Renewable Energy in California:

Implementing the Governors Renewable Energy Executive Order

Renewable and Natural Resource Conservation
The Desert Renewable Conservation Plan

USGS Workshop
Natural Resource Needs Related to Climate Change
In the Great Basin and Mojave Desert:
Research, Adaptation and Mitigation

April 20-22
University of Nevada, Las Vegas
Las Vegas, NV

California Energy Commission

Department of Fish and Game

Fish and Wildlife Service

Bureau of Land Management

Renewable Energy Action Team

- Comprised of the four MOU signatory agencies
- Holds “top to bottom” meetings every other week to address policy and process issues
- Primary function is to coordinate permitting and process activities among agencies
- Reports to policy team comprised of the Natural Resources Agency, Commissioners, and Fish and Wildlife Service and Bureau of Land Management directors
- Working technical unit for implementing the Executive Order

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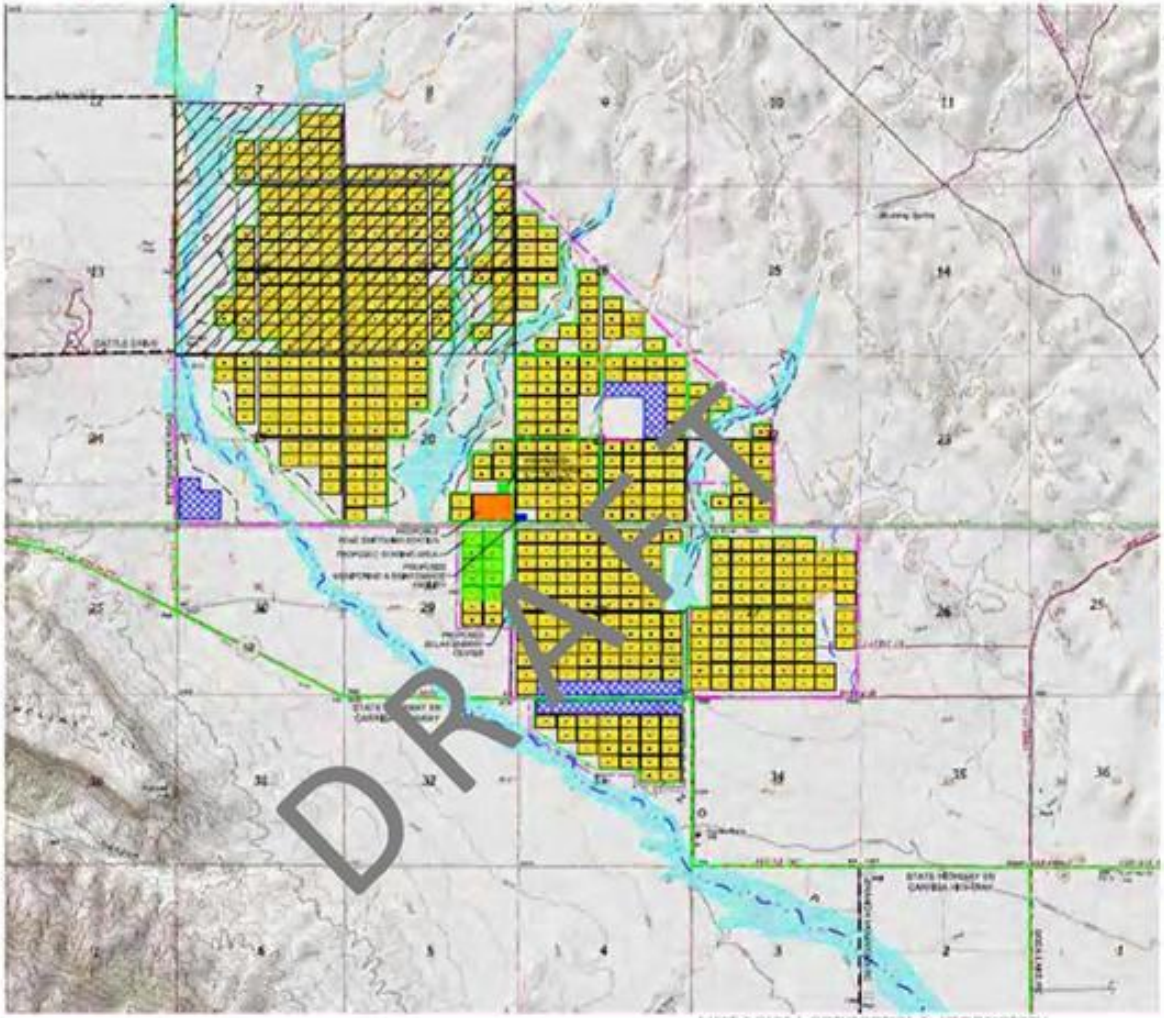
NCCP and Individual Take Permit Provision Comparison

Individual Take Permit (ITP)	*NCCP*
Intended for a single action with a finite impact and conservation horizon	Intended for a range of activities that would occur over the life of the permit
Usually a single project applicant	Often many applicants or local government or state agency applicant
Project centric and oriented	Ecosystem or functional ecological unit oriented
"Take" authorization standard is "fully mitigate" all project actions	NCCP standard is "provide for conservation and recovery" of species
No assurances	Department may authorize assurances
Applicant responsible for funding entire range of mitigation requirements	Provides for state and federal contributions to meet conservation and recovery standard

Option B



LEGEND

1 PANEL PERSPECTIVE

First Solar Confidential & Proprietary

Natural Community Conservation Planning Act: Advantages of the NCCP Approach

- Eco-regional in focus
- Consider and maintain ecosystem processes
- Provide conservation for non-listed species
- Reserve design and conservation actions implemented to maintain and enhance sensitive species, facilitate the recovery of listed species
- Long-term Monitoring Framework

- Independent scientific review process
- Extensive stakeholder process
- Balanced Approach – Biologically driven, Development driven
- Acquisition and preservation actions funded by applicants with contributions from state and federal government

