LAND USE SERVICES DEPARTMENT
PLANNING COMMISSION STAFF REPORT

HEARING DATE: November 3, 2016 **AGENDA ITEM # 2**

Project Description: General Plan Renewable Energy and Conservation Element

Applicant:	Land Use Services Department
Community:	Countywide
Location:	Countywide
Staff:	Linda Mawby, Senior Planner
Proposal:	General Plan Amendment to incorporate a new Renewable Energy and Conservation Element.

Newspaper Publication Date: October 23, 2016 Report Prepared By: Linda Mawby

INTRODUCTION:

The Draft Renewable Energy and Conservation Element (REC Element) is a newly introduced General Plan Element designed to present the County's renewable energy goals and policies. Based on the collective community, environmental and economic values and impacts of renewable energy (RE) development, the REC Element will guide future renewable energy development and energy conservation, and will establish a framework for County Development Code regulations that will implement the REC Element policies. The REC Element reflects a combination of insights gained from a review of best practices, regional environmental conditions, local values, and economic benefits. The policies of the REC Element are intended to address current trends and demand for RE development, and also anticipate and guide an evolution in RE technologies.

The County has received substantial interest in RE development, initially as a result of federal subsidies and, more recently, due to state utility mandates intended to reduce greenhouse gas emissions. However, as multiple RE projects were proposed in the County, substantial and justifiable concerns were raised by the public. It became apparent that the energy policies in the General Plan and the development standards and land use regulations in the Development Code were very general, and more specificity was needed to guide RE development in the County.

Following a solar energy development moratorium in 2013, additional approval criteria for commercial solar energy generation facilities were added to Development Code Chapter 84.29. At that time, the County also began work on the REC Element, to develop a comprehensive policy framework for all RE development. Following adoption of the REC Element, a subsequent Development Code amendment will be proposed to fully implement the REC Element policies.

BACKGROUND:

California Energy Commission Planning Grants

The REC Element was funded, in major part, by Renewable Energy and Conservation Planning Grants from the California Energy Commission (CEC) to complement the Desert Renewable Energy and Conservation Plan (DRECP) with local land use planning. The DRECP is a major joint federal and state collaborative planning effort led by the CEC, the California Department of Fish and Wildlife (CDFW), the U.S. Bureau of Land Management (BLM), and the U.S. Fish and Wildlife Service (USFWS), with the goal of identifying suitable locations for meeting RE development demand on both public and private lands in the California desert. San Bernardino County received two renewable energy planning grants totaling $1.1 million.

SPARC Phase 1 (2013-2014)

The first CEC grant for $700,000 supported the development of the San Bernardino County Partnership for Renewable Energy and Conservation (SPARC). SPARC Phase 1 culminated in a Renewable Energy and Conservation Element Background Report (PMC REC Element Background Report) and the Renewable Energy and Conservation Element Framework: Purpose, Values and Standards (REC Framework). These documents are posted on SPARCForum.org community forum, a website tailored to providing information and a forum for discussion of renewable energy opportunities and issues.

SPARC Phase 2 (2015-2016)

The second CEC grant for $400,000 built upon the SPARC Phase 1 work with an analysis of costs, benefits, and opportunities for renewable energy resource development. SPARC Phase 2 is also known as the Renewable Energy Value-added Evaluation and Augmentation Leadership (REVEAL) Initiative, and culminated in the REVEAL Initiative Report, which is also posted on SPARCForum.org. A key purpose of the REVEAL Initiative was to take a Triple Bottom Line approach toward maximizing the benefits and minimizing the costs of the economic, social, and environmental impacts of renewable energy on the County and its communities.

Key themes from SPARC Phases 1 and 2 include:

- Public preference for small-scale accessory solar and wind projects over utility-scale projects.
- Paramount consideration for protecting the environment and wildlife.
- Strong desires to limit renewable energy development to disturbed lands.
- Land use compatibility, dust control, water demand and visual quality are key concerns.
- Transparency and communication between residents and the County are essential for a successful renewable energy program.

The results of SPARC Phases 1 and 2 have informed the goals and policies proposed in the Draft Renewable Energy and Conservation Element. The value statements in the REC Framework, in particular, guided the entire work effort of the SPARC Phase 2 cost-benefit analysis and the drafting of the Draft REC Element.

August 4, 2016 Workshop

The Draft REC Element was introduced to the Planning Commission in a workshop on August 4, 2016. This initiated a period of public review and comments, which concluded on October 20, 2016. All comments on the original Draft REC Element have been considered in final modifications to the document, which are highlighted in tracked changes format in Exhibit A. Copies of all written comments are included in Exhibit B, "Written Public Comments".

The revised Draft is now being presented for your review and consideration at this time for recommendation to the Board of Supervisors.

REC ELEMENT SUMMARY:

The REC Element has four key purposes.

- Identify the collective community, environmental, and economic values for RE development and energy conservation.
- Articulate priorities for energy conservation, energy efficiency, and RE development.
- Establish goals and policies to manage RE development and energy conservation.
- Set a framework for Development Code standards to implement REC Element policies.

SPARC Phase 1 and Phase 2 studies and the related public input have provided valuable insights for an understanding of viable, locally appropriate renewable energy and conservation strategies for San Bernardino County. The learning process of the SPARC studies resulted in a shift in the approach to assessing and categorizing RE projects. Instead of evaluating RE projects based on size (industrial scale being defined first as 20 MW and then as 10 MW), The REC Element identifies RE projects based on their functions and where the energy generated will be consumed.

***Community-Oriented Renewable Energy*, or CORE**, is defined as "primarily benefitting the communities, or neighborhoods, near or in which it is located". This focus will better balance the potential negative impacts of a project with the potential benefits to the local community.

Utility-Oriented Renewable Energy projects are designed to provide energy to the utility grid system. This does not mean the energy will not be used for consumption locally or outside of the County, but means it is available to be distributed or transported to meet current demand anywhere on that specific transmission system.

The REC Element's Goals, Objectives, and Policies are organized by the following key topics:

1. **Energy Conservation and Efficiency** (p. 17-20). Reducing the need for energy generating facilities.

   Key Points - Policy direction to promote energy conservation and efficiency through:
   - Continued implementation of the County's Greenhouse Gas Emissions Reduction Plan.
   - Energy efficiency in the built environment.
   - Economic benefits though use of local workforce, energy efficiency retrofits and conservation tracking.

2. **Renewable Energy Systems** (p. 21-24). Integrating RE technologies and organizational options to best serve the county.

   Key Points - Policy direction to support RE systems and programs that are:
   - Appropriate for the character of the proposed location.
   - Open to emerging and experimental renewable energy technologies.
   - Cost-effective and that encourage universal access to renewable energy.
   - Encourage energy efficiency.

3. **Community-Oriented Renewable Energy (CORE)** (p. 25-30). Enabling local communities to benefit from RE systems.

   Key Points - Policy direction for community-oriented renewable energy (CORE) facilities to:
   - Promote a distributed energy infrastructure and improve grid resiliency.
   - Optimize benefits and minimize negative impacts of RE projects on communities.
   - Be compatible with and benefit local communities.
   - Encourage local employment and collaborate with local colleges and training centers.

4. **Environmental Compatibility** (p. 31-35). Optimizing renewable energy output while minimizing negative effects to the natural environment.

   Key Points - Policy direction for conservation and development standards, including:
   - Protection of sensitive biological, cultural, and scenic resources.
   - Protection of air quality and water supplies.
   - Minimizing visual impacts of glare and obstruction of scenic views.
   - Requiring sustainable project decommissioning.

