigation Strategy
Biological Resource Compensation/Mitigation Costs for In-Lieu Fee Implementation

	Task	Cost		
		Imperial, Riverside (excluding Coachella Valley), San Bernardino Counties	**Kern County**	**LA County**
1.	Land Acquisition[1]	$1000	$3000	$10,000
2.	Level 1 Environmental Site Assessment (per acre)	$75/acre		
3.	Appraisal	$5000/parcel[2]		
4.	Initial site work - clean-up, enhancement , restoration (per acre)	$290/acre		
5.	Closing and Escrow Costs – 2 transactions at $2500 each; landowner to 3rd party and 3rd party to agency	$5000 for 2 transactions $2500 for single transaction if lands come to DFG		
6.	Endowment for long-term Management and Maintenance (LTMM) - includes land management; enforcement and defense of easement or title [short and long term]; region-wide raven management; monitoring, etc. (per acre)	$1450/acre[3]		
7.	Fund management costs[4]	$1.5% of LTMM No fee if Special Deposit Fund is used.		
	TOTAL *land acquisition mitigation cost*	*$*		

[1]The per acre costs estimates represent the average for all Wildlife Conservation Board land transactions where acquisitions consisted of parcels greater than 40 acres in size within the respective counties.

[2]Parcel sizes may range from 1 acre to 640 acres and above. The general location of the land acquisition(s) will determine the generalized parcel size for determining project specific estimates.

[3]The endowment for long-term management and maintenance is based on PAR like analysis calculating management costs estimates with a 3% annual capitalization rate.

[4]NFWF-related fees ("REAT-NFWF Mitigation Account Additions" identified in the attached table) will apply if the NFWF accounts are used for fund management.

Note: if compensation lands are accepted by BLM (rather than the state), applicable fees in the REAT Biological Mitigation Cost Table (attached) may apply.