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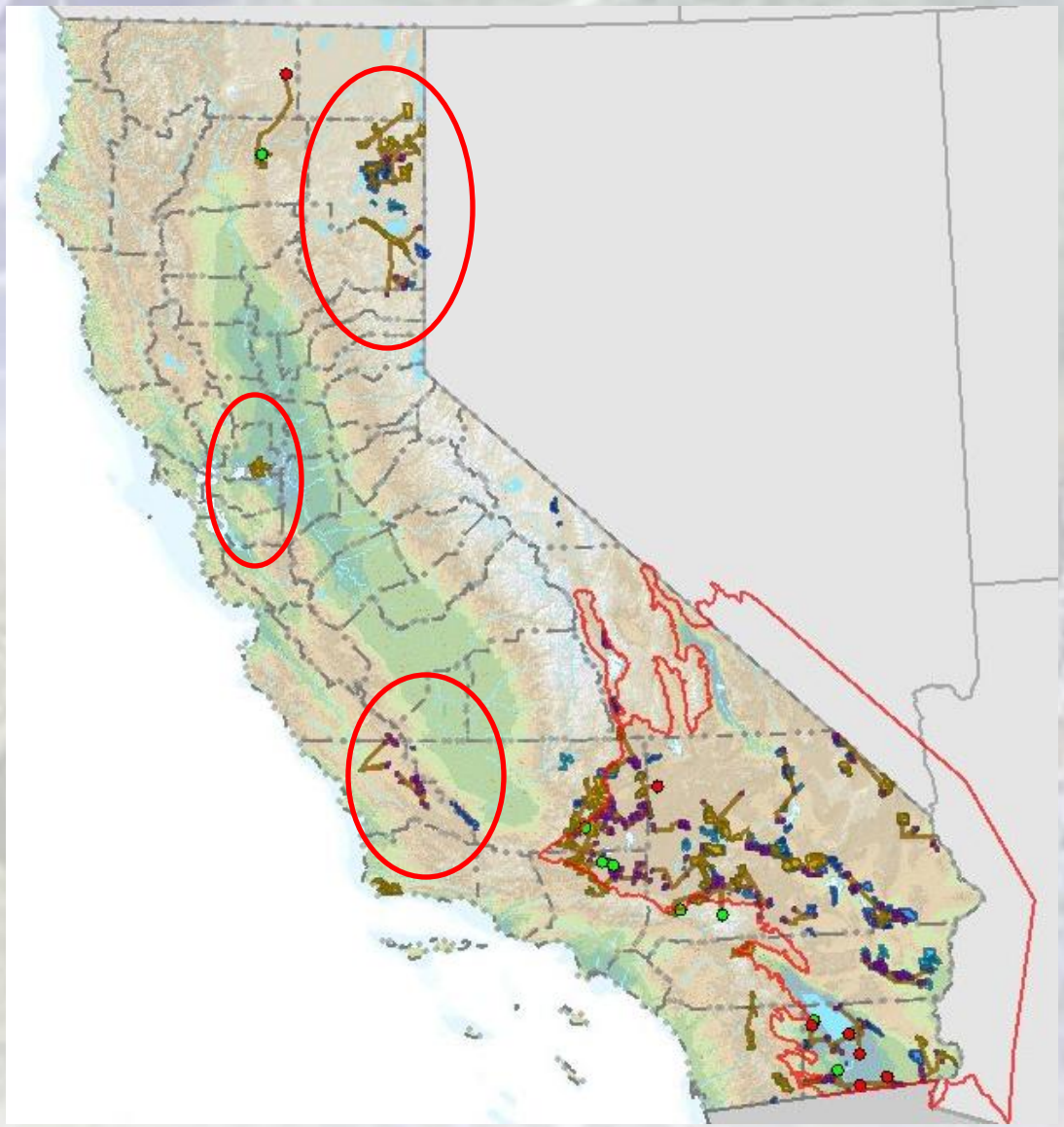
EO Element 8:
NCCP Priorities

- **Current focus is on the desert with development of the DRECP**

- **Future development of NCCPs for RPS projects will focus on**
- **t he Modoc Plateau and the Carrizo Plain**

- **Initial planning for an NCCP underway for the Altamont Pass Wind Resource Area**



Renewable Energy in California:

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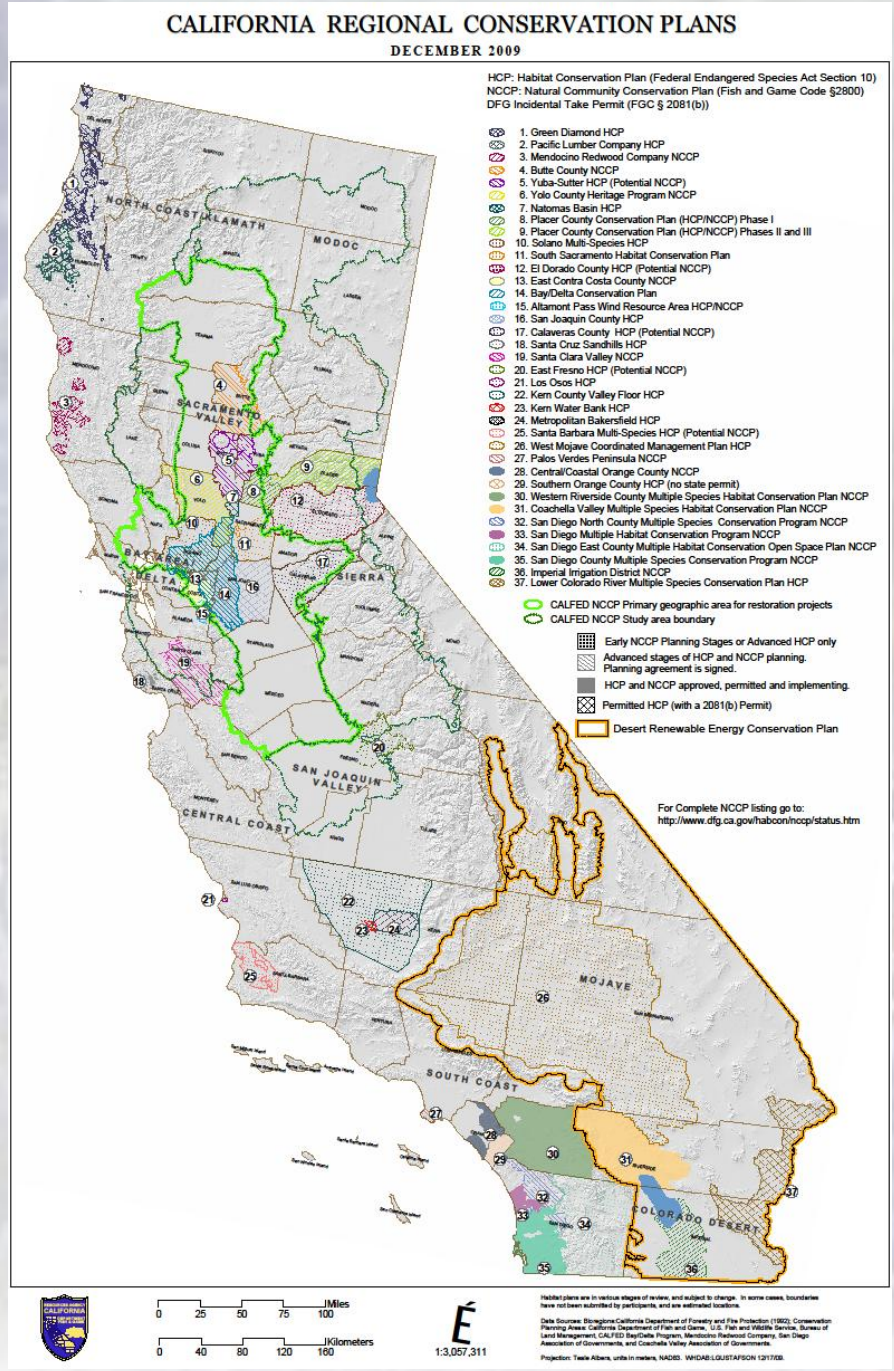
- **NCCP 39 Plans**
- **Range from single landowner to the Entire Bay-Delta**
- **DRECP largest 24,300,000 acres**



Renewable Energy in California:

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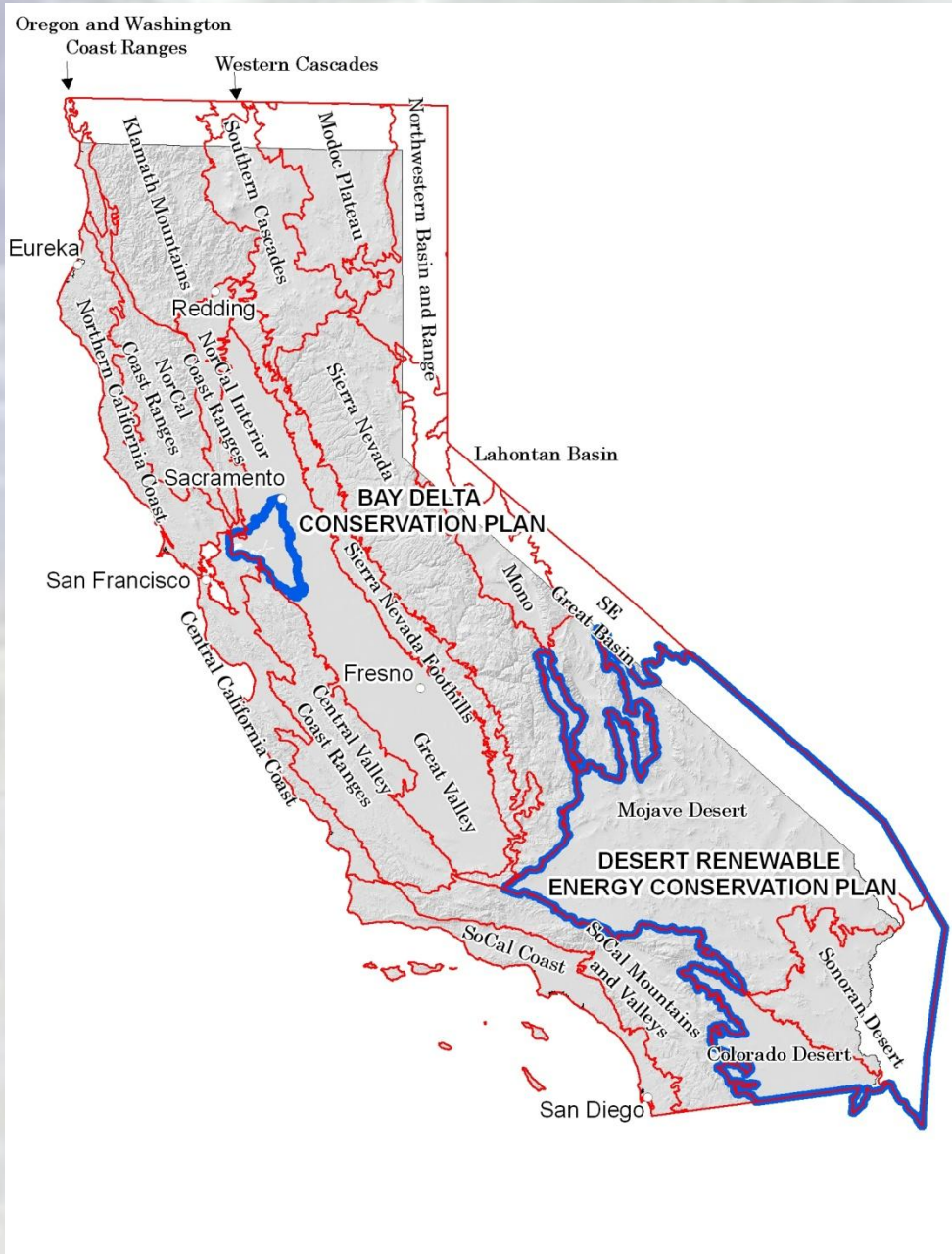
- **NCCP 39 Plans**
- **DRECP largest 24,300,000**
- **Ecosystem Based includes the entire Mojave, Sonoran and Colorado Desert Areas in California**



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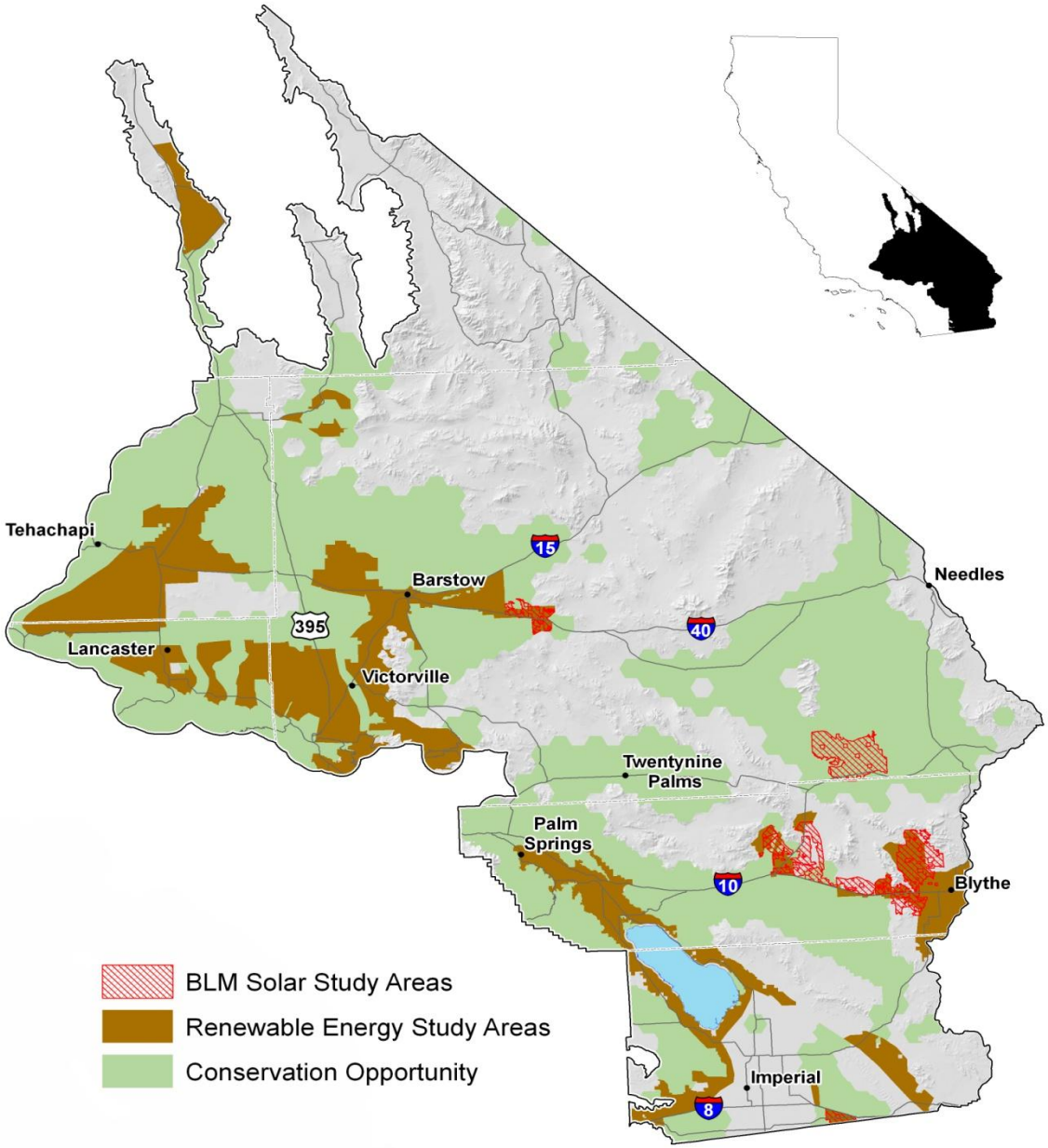
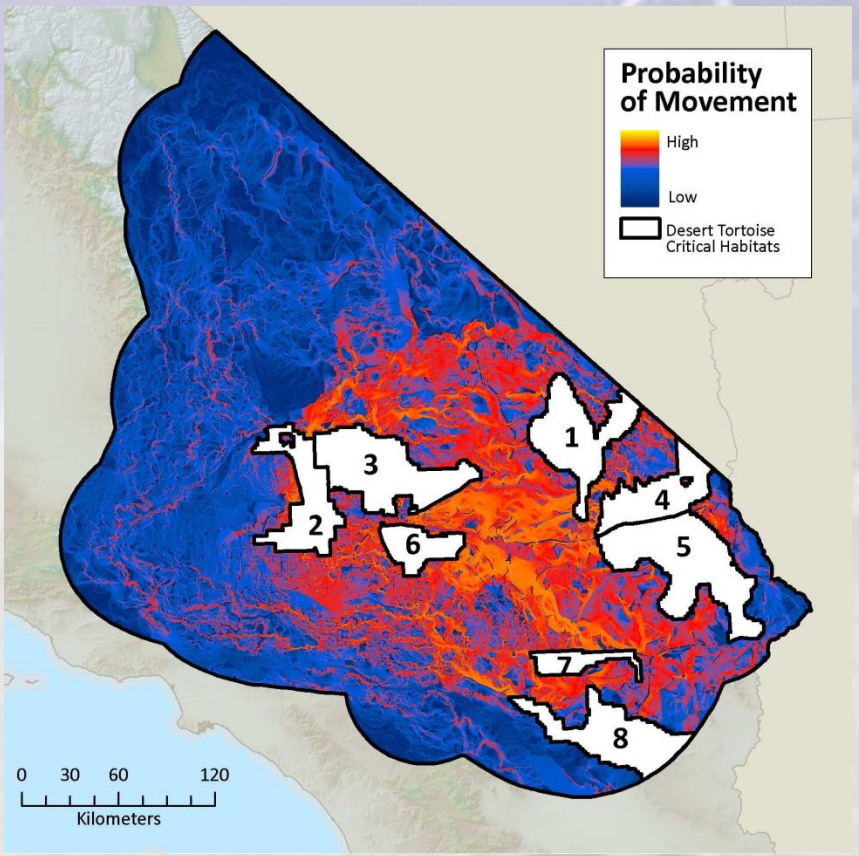
The Desert Renewable Energy Conservation Plan