5. **Siting** (p. 36– 39). Criteria for the siting of RE facilities in the county.

   Key Points - Policy direction for RE facilities siting, including:
   - Utilizing disturbed/degraded areas near transmission infrastructure.
   - Protecting scenic/recreational assets and agriculture.
   - Requiring siting analyses to support site selection.
   - Coordinating with and protecting military operations.

6. **County Government Systems** (p. 40-43). Emphasizing the County's role as regulator over RE development, operations and decommissioning to ensure implementation of REC goals.

   Key Points - Policy direction for RE regulatory systems, including:
   - Requirement of a clear and consistent permitting and decommissioning process.
   - Recognition of the need to cover the costs of County services.
   - Provision of a County web portal to publicize RE benefits and opportunities.
   - Support and collaborate regarding pilot projects and incentives.

PUBLIC COMMENTS:

Eighteen (18) comment letters and e-mails were submitted with editorial comments and suggested modifications for the Draft REC Element. Several of the letters also recommended specific development standards, location criteria and development project review requirements that staff will

continue to consult through the next phase of work on renewable energy systems, the Development Code amendments required to implement policies of the REC Element. Key modifications made to the REC Element in response to public comments include:

- Increasing the emphasis on rooftop and parking lot installations for CORE
- Re-organizing policies to better reflect intended application
- Adding specificity to the list of site types appropriate for utility-oriented RE

CALIFORNIA ENVIRONMENTAL QUALITY ACT:

An Addendum to the Program Environmental Impact Report for the San Bernardino County General Plan Update (2007), and including the Supplemental Environmental Impact Report for the Greenhouse Gas Reduction Plan (2011), has been completed for the REC Element, to document compliance with the California Environmental Quality Act (CEQA). The Addendum presents evidence to support the conclusion that no additional environmental analysis is required to adopt the REC Element as a new element of the County General Plan, because none of the conditions specified in Section 15162 of the State CEQA Guidelines apply to the REC Element.

RECOMMENDATION AND NEXT STEPS:

After three years of research and preparation, multiple public workshops and extensive interaction with stakeholders, the Land Use Services Department is pleased to present the Draft REC Element for Planning Commission review and recommendation to the Board of Supervisors.

Approval of the REC Element will be the first step in the establishment of a new system of policies, regulations and implementation measures for renewable energy development in the County. Following adoption of the REC Element, a Development Code amendment will be prepared early in 2017, to implement the adopted REC Element policies. Once the implementing regulations are complete, the Land Use Services Department intends to continue promoting renewable energy education and innovation through SPARCForum.org, and collaborating on RE development projects consistent with the new policy and regulatory system.

RECOMMENDED ACTION:

That the Planning Commission make the following recommendation to the Board of Supervisors:

> **ADOPT** the Renewable Energy and Conservation Element as a new element of the County General Plan, based on the recommended findings and relying on the previously certified EIR, as outlined in the Addendum

ATTACHMENTS:

Exhibit A: Renewable Energy and Conservation Element (with tracked changes shown)
Exhibit B: Written Public Comments
Exhibit C: Recommended Findings
Exhibit D: Addendum to the Program Environmental Impact Report for the San Bernardino County General Plan Update (2007), including the Supplemental Environmental Impact Report for the Greenhouse Gas Reduction Plan (2011)

EXHIBIT A

Renewable Energy and Conservation Element
(with tracked changes shown)

(Please see link to the Renewable Energy and Conservation Element
Element on the website)

EXHIBIT B

Written Public Comments

ALLIANCE FOR DESERT PRESERVATION

September 2, 2016

(Sent by email: Linda.Mawby@lus.sbcounty.gov)
Planning Commission for
San Bernardino County
c/o Ms. Linda Mawby
County of San Bernardino Government
Center Covington Chambers- First Floor
385 North Arrowhead Ave.
San Bernardino, Calif. 92415

Dear Members of the Planning Commission:

Re: Draft Renewable Energy and Conservation Element

We submit this letter as part of the Alliance for Desert Preservation's ("ADP") comments on the proposed draft, dated July 29, 2016, of the Renewable Energy and Conservation Element ("RECE") of the County's General Plan. The instant written comments supplement oral comments made by some ADP members at the Planning Commission workshop regarding the RECE on August 4, 2016.

The proposed RECE makes great strides in the right direction, compared to the utility-scale approach embraced by SPARC in its earlier stages. The proposed RECE now points toward a much more enlightened emphasis on point-of-use models. The Distributed Generation model promotes the highest number of long-term high paying local jobs, sustains the tax base through property value preservation, and protects the valuable open spaces so critical to the economies of most of the desert communities. It is the fastest, safest, and cleanest way to ramp up renewable energy generation in San Bernardino County.

We will discuss below the manner in which the RECE's purposes can be achieved through the addition of more carefully defined criteria.

1. The RECE Needs an Overlay Zone for the "Five Areas" for Utility-Scale Designated by Board of Supervisors' February 2016 Resolution

Last February, the San Bernardino County Board of Supervisors adopted a resolution tentatively designating five sites as the only places that utility-scale can go, subject to the

projects otherwise satisfying the County's criteria. Each of these sites is seriously degraded, away from population centers, and relatively close to existing transmission

The proposed RECE mentions the Supervisors' resolution as a guiding principle when it comes to locating utility-scale projects. This is good, but the RECE should go farther. The RECE should specifically state that the five sites designated by the Supervisors' resolution are, subject to environmental review, the only places in the County where utility-scale will be allowed. Overlay zones should be created for that purpose in the RECE on the five sites. And the RECE should state clearly that utility-scale wind is prohibited altogether. This is the approach taken by Inyo County, a county that has a lot in common with our own.

Making it clear exactly where big renewables are and are not allowed benefits everyone. It gives clear direction to developers, while providing assurance to the people of this County that our desert won't become a national dumping ground for big, grid-oriented energy projects, where the profits and power are sent out of the County, while all the downsides remain here.

2. The RECE Needs to Refine the Definition of "Community-Oriented Solar"

The proposed RECE rightly places a strong emphasis on community-oriented solar renewable energy, or CORE. The RECE does a good job of identifying the important County values which are served by strongly encouraging community-oriented solar while moving away from utility-scale.

The RECE specifies that CORE is to serve local needs, create energy independence, reduce the need for new transmission, sustain sensitive natural resources and habitats and encourage economic growth.

However, the RECE should be more specific as to maximum size and concentration of a project. Further, it should establish a more refined set of criteria, so that even if a project is under the maximums, it will be disallowed if its functional purpose and environmental effect is more like utility-scale. This is vital to prevent the proliferation of projects that paste on a "community-oriented" label but are, in fact, geared toward selling power to the grid.[1]

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[1] A developer could break up a large-scale project into several smaller ones, call them community solar and concentrate them in the one locale. Or the developer could break up a large-scale project into smaller ones labelled community solar, and disperse them. Or developers could concentrate so many CORE projects in one area that -- together -- their purpose and effect equates with utility-scale. In any of those cases, most of the power generated could be sold to the grid for the developer's profit, and our communities would mostly reap the detriments, which would include the overbuilding of projects labelled community solar.

Examples of relevant criteria – of the sort that should be incorporated into the RECE -- include the following:

(a) The project should serve only the local community, with net metering, and with sales of excess wattage as lowest priority;

(b) The nameplate capacity of a proposed community solar project must be proportionate to the current and reasonably anticipated needs of the community;

(c) The project should require only minimal new transmission infrastructure; and

(d) The cumulative megawatt capacity of community solar projects that can be put in in a given area should be limited so that they don't become over-concentrated in any particular region.

3. The RECE Needs to Provide Siting Criteria for CORE Projects

The proposed RECE must provide parameters for where community solar projects are to be sited. Otherwise, community solar will not benefit the communities it is intended to serve, nor will it preserve natural resources and habitats.

Suggestions about siting criteria that should be added to the RECE are described below.

Community solar projects should not impinge on wildlife corridors. Biologist Kristeen Penrod, of SC Wildlands – whose research is widely viewed as the gold standard by state and federal agencies -- has extensively mapped these corridors in San Bernardino County, and made it clear that they are the minimum needed to sustain the plant and animal species found in this county.

The RECE should have intelligent, refined criteria regarding siting on disturbed or degraded lands. Historically, "disturbed" and "degraded" have been terms used to include almost any part of the desert that has experienced any degree of human development. Currently, most of the desert has a dispersed rural population which successfully coexists with an intact natural environment. This unique, and delicate, balance between human and natural communities could be destroyed by too much energy development, including CORE projects. The RECE should provide that community solar development take place on lands that have been severely degraded by human activity, like former brownfield, mining and industrial sites.

The proposed RECE also says "fallow agricultural lands" may be good to site new projects. But large portions of certain desert regions, such a Lucerne Valley, have at one time been used for farming, but are now recovered or recovering desert lands. Siting criteria should be developed which are sensitive to these distinctions.

The proposed RECE should also incorporate siting criteria so that community scale renewables will not needlessly impinge on the communities they are intended to serve, with particular attention given to quality of life and visual values issue.

The proposed RECE calls for new subdivisions to set aside land for development of neighborhood solar. However, the siting criteria should emphasize and incentivize community solar systems which to the greatest extent possible use the built environment – that is, parking lots, rooftops and the like -- as opposed to ground-mounted solar. The benefits to everyone of these criteria are fairly obvious: less land disturbance, greater carbon sequestration, a reduction in blowing dust, and a sharp reduction in the large amounts of water required for construction and maintenance.

The proposed RECE should also develop siting criteria for community solar which minimize the need for new transmission infrastructure, because the addition of such infrastructure leads to sharply higher costs for the power consumer and environmental degradation.

4. The Proposed RECE Should Adopt a Two-Tier Approach for Projects Over Half a Megawatt

The proposed RECE should bring a new level of analytical acuteness to the planning process by making at least two tiers of project review for new CORE projects -- one level for projects of less than 500 kilowatts and another more stringent level of review for larger projects . Since generation of 1 MW requires installation of solar panels covering roughly 8 acres, this tiering process would expose to more stringent review projects that would disturb more than 4 acres of land.

Among other things, proponents for such larger projects should be required to demonstrate that putting solar on rooftops and in the built environment would not be feasible and that such projects would not be located in recognized wildlife corridors. Greater setbacks should be required and a full assessment of the impact on viewscape and other values important to the County's residence should be required.

5. Conclusion

We commend the progress made in the proposed RECE toward fostering renewable energy development that does not come at the cost of the County's human and natural communities. Incorporation of our comments will allow the RECE to achieve that goal. We look forward to continued participation in the RECE process.

Very truly yours,

Alliance for Desert Preservation

Richard Ravana

Richard Ravana, President

Town of Apple Valley

A Better Way of Life

October 6, 2016

Linda Mawby
Land Use Services Department, San Bernardino County
385 North Arrowhead Avenue, First Floor
San Bernardino, CA 92415-0187
Linda.Mawby@lus.sbcounty.gov

Re: San Bernardino County's Draft Renewable Energy and Conservation Element

Dear Ms. Mawby,

The Town of Apple Valley (Town) appreciates the opportunity to comment on the proposed Draft Renewable Energy and Conservation Element (REC Element) as a part of the San Bernardino County Partnership for Renewable Energy & Conservation (SPARC) outreach process. The Town recognizes the significant effort undertaken by San Bernardino County (County) to develop a REC Element that defines renewable energy development standards that protect the County's environment, communities, residents, and economy.

As stated in our previous March 30, 2015 letter, the Town is working closely with County planning staff to prepare a Multispecies Habitat Conservation Plan/Natural Community Conservation Plan (MSHCP/NCCP). The approximately 222,000-acre Plan Area includes the Town's jurisdictional area (approximately 47,888 acres), unincorporated County lands (approximately 81,192 acres), lands managed by the Bureau of Land Management (approximately 86,406 acres), and lands managed by the state (approximately 7,881 acres). The MSHCP/NCCP identifies three important landscape-level linkages: the Wild Wash Linkage, the San Bernardino-Granite Mountains Linkage, and the Mojave River, that are critical for wildlife movement and future adaptation to climate change. The linkages inside the Plan Area will be preserved and protected by the MSHCP/NCCP and the linkages beyond the Plan Area are mapped as an Outside Inventory Area. Together, these linkages connect over 2.4 million acres of existing conservation lands.

General Comments

Upon review of the REC Element, the Town believes that many of the values, goals, and objectives described within the document align well with the MSHCP/NCCP planning effort. These include:

- A focus on sustainability, stewardship of the land, public health and wellness, and an environment in which those who reside and invest here can prosper and achieve well-being.
- A high quality of life for residents that provides a broad range of choices to support diverse people, geography, and economy to live, work, and play.
- Stewardship that conserves and responsibly uses environmental, scenic, recreational, and cultural assets, ensures healthy habitats for sensitive plants and wildlife, enhances air quality and makes the Town and County a great place for residents and visitors alike.
- Serving our residents' social and economic needs while protecting environmental resources and the benefits they provide.
- Collaborating with appropriate federal and state agencies to facilitate mitigation on public/federal lands.

As noted in our previous letter, the Town's MSHCP/NCCP will exclude coverage of large-scale renewable energy development within the MSHCP/NCCP Plan Area in order to protect the local community and environmentally sensitive resources. The Town believes this is consistent with the REC Element objectives and policies to "focus utility-scale facilities in well-defined areas that are (1) less desirable for the development of communities, neighborhoods, commerce, and industry, and (2) less environmentally sensitive (page 4)."

Specific Comment

The Town is pleased the REC Element recognizes that key areas critical to wildlife movement and migration need to be maintained and protected. The Town's preference, however, is for the REC Element to exclude the Plan Area and regional linkages identified in the Plan from future renewable energy development.

Thank you for the opportunity to review and provide comment on the REC Element. The Town looks forward to continuing its close working relationship with County planning staff as both planning efforts move forward. Please call me at (760) 240-7000, ext. 7204 or email me at llamson@applevalley.org if you have any questions or would like to discuss the Town's MSHCP/NCCP in more detail.

Sincerely,

Lori Lamson
Assistant Town Manager
Community and Development Services
Town of Apple Valley

September 8, 2016

Linda Mawby, Senior Planner
County of San Bernardino
Land Use Services Department – Planning Division
385 North Arrowhead Avenue, First Floor
San Bernardino, CA 92415-0187
By email: linda.mawby@lus.sbcounty.gov

Dear Ms. Mawby:

On behalf of Audubon California, a state program of the National Audubon Society, and San Bernardino Valley Audubon Society, a chapter of the National Audubon Society we submit the following comments on the draft Renewable Energy and Conservation Element of the County of San Bernardino General Plan.