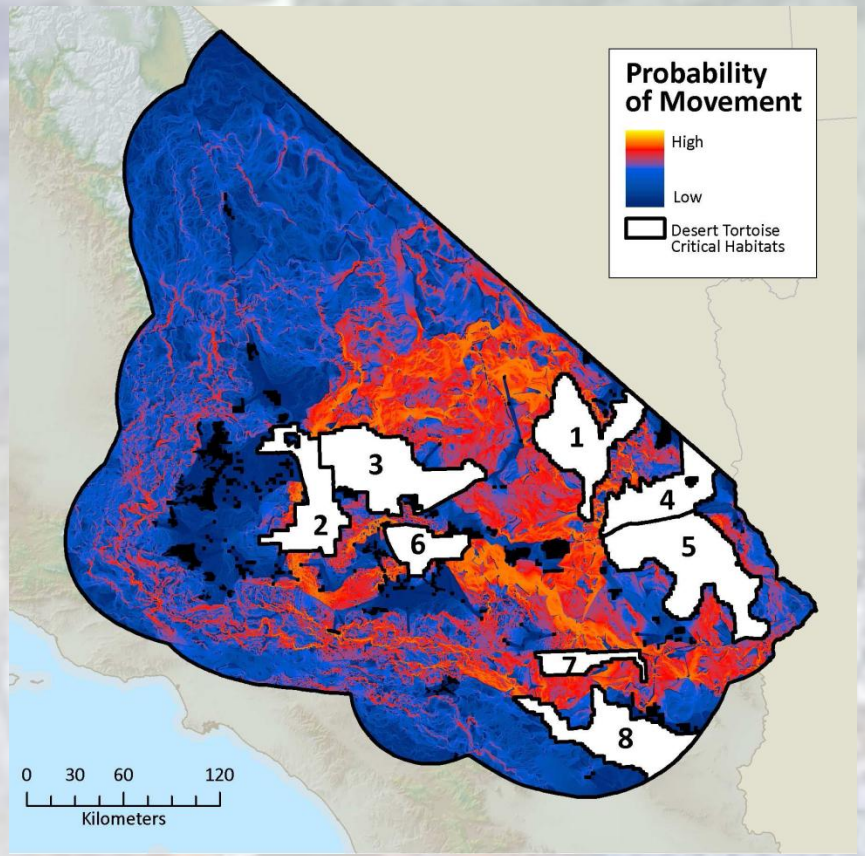
- Identify geographic areas designated for RPS project development
- Identify areas for conservation and species management
- Focuses on the Mojave and Colorado desert regions
- Goal is to coordinate and consider desert land uses and activities during the planning process

RENEWABLE ENERGY ACTION TEAM
STARTING POINT



Desert Tortoise



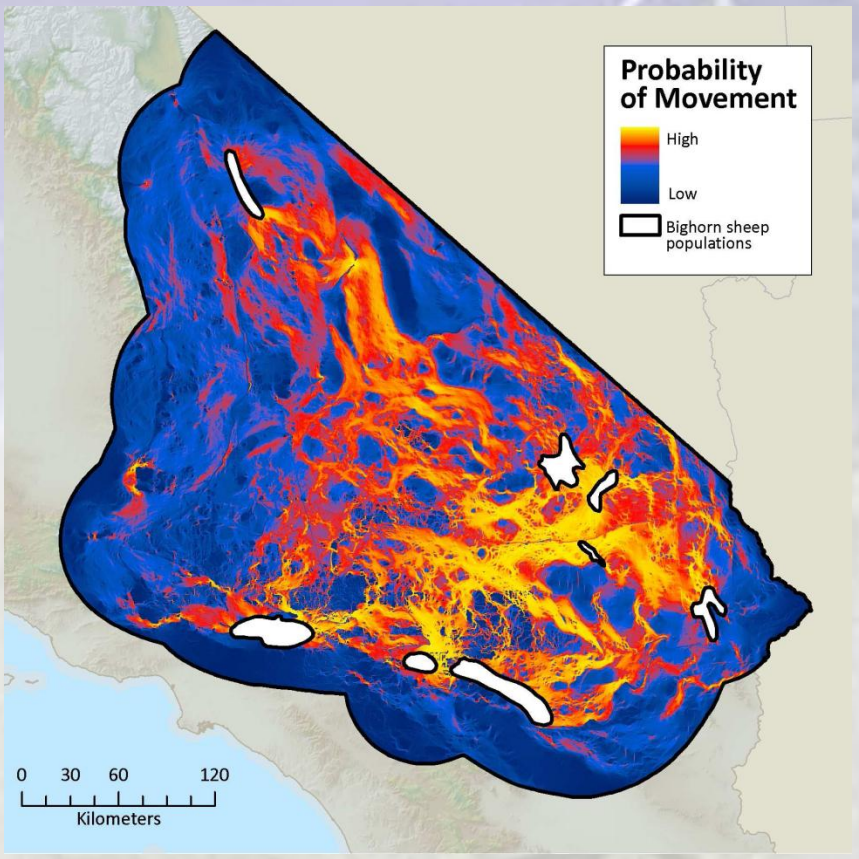


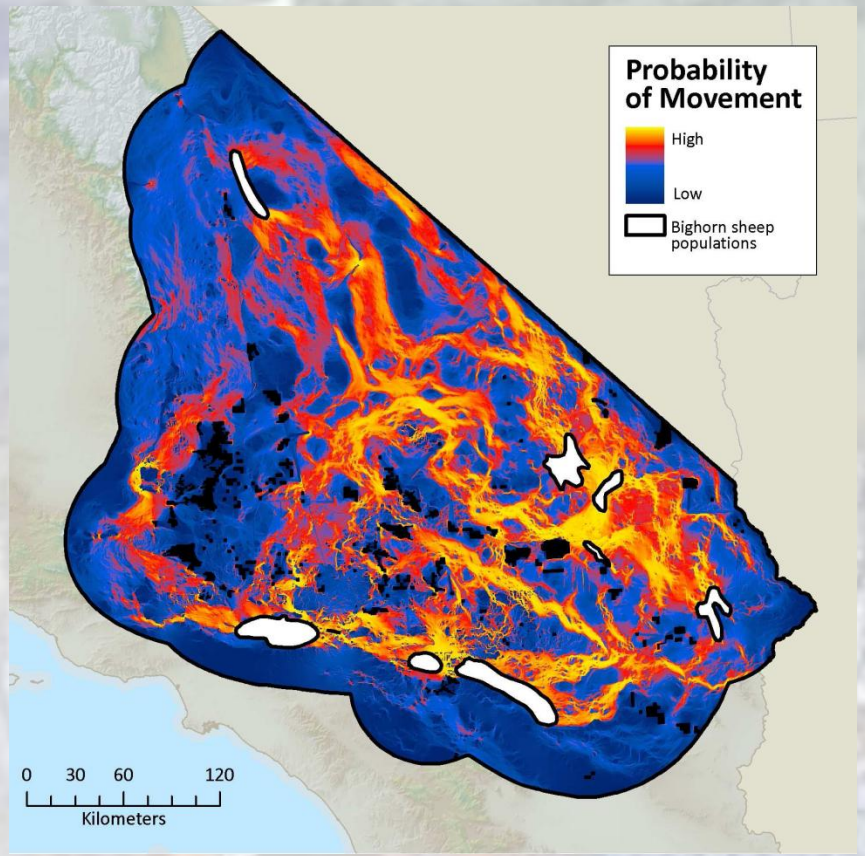
Project Members: Lucas Bare,Tessa Bernhardt,Toby Chu, Christopher Noddings,Melissa Gomez, Milena Viljoen,
Project Advisor: Lee Hannah

Cumulative Impacts of Large-scale
Renewable Energy Development in the West Mojave
Effects on habitat quality, physical movement of species, and gene flow

ON THE WEB AT HTTP://WWW.BREN.UCSB.EDU/~WESTMOJAVE SPRING 2009

Bighorn Sheep





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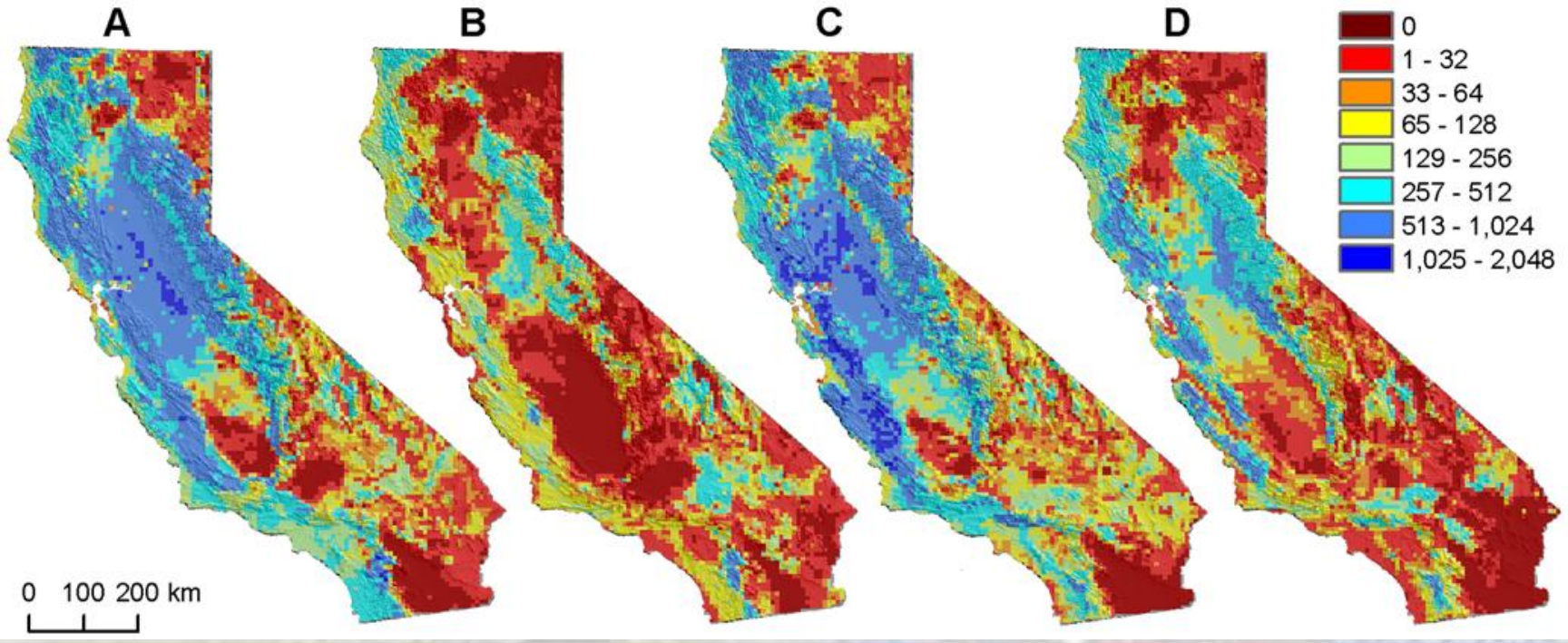
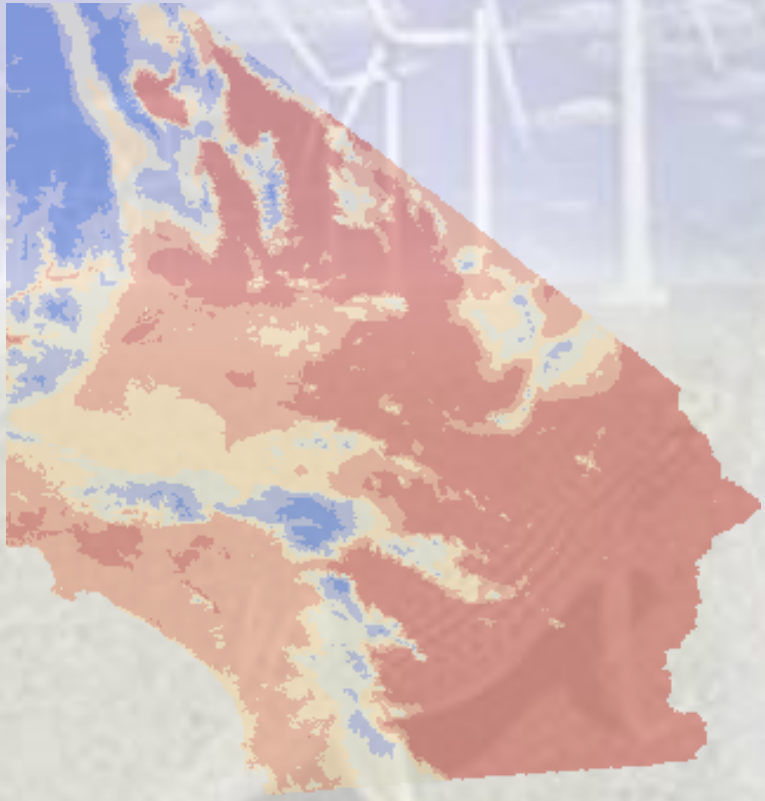
Comparison of Climate Model Results