Audubon scientists used three decades of citizen-scientist observations from the Audubon Christmas Bird Count and the North American Breeding Bird Survey to define the "climatic suitability" for 588 bird species in North America —the range of temperatures, precipitation, and seasonal changes each species needs to survive. Then, using internationally recognized greenhouse gas emissions scenarios, they mapped where each bird's ideal climatic range may be found in the future as the climate changes. These maps serve as a guide to how each bird's current range could expand, contract, or shift across three future time periods (2020, 2050, and 2080). Of the 588 North American bird species Audubon studied, more than half are likely to be in trouble. Our models indicate that 314 species will lose more than 50 percent of their current climatic range by 2080. The 2014 report is available at www.climate.audubon.org.

Both Audubon California and San Bernardino Valley Audubon support renewable energy to transform our energy sector from fossil fuels and the emissions that cause climate change as critical for the survival of our birds. This includes utility-scale renewable energy projects when they are sited and operated properly to avoid, minimize or mitigate effectively for their impacts on wildlife and habitat. Proper siting on previously disturbed lands, close to transmission and close to the energy demand is key to protecting our natural wildlife and habitat resources, and we appreciate the County's incorporation of these standards.

There are five Audubon Important Bird Areas in San Bernardino County. The Important Bird Areas Program, administered by the National Audubon Society in the United States, is part of an international effort to designate and support conservation efforts at sites that provide significant breeding, wintering, or migratory habitats for specific species or

concentrations of birds. Sites are designated based on specific and standardized criteria and supporting data. Maps and GIS and other data of these Important Bird Areas are available here: http://ca.audubon.org/conservation/california-important-bird-areas-gis-data-and-methods

Overarching Comments on the draft document:

1. We appreciate and support the County's goal :"*to achieve a clean energy future that minimizes negative effects consistent with local values."*

We especially appreciate and support the County's Environmentally-oriented Guiding Principles.

2. The use of the word "Conservation" is confusing.

At times, it is unclear which meaning the word "conservation" refers to in the document as it is sometimes used for conservation of energy and sometimes used for conservation of natural and cultural resources, which we assume to include wildlife and habitat. For instance, in the Intentions of this element the third specific of the purpose is expressed as "Establish goals and policies to manage RE development and conservation." Is this conservation of energy? Is this conservation of natural and cultural resources including wildlife and habitat? This section also states "The County needs to strengthen its policies and regulatory system to strategically manage RE development and conservation."

Recommendation: The Core Values statement uses the term "Conservation of Natural and Cultural Resources". This term could be used for every reference to conservation of wildlife and habitat as well for clarification, and defined in the definitions section. Then "Energy conservation" could be used for energy efficiency and other methods of conserving energy.

3. The use of the words "renewable energy projects", "renewable energy facilities" "RE generation facilities" and "large utility-scale RE generation projects" are confusing.

Additionally, later the document refers to "RE installations producing 20 MW or more need to be able to connect to specialized power lines called transmission lines…." and later in Policy 5.2 defines Large utility-scale Re generation projects as 10 MW or more.

Recommendation: Standardize and clarify what each use of a renewable energy generation project refers to, and consider standardizing them by MW capacity generation.

4. The County should consider a stakeholder mapping exercise.

Recommendation: The DRECP and other planning exercises such as the Governor's office of OPR's Central Valley Stakeholder Process for "Least Conflict" Solar Siting provide publicly available maps in a GIS format that identify plan areas and potential conflicts and opportunities in those areas to provide direction for development of renewable energy of all sizes in addition to descriptions of criteria for siting. The certainty of area boundaries and scientifically validated GIS layers provided in a publicly accessible format, such as CBI's

Databasin or ArcGis online even though not precise, provide more certainty for the public as well as energy planning.

Our comments on specific policies:

RE Policy 4.3.1.

Recommendation: Add "including attraction and impact to nocturnal migratory birds" after "lighting design to minimize night-sky impacts"

RE Policy 4.6.

Recommendation: Add "minimize impacts that occur during operations through planned clear adaptive management goals and thresholds."

RE Policy 4.8

We are not aware of how project designs could provide nesting, breeding or foraging habitat for birds, or for that matter insects.

Recommendation: Research the scientific validity of this policy through independent third-party avian scientists and wildlife agencies before including.

RE Policy 5.2

Recommendation: Include EPA's Re-powering program https://www.epa.gov/re-powering

These conclude the comments from Audubon California and San Bernardino Valley Audubon Society, and we look forward to the final element for inclusion in the General Plan.

Sincerely,

Garry George
Renewable Energy Director
AUDUBON CALIFORNIA

Drew Feldmann
Conservation Chair
SAN BERNARDINO VALLEY
AUDUBON SOCIETY

From:	BETTY MUNSON
To:	Mawby, Linda
Cc:	Joanna Wright; CHUCK BELL; Lorrie Steely; Richard Selby; Barbara Harris; Phillip Brown; Jim Harvey; Sarah Kennington; Supervisor Ramos
Subject:	Comment Draft Renewable Energy and Conservation Plan
Date:	Monday, October 17, 2016 1:36:03 PM

Sent by e-mail to Linda.Mawby@lus.sbcounty.gov

From: Betty Munson
4880 Bonanza Rd.
Johnson Valley CA 92285

October 16, 2016

to: San Bernardino County Planning Commission
att: Ms Linda Mawby
385 N. Arrowhead Ave.
San Bernardino CA 92285

re: Draft Renewable Energy and Conservation Element.

This is a personal comment. I note that my experience with these issues was gained as a Council member of the Homestead Valley Community Council, and Chair of the Scenic 247 Committee of the HVCC, as well as several years as a director and officer of the Johnson Valley Improvement Association. This is not an official comment from any of these groups, but it corresponds with all previous protests and resolutions approved by them.

I have attended many meetings over the last decade, with both County officials and grass roots organizations, held in resolute protest against industrial-scale wind and solar projects being forced onto private and public lands in the high desert of San Bernardino County. The impetus behind these projects may have been well intended. The outcomes of the few that reached completion prove how foresighted the protesters were.

Specific issue critical to rural communities:
I particularly wish to urge County protection of the scenic corridor of State Route 247 from Yucca Valley to Barstow. Readers of this comment may be familiar with the campaign to gain State Scenic Highway status for this road;

we have addressed County officials about it for years.

If this project is unfamiliar to you: Hwy 247 has two segments, locally named Old Woman Springs Road and Barstow Road; they link at the Crossroads in Lucerne Valley. It is the prehistoric and historic route that follows a line of year-round springs in the foothills on the north-facing slopes of the San Bernardino Mountains.

With the arrival of the Small Tract homesteaders in the 1950's, most ranching and mining activities faded away. After the route was realigned and paved it became the link to mountain and desert recreational activities as well as giving tourists the connections between destinations such as Joshua Tree National Park, the Johnson Valley OHV Area, Big Bear and Route 66.

Hwy 247 is already a County Scenic By-Way and now has the same protection standards as the Caltrans standards.

The Scenic 247 story, the map of the scenic corridor and the economic reasons behind the campaign are available on www.scenichighway247.com. The main natural resource for this entire area can be summed up as: open desert vistas for visitors bringing outside money into this “disadvantaged” area, money that supports rural businesses, supports local jobs and benefits County revenues.

The organizations I mentioned have always been in support of the generation of renewable energy, but in the form of rooftop and parking lot installations in the already-built environment. We deplore Federal and State incentives leading to the Big Energy land rush into the desert.

The fast-tracking promised by the massive Desert Renewable Energy Conservation Plan bodes ill for natural desert habitat and the lure of vistas largely unchanged by 150 years of history.

The rural residents who revolt against these industrial wind and solar developments and the miles of transmission lines they propagate have fought each project one by one. They will not be soothed by promises of carbon footprint reduction, etc. They know the siting, planning, construction and maintenance of all these projects everywhere have not been green, have

not lived up to politicians' and developers' promises. (ref: Ivanpah, Cascade Solar, Lone Valley Solar, Newberry Springs)
Taxpayers everywhere must not know of the defects of these projects. They must not realize how government subsidies and tax breaks support them, and the study of how best to fast-track them.

Who has told well-meaning supporters of these projects that the millions of desert plants adapted to this harsh climate sequester carbon daily, for free? That removing this vegetation for the sake of sequestering carbon is folly? I do not see much publicity on the subject; therefore the story that we can generate energy from the endless free sun and free wind passes without much question.

I request the RECE negate all DFA's in the Scenic 247 Corridor (see below).

RECE Issues relating to all San Bernardino County:

PUBLIC NOTICE: The RECE should spell out that application for any project requires accurate widespread and local public notification of the developer's site location and description, as well as the full extent of changes in land characteristics and scenic values. The RECE should state that developers must assume the costs for **on-site fact checking** of the accuracy of their application by the Planning Department before any other action is taken.

MAPS: The RECE must include accurate maps with landmarks and road names stating exactly the zones available (with local support) for industrial-scale solar projects. Assessor maps as currently used must be modified where they do not reflect existing road names or conditions.
There must be clarity going in, for everyone concerned. DRECP maps seem unchanged since their first appearance. Such low-resolution documents are unacceptable. The lack of detail for topography, landmarks and road names give the impression of deliberate ambiguity.

SOIL DISTURBANCE: RECE requirements for limiting wind and water erosion must include County verification of statements on developer plans (see above). Erosion of soil by wind or water must be prevented; wholesale grading and removal of vegetation must be against County RECE regulations. The developer must bear the cost of Code Enforcement

continuous oversight when construction begins. Any diversion from the approved plan must be halted immediately; changes must be investigated as thoroughly as for the original plan. Violations will incur meaningful fines or shutdown and restoration. Soil disturbance during construction should be limited to less windy days. Available best practices for mounting solar panels with the least possible disturbance of existing vegetation must be mandated.

PROMISES OF LOCAL JOBS: It is now obvious that industrial-scale projects for whatever reasons hire only union workers, who move from job to job. The RECE emphasis must be on point-of-use solar projects which can be built anywhere in developed areas, hiring local workers for construction and maintenance, keeping their wages in the community where the work is performed. This will benefit the communities and the schools as well as the workers and the County.

PROTECTION OF PROPERTY VALUES: Specific compensation must be stated for the unintended reduction of property values when despite all care a project is sited wrong, both for the defense of the neighboring property owner and the County revenues.

WILDLIFE HABITAT: We all know even the most developed desert areas still support a wild animal population. However, fault is to be found with the Phase I Land Use Planning Amendment/FEIS of September 2016. The BLM LUPA still shows Development Focus Areas not only along the Scenic 247 corridor but also severing well-known wildlife migration corridors to the detriment of their continued existence. The RECE affects the largest part of the area included in the DRECP and must correct this.

GROUNDWATER: Scarce to unavailable, overdrafted in many places, as County planners well know. The RECE must require the developer to produce an independently-confirmed analysis of their project's effect on groundwater supplies.

BONDING REQUIREMENTS for decommissioning a non-producing project and restoring the site must be specific and enforceable. The extent of currently failing operations, and the difficulties faced in trying to repair their damage gives an awful warning for the future.

Thank you for your attention.

Betty Munson
760-364-2646

From:	Bill Lembright
To:	Mawby, Linda; Cummings, Brandon
Cc:	Steely Lorrie; Bell Chuck; Munson Betty; Harvey Jim; Selby Richard; Sall Claudia; Malone Tony; Slade Neville; Rieman Ruth; Hammer Brian; Rader David; David Rib; Magee Jean; Linda Gommel; Brashear Marie
Subject:	Renewable Energy and Conservation Element Input to the San Bernardino Planning Commission
Date:	Tuesday, October 18, 2016 10:52:14 AM

My amended comments to the San Bernardino County Planning Commission regarding the Renewable Energy and Conservation Element.

Remember, we don't have to provide for ALL of our power needs, but to supplement them as much as possible.

If the County would mandate solar panel arrays on all County buildings and parking structures, and add solar arrays above existing uncovered parking lots, HUGE amounts of electricity will be produced for onsite consumption. This will pay for itself over time and solve the problem of power shortages.

The County and State should offer tax incentives and funding assistance for residential, commercial, and industrial energy users to install point-of-use solar. We have installed solar at work at Lucerne Valley Market and Hardware, and at home, cutting power bills dramatically while greatly minimizing our power demand on the grid. Many Lucerne Valley residents are going solar. Many more would like to go solar, but need help from the County to expedite planning and financing of their installations. I suspect this same eagerness is widespread amongst many other County residents. We should put on hold the political push to install massive, disruptive, inefficient, and uneconomical renewable energy farms. The demand for point-of-use photo-voltaic solar is high and where the market is headed. This is efficient, gives economic benefits to the individual, County, and State, without lining the pockets of crony capitalists and special interests.

The County can speed up the installation of point-of-use solar through a combination of incentives and mandates designed to steer new construction and existing structures to attain zero net energy, or to at least come close to that target. New construction can mandate a minimum production through rooftop and parking-lot solar installations. The Planning Dept. can play a vital role in that process by educating the applicant on the most affordable methods to reach that goal, to streamline the application process, and to show how even reducing demand peaks greatly lowers ones power bills, and relieves the costly peak capacity reserves that the grid must provide.

The County, through mandates and incentives, should also encourage the construction of unobtrusive energy storage units so that each structure powered by solar can continue to generate power when the grid is down and operate with lower demand peaks at all times. This added security saves money AND reduces emergency costs to both the County, businesses, and individuals daily and during power emergencies. Done correctly, this will increase, rather than decrease property values and quality of living. The County should not allow itself to become the dumping ground of huge, unsightly power storage facilities for the State or Nation. Each city and state can accommodate their own needs and at a reduced cost to power users nationwide.

Isolated construction in new areas should be encouraged to be energy self-sufficient to avoid new and unnecessary transmission lines. This will lower costs for the property owner, the utility companies, and the rate payers, while it will increase property values and quality of life for residents, both human and wild. Also, the County should specify projects producing more than one megawatt may not be located within 500 feet of a County or State Scenic Road.

Also, the County should develop a tracking system of point of use power generation so that the County is properly credited for all its efforts by the State and the Feds. This can be done much as water use consumption and use reduction is already tracked by the State.

Please list our proposed, naturally screened, up to 6 sq. mi. community solar, micro-grid energy farm and community utilities service complex at Tamarisk Flats, as Lucerne Valley's only suitable renewable energy site. We want photo-voltaic solar, and no solar thermal or wind farms. We want to limit maximum solar panel height to 12 feet. We are targeting 15 MW production under existing large transmission lines, would like to build a substation on site, then transmit power from there west to State Highway 247, and run the power underground to the substation directly south in the middle of town, and tie into our local SCE grid there. One of our goals is to lower power bills for our severely economically disadvantaged community. This savings should be made possible by us locally generating power and distributing it through our local microgrid.

We do not want to approve of soil disturbance by grading and scraping. We want solar support posts drilled and pounded into place. We wish to leave the native vegetation intact. The only grading should be for roads and concrete slabs, where needed for buildings and utilities. What little water is needed should come from on-site wells which draw from a high water table full of brackish water. Better than using water,alone, please specify the use of environmentally friendly lignin sulfonate (as used on mining haul roads) to effectively minimize dust and ongoing road maintenance grading. Lignin sulfonate can be used on all areas of soil disturbance. Monitoring devices should be installed up and down wind of projects to be certain operators stay within the limits of PM 10 and 2.5 that will be set by the County and AQMD.