Citation: Stralberg D, Jongsomjit D, Howell CA, Snyder MA, Alexander JD, et al. (2009) Re-Shuffling of Species with Climate Disruption: A No-Analog Future for California Birds? PLoS ONE 4(9): e6825. doi:10.1371/journal.pone.0006825

Climate – Annual Mean Temperature

Projected Current Climate

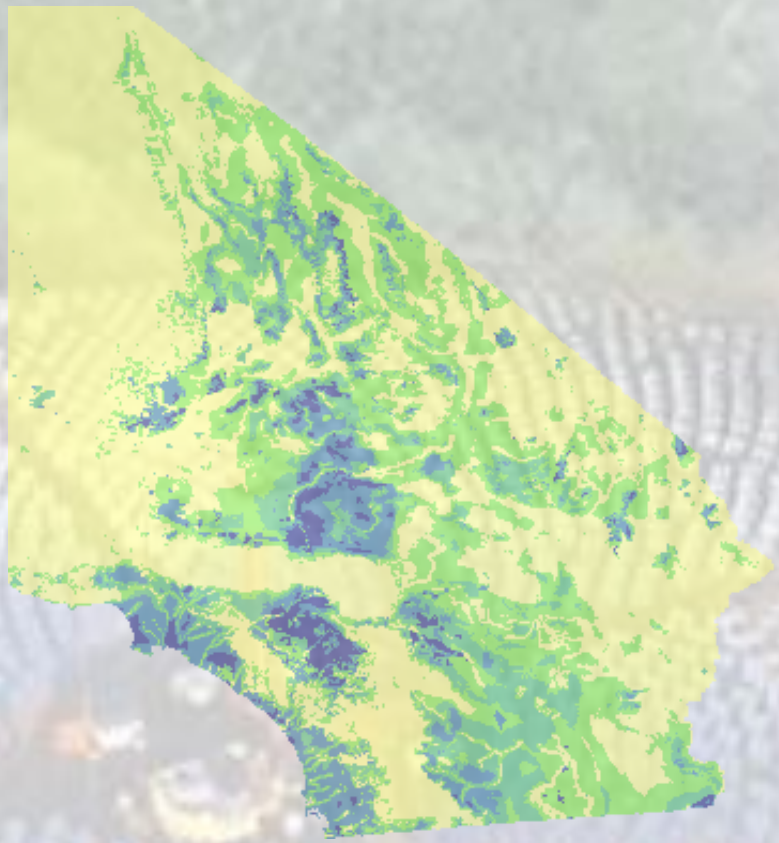


Projected Future Climate

Cactus Wren

Projected Current Distribution

Projected Future Distribution



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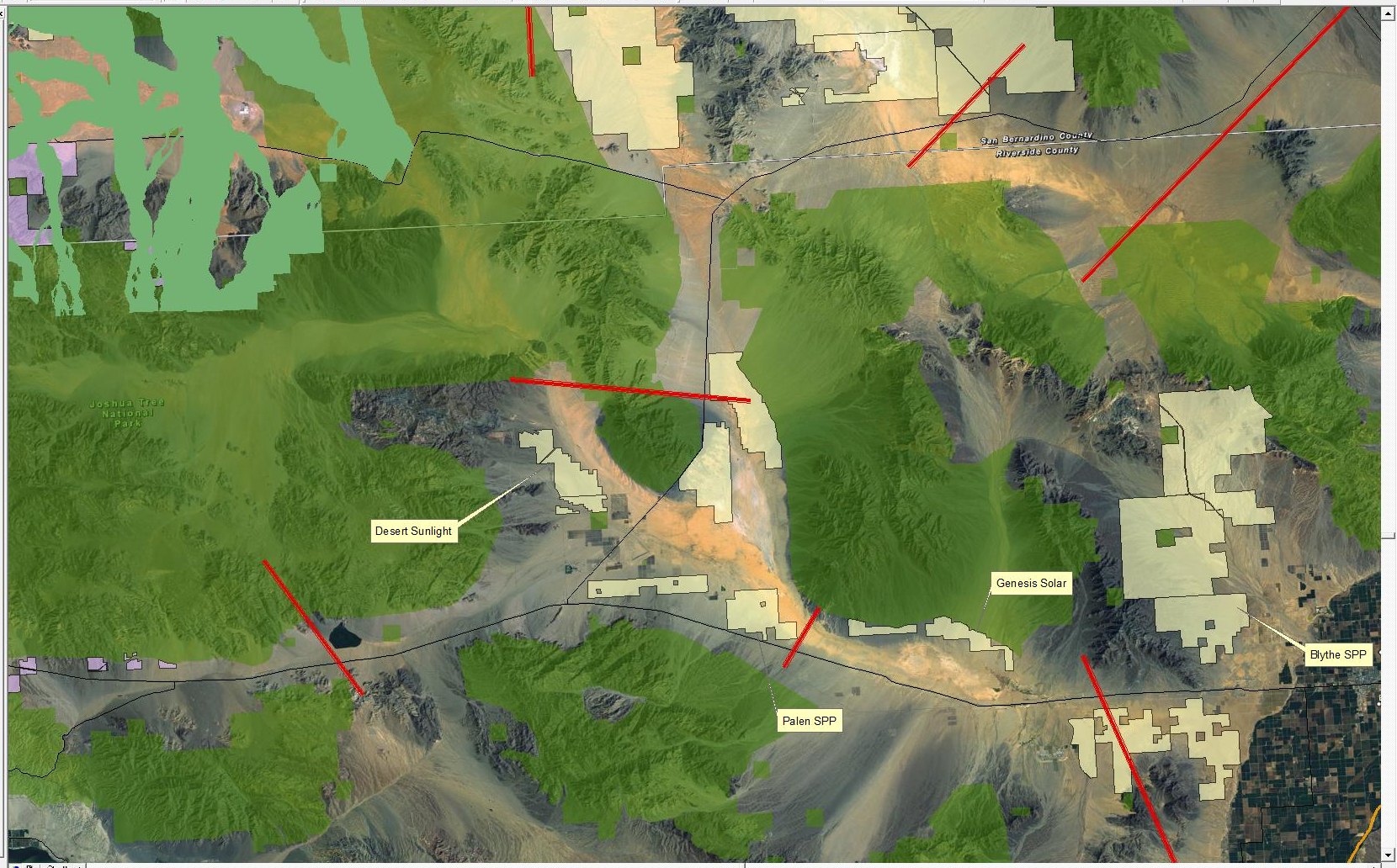