We want to exclude wind generators and solar thermal projects, which negatively impact our region. We already are home to several long-distance transmission lines and want NO more. In order to avoid more or larger transmission lines, we wish to limit our excess solar energy production to 7.5% more than we consume. This is a pristine and environmentally friendly region and want to keep it that way while we do more than our share in solving our energy problems, and those of the County and State.

We want to limit utility, commercial, and industrial scale renewable production to our huge, pre-approved Tamarisk Flats site. Also, the County needs to be sure the BLM does not approve utility scale renewable energy farms on public lands near residential communities. Please, County of San Bernardino, do NOT give approvals, or go-aheads on ANY sites outside that area. ALL other sites are inappropriate and unnecessary in our sphere of influence!

If any utility scale power farm falls below 20% of its rated production capacity, then it should be decommissioned, demolished, and the land restored, unless the Community of Lucerne Valley opts to take it over to supplement its energy production.

Please include this input in the final Renewable Energy and Conservation Element.

Thanks, Bill Lembright
10110 Highland Rd.
Lucerne Valley, CA. 92356

phone: (760) 248- 7311

CENTER *for* BIOLOGICAL DIVERSITY *Because life is good.*

protecting and restoring natural ecosystems and imperiled species through science, education, policy, and environmental law

via email and USPS

September 23, 2016

Linda Mawby
Brandon Cummings
Land Use Services Department, San Bernardino County
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Linda.Mawby@lus.sbcounty.gov
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RE: Comments on the Draft Renewable Energy and Conservation Element of the General Plan – July 2016

Dear Ms. Mawby and Mr. Cummings,

These comments are submitted on behalf of the Center for Biological Diversity's 1.1 million staff, members and on-line activists in California and throughout the United States including numerous members that live in San Bernardino County, regarding the proposed Renewable Energy and Conservation Element of the General Plan.

The development of renewable energy is a critical component of efforts to reduce greenhouse gas emissions, avoid the worst consequences of global warming, and to assist California in meeting its climate goals. The Center for Biological Diversity (the "Center") strongly supports the development of renewable energy production, and particularly supports planning efforts to ensure that projects are sited appropriately to protect wildlife, other natural resources, air and water quality, and cultural resources. Like all types of development, renewable energy projects should be thoughtfully planned to minimize impacts to the environment. In particular, renewable energy generation and transmission projects should avoid impacts to sensitive plant and animal species and habitats, water resources, water and air quality, and cultural resources.

We supported San Bernardino County's acquiring state funding to implement effective renewable energy planning in the County. We have also taken active interest in the SPARC process, submitting previous comments through the SPARC website. We incorporate those comments herein by reference.

We are pleased to see that the County has looked at renewable energy holistically with a focus on energy conservation and community-oriented renewable energy. While the proposed Renewable Energy and Conservation Element (RECE) still lacks maps defining areas for renewable energy implementation, we believe it is a step in the right direction. However we do have recommendations on improvements regarding several conservation issues as addressed below:

General comments:

We are concerned that RECE approaches conservation with vague unenforceable provisions. For example, the "Environmentally-oriented Principles" include: "Prohibit renewable energy production in areas identified as critical habitat or as a wildlife corridor for species of special concern as defined in the Conservation Element, without comprehensive and feasible mitigation or avoidance of potential impacts." This principle does nothing to advance conservation of the County's world class flora and fauna because all projects in critical habitat or in wildlife corridors are required to avoid, minimize and mitigate impacts under the California Environmental Policy Act. If the County's goal is to eliminate poorly sited project in these types of areas, it should clearly prohibit renewable energy development in them. In addition there are other important areas for conservation that should be included in a renewable energy development prohibition including, but not limited to, BLM- designated Areas of Critical Environmental Concern and Desert Wildlife Management Areas, California Desert National Conservation Lands, areas with mapped sensitive species habitat, cultural and historical resources, scenic resources, private conservation lands, and existing mitigation lands. The DRECP Gateway[1] has assembled numerous data sets that the County can access regarding both public and private conservation lands, and we encourage the County to use those data sets in refining the locations where renewable energy projects should not be developed.

While we support siting projects in proximity to existing transmission corridors, we believe the RECE needs to clarify the definition of utility corridors. For example, RE Policy 5.2 states "Large utility-scale RE generation projects – 10 megawatts or more – on private land will be limited to the site-types below in the unincorporated County" and one of the site-types is "viii. Within electric transmission and distribution corridors" (at pg. 6). Portions of most or all of the large utility-scale renewable energy generation projects that were proposed or built on public lands in San Bernardino County could meet this standard because they all included gen-tie lines to, and/or portions of the projects within, BLM-designated utility corridors with existing transmission lines. These existing BLM-designated utility corridors are often up to five miles wide, and could potentially accommodate large utility scale renewable energy along the corridor's whole length -- development along these corridors could result in severely fragmenting habitat and limiting connectivity across the County. Further, the BLM has expressed concerns with allowing any additional construction of large-scale projects within these transmission and distribution corridors because it will limit future availability of the corridor for additional transmission lines and could result in the need to designate additional new corridors. Because the County is interested in focusing on community oriented renewable energy (CORE) (at pg.4) in the already built environment, close to the site of energy end use to prevent the energy inefficiency of long distance transmission losses, it should not designate all transmission and distribution corridors as areas where construction of large utility-scale renewable energy projects is appropriate.

1 https://drecp.databasin.org/

Desert Renewable Energy Conservation Plan

With the recent adoption of the Desert Renewable Energy Conservation Plan by the Bureau of Land Management, the RECE section on that plan will need to be updated to accurately reflect its contents clarify how the County RECE and the DRECP will work together to achieve the goals for the County.

We strongly support the County pursuing the original goal of the DRECP, which was to have an integrated plan between federal, state and local permitting agencies. A coordinated effort to implement renewable energy in San Bernardino County will help to achieve the goals of the RECE and the BLM's DRECP and reduce land use planning conflicts which have happened in the past.

Specific Comments:

Several of the Policy sub-bullets need improvement to reach the County's goals and objective as follow:

- We support the County adopting zero net energy goals for new construction, which is a proven and implementable strategy[2] that helps to achieve carbon neutral goals. To that end, RE 1.2.4: "Work with utilities (Southern California Edison (SCE), Southern California Gas Company (SCG), etc.) to identify retrofit opportunities with short payback periods, such as variable-speed pool pumps, building air sealing, and attic insulation, for County use in conducting focused energy efficiency outreach." (pg. 19) needs to include a strong enforceable implementation component, not just outreach.
- RE 2.4.2 states "Educate developers about the County's RE goals and policies, and encourage the inclusion of renewable energy facilities for onsite use in new developments." (at pg. 22) While we support providing education to developers, because the County is the land use regulatory agency, it must take the step of *requiring* inclusion of renewable energy facilities for on-site use in new developments. The County has the opportunity to lead renewable energy planning by implementing such a requirement.
- RE 2.5.1 states "Allow and encourage construction of new buildings designed to ZNE standards consistent with state programs." (at pg. 22) While we support allowing and encouraging construction of new buildings designed to ZNE standards, the County needs to make this a *requirement* too. Incorporating ZNE standards now into all building designs will lead San Bernardino County forward towards sustainable future and set the example of progressive planning.
- RE 3.4.2 states "Encourage new institutional campuses and large residential/ commercial developments to include microgrids with onsite renewable energy generation and energy storage systems." (at pg. 28) As above, the County's RECE would be better crafted to *require* instead of encourage this type of renewable energy solution on new campuses and large development for all the benefits identified above.