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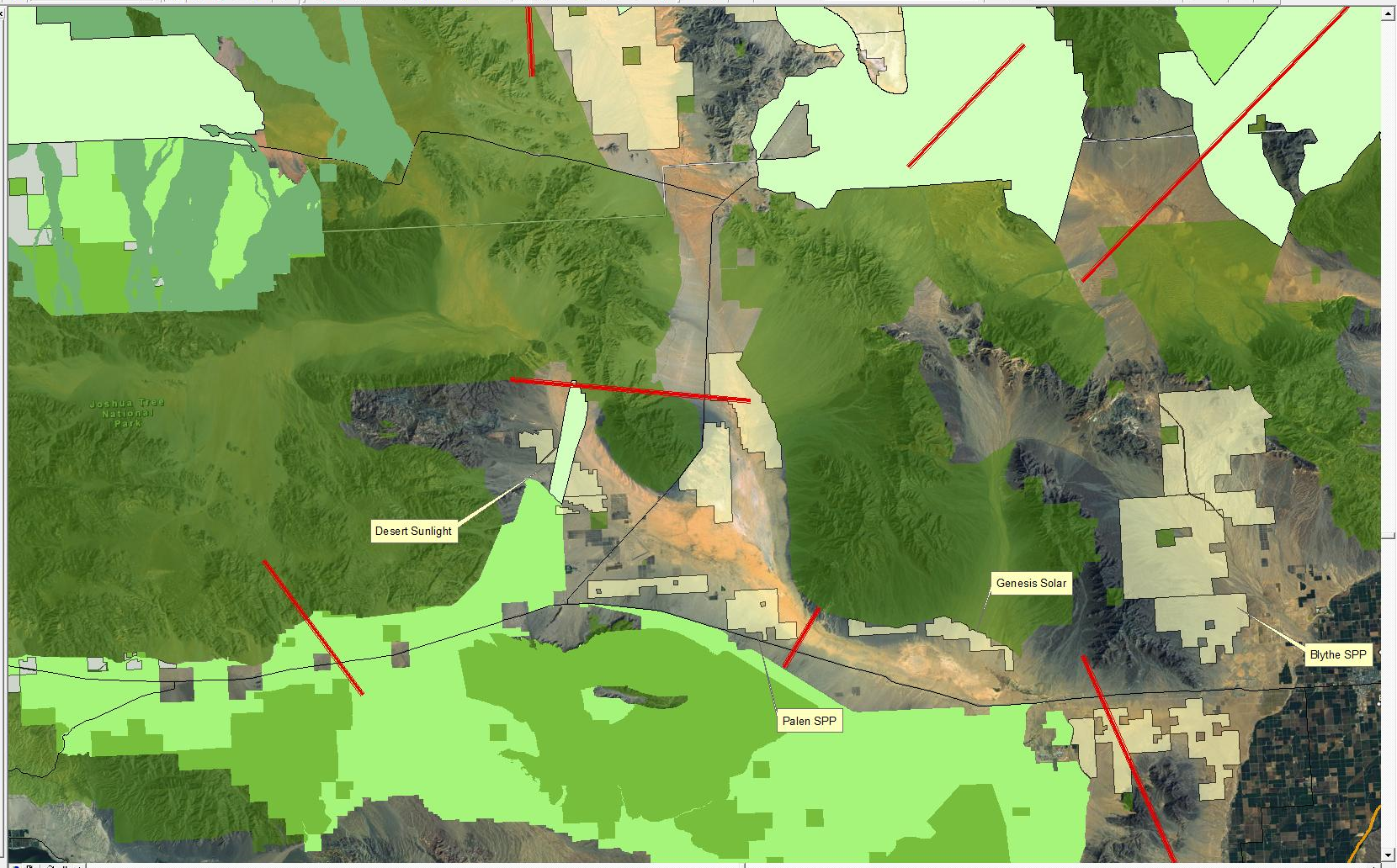