2 https://medium.com/solutions-journal-summer-2016/rmis-innovation-center-e2027a99d237#.fkzgkgo1s

- RE 3.5.1 states "Address measures required to minimize ground disturbance, soil erosion, flooding, and blowing of sand and dust in the Development Code." (at pg. 29) While we support minimizing ground disturbance and resulting erosion, flooding and blowing of sand, this must be balanced with ecological concerns of maintaining the natural processes on sites where possible, particularly on very large scale renewable energy project sites. For example, some projects were placed directly in sand transport corridors which disrupted important "sand rivers" that provide habitat for rare and unique plants and animals that are adapted to this ever-changing environment. Likewise, desert sheet flow over a landscape during thunder storms are natural processes are an integral part of the landscape and the species that live there; while for a utility-scale project they would be seen as problem to be solved to reduce flooding and erosion. RE 3.5.1 needs to include language that safeguards these natural processes through maintaining intact natural processes that may include sheet-flow, and sand transport corridors. We suggest the following: "Address measures required to **maintain intact natural processes that may include flooding of desert washes, sheet-flow, and sand transport corridors**, while minimizing project-related ground disturbance, soil erosion, flooding, and blowing of sand and dust in the Development Code."
- RE Policy 4.6 states "RE project site selection and site design shall be guided by the following priorities relative to habitat conservation and mitigation:
  - Avoid sensitive habitat, when feasible, through site selection and project design.
  - Where necessary and feasible, conduct mitigation on-site.
  - When on-site mitigation is not possible or adequate, conduct mitigation off-site in an area designated for conservation." (at pg. 34)

  First we believe this section if better placed in next section - Section V. Siting. Secondly, a *prohibition* on building in sensitive habitat because of the impacts would better serve the resources the County is attempting to conserve. Third, prioritizing on-site mitigation can lead to problems for biological resources including fragmentation of habitat and must be considered on a site-specific basis—small fragments of protected habitat rarely provide for real benefit to species, while protecting larger portions of project sites that connect to other existing conservation can be beneficial. Often times for biological resources, off-site mitigation is preferable, because it can focus on additions to existing conserved habitat resulting in a larger, more intact conservation area, which is preferable to small isolated habitat islands. This is dependent on technology, location of the project, resources present etc. But we urge the County to address the variability in the need to conserve resources and craft mitigation guidance that will actually achieve mitigation goals.
- RE 4.7.1 states "Collaborate with appropriate state and federal agencies to facilitate mitigation/conservation activities on public lands." While we support this in concept, and believe that future mitigation should occur adjacent on existing conservation areas, many of which in San Bernardino County are on public lands, we note as above, that the original vision of the DRECP was to facilitate this type of collaboration and cooperation. Therefore we encourage the County to pursue a comprehensive DRECP that lays out the cooperative guidelines for mitigation on both public and private lands where needed.

- RE 5.1.3 states "Encourage new subdivision applications to set aside an area of land capable of supporting neighborhood-oriented renewable energy generation." (at pg. 37). This should be a *requirement* for all new development based on all the benefits described.

We appreciate the opportunity to provide comments on the RECE, and look forward to continuing to work with the County to develop a forward-looking and robust planning strategy to implement renewable energy in San Bernardino County while protecting its world-class natural resources from degradation.

Sincerely,

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California Program Office
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October 5, 2016

Linda Mawby, Senior Planner
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Via email: Linda.Mawby@lus.sbcounty.gov

RE: Draft Renewable Energy and Conservation Element

Dear Ms. Mawby,

Thank you for the opportunity to review and comment on the draft Renewable Energy and Conservation Element (REC Element)[1] of the San Bernardino County (County) General Plan. These comments are submitted on behalf of Defenders of Wildlife (Defenders); a non-profit environmental organization with 1.2 million supporters nationally, including 170,000 in California. Defenders is dedicated to protecting all wild animals and plants in their natural communities. We also strongly support the State of California's emission reduction and climate goals. The development of renewable energy is a critical component of efforts to reduce greenhouse gas emissions, avoid the worst consequences of global warming, and assist California in meeting its mandated emission reductions.

We support the development of renewable energy production in appropriate locations, with the application of sound mitigation practices. We urge that in meeting our renewable energy portfolio standard in California, renewable energy projects be located in well-thought out locales and designed in the most sustainable manner possible. Like any project, "Smart from the Start" planning is essential. Such projects should be sited in a manner that avoids impacts to our native wildlife, plants, limited water supplies, prime agricultural lands and well-being of local communities. Proximity to areas of electrical end-use should be emphasized in order to both maximize energy transmission efficiency and benefit local communities.

We really appreciate the time, thought, and effort the County, its planning consultants, and involved stakeholders have devoted in developing this policy vision for renewable energy development. The recognition of the need to both reduce energy use and to emphasize Community Orientated Renewable Energy (CORE) development shows great leadership. We also recognize the County's need to balance sustainable economic development with conservation of natural resources. Accordingly, we offer the following comments and recommendations on the draft REC Element.

[1] PMC & Aspen Environmental Group. July 29, 2016. County of San Bernardino General Plan. Renewable Energy and Conservation Element. San Bernardino, CA. http://www.sbcounty.gov/uploads/LUS/Renewable/REC_ELEMENT/WEB_DRAFT_RENEWABLE_ENERGY_AND_CONSERVATION_ELEMENT.pdf.

General Comments and Recommendations

Defenders first and foremost supports the consideration of all environmentally-oriented guiding principles outlined in the draft REC Element when making and adopting legislative land use decisions. Specifically, conserving and sustaining sensitive natural resources and habitats, as well as prohibiting renewable energy production in critical habitat without comprehensive mitigation and impact avoidance, should frame all land use decisions. We also believe community-oriented renewable energy generation facilities, encouragement of more direct benefits to county residents, public participation, accountability, and consistency with past planning efforts/investments, are key to a balanced approach to renewable energy development. We also are heartened by the significant public input garnered during the development of the draft REC Element stressing the paramount importance environmental protection and wildlife.

Policy statements in this plan provide a strong road map to the County's energy future. However, without clearly defined goals, metrics for success, and monitoring mechanisms to measuring progress it will be impossible to discern whether the policies are being met. We suggest the draft REC Element incorporate clearly defined goals for each policy statement, measurable metrics for step-down objectives identified for these goals, and easily tracked monitoring mechanisms to ensure successful implementation. The inclusion of these goals, metrics/objectives and monitoring mechanisms will facilitate the finalization of County Development Code standards.

As underscored in the draft REC Element, renewable energy facilities can have negative consequences for native plants, animals and habitats, and the development of renewable energy must be held to the same high standards as other forms of land use. Specific environmental compatibility, effective impact avoidance & mitigation, as well as appropriate siting/least conflict mapping should be discussed at a greater detail in support of the policy statements outlined in this document. While we presume some of this environmental importance/compatibility mapping and protection information will be discussed in the upcoming planning for the Conservation Element of the San Bernardino County Plan, the inclusion of summarized information in an appendix to the draft REC Element would be extremely helpful in supporting this planing document's narrative.