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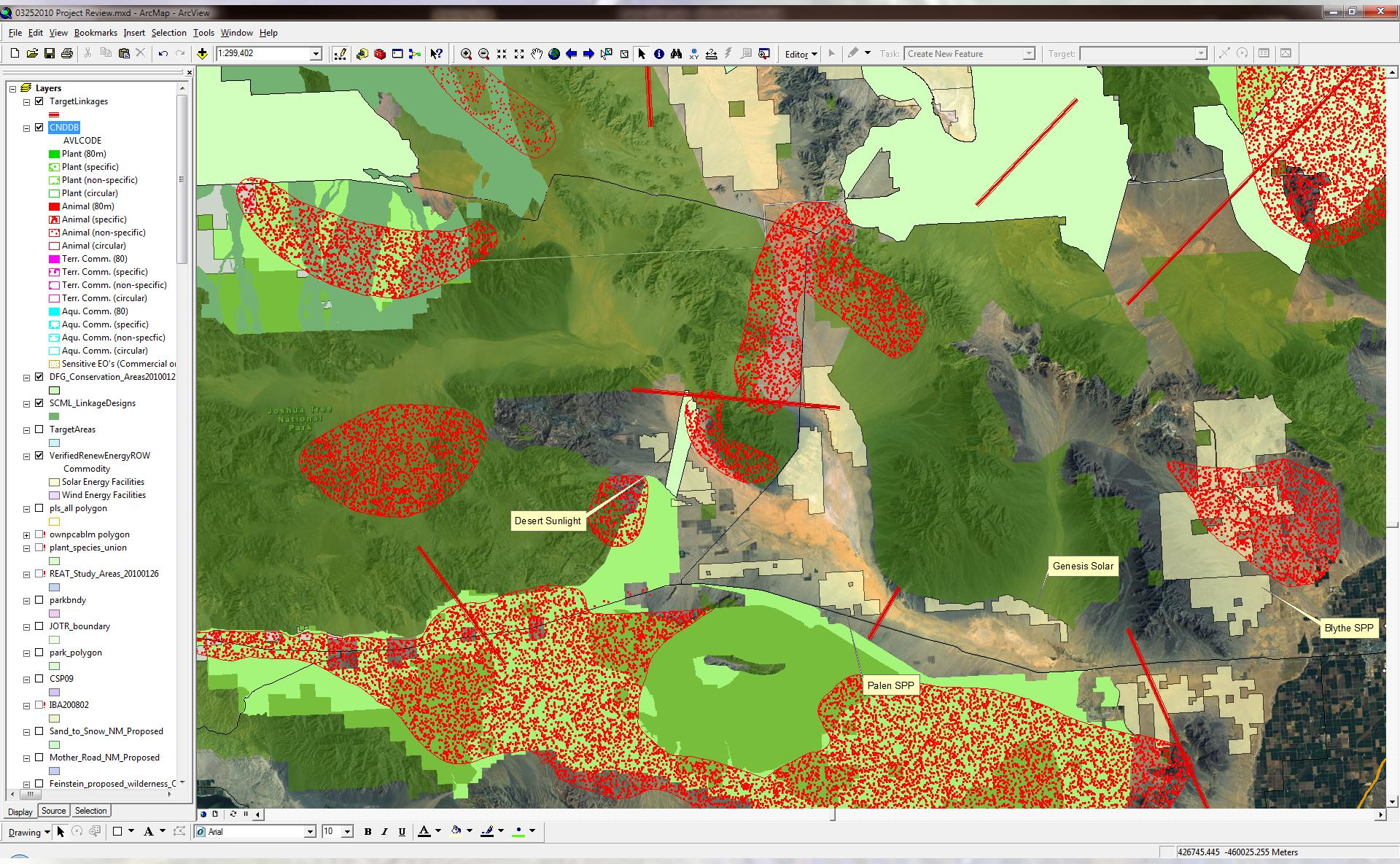
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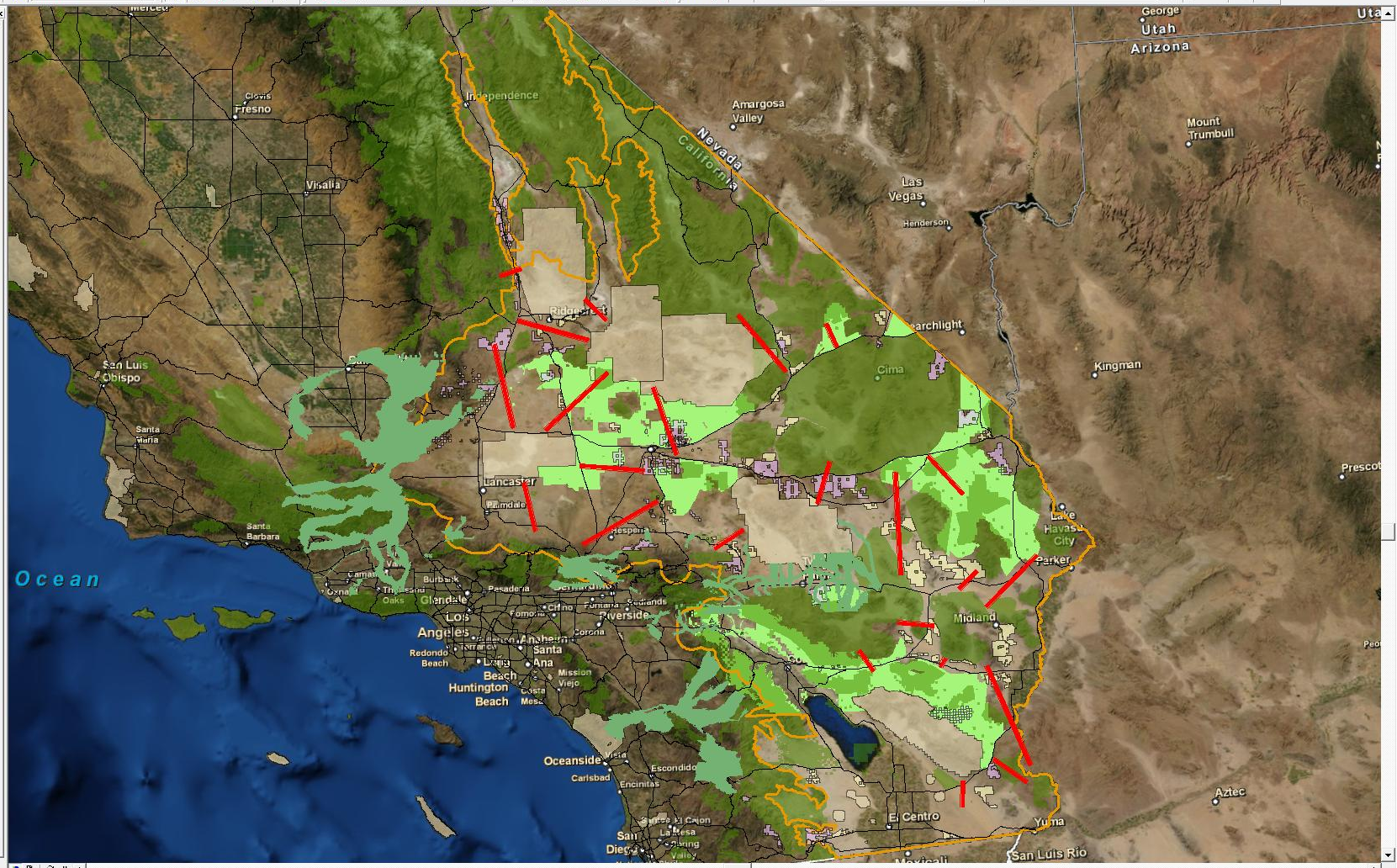
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Bridgeport
San Luis Obispo
Santa Maria
Santa Barbara
Lancaster
Palmdale
Victorville
Ventura
Oxnard
Thousand Oaks
Burbank
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Anaheim
Santa Ana
Long Beach
Huntington Beach
Redondo Beach
Mission Viejo
Costa Mesa
Riverside
Corona
Ontario
Fontana
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Pomona
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Oceanside
Carlsbad
Encinitas
Escondido
San Diego
Lake Havasu City
Parker
Midland
Needles
Barstow
Yucca Valley
Twentynine Palms
Joshua Tree
Indio
Palm Springs
Desert Hot Springs
Hesperia
Victorville
Apple Valley

The Desert Renewable Energy Conservation Plan: Opportunities

- Comprehensive Conservation Plan at the Eco-Regional Scale
- Incorporation and funding for a long-term Monitoring Framework that can incorporate ongoing research
- Flexible Conservation Strategy With Active, Adaptive Management in Response to Climate Change

- Comprehensive regulatory solution, with Certainty and Assurances for Developers
- Multi-Agency Implementation Framework
- Conservation Partnerships to Assist with Implementing Conservation

The Desert Renewable Energy Conservation Plan: Challenges

- Lack of information on Species Distribution, Habitat Associations
- Current Survey Protocols do not scale well for projects of this size
- Lack of detailed information on the interaction and response of species
- Aggressive time frame
- Meeting complex and evolving conservation objectives over multiple land owners and land uses
- Overcoming multi-agency culture and process impediments to create a seamless and integrated permitting process

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Thank You!

Scott A. Flint
Renewable Energy Program Manager
California Department of Fish and Game
(916) 714-0774
sflint@dfg.ca.gov

A few resources for stakeholders…

- Department of Fish and Game Renewable Energy Information:
  http://www.dfg.ca.gov/habcon/energy/

- Biogeographical Information and Observation System

  http://bios.dfg.ca.gov/