The inclusion of a section within the draft REC Element of how it directly relates to the Desert Renewable Energy Conservation Plan (DRECP) is strongly recommended. The integration of the County's renewable energy and conservation planning with the latter adopted federal planning effort is essential to streamlining appropriate renewable energy development and ensuring long-term conservation of the many special status species which occur in this planning area, as well as their affected habitats and crucial linkages. A hard look at previous conservation investments by both the County and Bureau of Land Management (BLM) is necessary; as well as a review of County needs relative to federally-adopted energy development focus areas (DFAs) and planned transmission corridors. DRECP adjustments may be needed; which can be easily furthered due to agreements the County has in place with the BLM, and its close working relationship with this federal agency.

Specific Comments and Recommendations

RE Policy 2.1 directs that energy generation be "consistent with orientation, siting and environmental compatibility policies of the General Plan." However, RE Policy 2.1.1 then proceeds to only address minimizing impacts on surrounding properties. As stated on page 21 of the draft REC Element, *"Incompatible facilities can cause substantial negative effects on biological communities, resources, and aesthetics."* Consistent with that statement, **RE Policy 2.1.1** should be revised to utilize renewable energy development standards to minimize impacts to the natural environment, including plant and animal species, and surrounding properties.

RE Policies 2.4.2, 2.4.3, 2.4.4, 3.4.2, and 5.1.3 should be revised to reflect strong standards, moving beyond education and encouragement, to require the inclusion of appropriate renewable energy facilities within new developments.

We support permit streamlining to incentivize on-site energy generation as considered in **Policy 3.1.1**. However, we believe the term "primarily" is too vague and in practice, could be interpreted as allowing a mere 51% of any produced energy to serve on-site uses. We believe requiring a higher percentage of energy production for permit streamlining would accelerate development of CORE facilities.

RE Policies 3.3 and 4.1 are two of the most important policies presented in the draft REC Element. We understand specific renewable energy development standards and siting criteria will be included in the County's Development Code to implement the REC Element. The latter standards and criteria are fundamental to providing a comprehensive review these two policies. We look forward to a future review opportunity of these policies when the standards and criteria for Development Code implementation are considered.

We support the intent of **RE Policy 3.5.1** to minimize ground disturbance, soil erosion, flooding, and blowing of sand/dust resulting from development activities. However, it is essential that in doing so the natural processes associated with sand transport and streambed/wash flow across the landscape be maintained. The areas which support these natural processes are commonly high value habitats which support crucial wildlife linkage and dispersal corridors. Potential streambed alteration must also be permitted by the California Department of Fish and Wildlife (CDFW) and minimized.

RE Policy 4.6 is a lynch pin for smart renewable energy development and needs to provide stronger direction. Avoidance of sensitive habitat should be required. The idea of onsite mitigation is laudable but may not result in beneficial conservation outcomes. Mitigation siting should be driven by highest conservation outcome. The strongest consideration should be given to conservation approaches which will enhance and leverage other similar investments. Finally, the use of the term "feasible" invites endless debates and in general, is best omitted from policy discussions.

While we appreciate the inferred goal of **RE Policy 4.8**, we are concerned about the unintended consequences of attracting bees, butterflies, and birds to renewable energy generation facilities.

Many of these facilities have been found to be dangerous or even deadly to wildlife. Incorporating habitat components into day-to-day working environments can also produce safety hazards on some project sites. Certain facility designs incorporating habitat may be beneficial for some wildlife, provided sufficient acreage criteria and site circumstances are met. However, meeting appropriate criteria and site-specific circumstances can also be a considerable development constraint. We recommend this Policy be reconsidered as it relates to specific renewable energy generation technologies. Further, we strongly recommend retention of native vegetation on site to the maximum extent practicable for simple dust control/soil erosion/non-native plant control purposes.

Defenders are also concerned with specific narrative included in **Chapter 5** of the draft REC Element, i.e.: "*In addition to qualitative siting standards in the Code, this Element encourages utility-oriented RE development on federal land in DRECP Development Focus Areas (DFAs), specifically those endorsed for this purpose by Board of Supervisors resolution*." We recognize the County's focus here on the limited number (5) of the DFAs it has tentatively endorsed in its Desert Renewable Energy Conservation Plan (DRECP) Position Paper[2] and the County Board of Supervisors Resolution 2016-20[3] relative to the DRECP Land Use Plan Amendment (LUPA)[4,5] prepared by the BLM. However, we have grave reservations about the federally-proposed North of Kramer DFA. Two BLM conservation management actions (CMAs) have been adopted relative to this proposed DFA:

> **DFA-BIO-IFS-4:** The DFA in the "North of Edwards" Mohave ground squirrel key population center is closed to renewable energy applications and any activity that is likely to result in the mortality (killing) of a Mohave ground squirrel until Kern and San Bernardino counties complete county General Plan amendments/updates that include renewable energy development and Mohave ground squirrel conservation on nonfederal land in the West Mojave ecoregion and the CDFW releases a final Mohave Ground Squirrel Conservation Strategy, or for a period of 5 years after the signing of the DRECP LUPA ROD [Record of Decision], whichever comes first. If Kern and San Bernardino counties and CDFW do not complete their respective plans within the 5-year period, prior to opening the DFA to renewable energy applications and other impacting activities, BLM will assess new Mohave ground squirrel information, in coordination with the CDFW, to determine if modifications to the DFA or CMAs are warranted based on new Mohave ground squirrel information.

[2] San Bernardino County (SBC). February 15, 2015. County of San Bernardino Position Paper on the Draft Desert Renewable Energy Conservation Plan. San Bernardino, CA. http://newberryspringsinfo.com/Alliance/SB-County-DRECP-Position-Paper.pdf.

[3] San Bernardino County Resolution 2016-20. A Resolution of the Board of Supervisors of the County of San Bernardino, State of California, Establishing the County's Position on the Proposed Land Use Plan Amendment in Phase I of the Desert Renewable Energy Conservation Plan. San Bernardino, CA. http://cob-sire.sbcounty.gov/sirepub/agdocs.aspx?doctype=agenda&itemid=250994.

[4] Bureau of Land Management (BLM). 2016. Land Use Plan Amendment. Deseret Renewable Energy Conservation Plan DRECP. Land use plan amendment to the California Desert Conservation Plan, Bishop Resource Management Plan, and Bakersfield Resource Management Plan. California State Office. Sacramento, CA. http://www.drecp.org/finaldrecp/lupa/DRECP_BLM_LUPA.pdf.

[5] Bureau of Land Management (BLM). September, 2016. Record of Decision. Desert Renewable Energy Conservation Plan DRECP. Record of Decision for the Land Use Plan Amendment to the California Desert Conservation Plan, Bishop Resource Management Plan, and Bakersfield Resource Management Plan. California State Office. Sacramento, CA. http://www.drecp.org/finaldrecp/rod/DRECP_BLM_LUPA_ROD.pdf.

DFA-BIO-IFS-5: Once the planning criteria in CMA **DFA-BIO-IFS-4**, are met, the DFA in the "North of Edwards" Mohave ground squirrel key population center will be reevaluated. If Kern and San Bernardino counties receive Mohave ground squirrel take authorizations from the CDFW through completed Natural Community Conservation Plans or county-wide conservation strategies that address Mohave ground squirrel conservation at a landscape level and include renewable energy development areas on nonfederal land in the West Mojave ecoregion, the "North of Edwards" key population center DFA will be eliminated and the management changed to General Public Lands, as part of adaptive management.[6]

The northern tier of the proposed "North of Edwards" DFA is comprised of a fairly solid public land block with very few remaining encompassed private lands. A slightly greater checkerboard private-public land ownership pattern exists to the south of these lands, just north of the existing Kramer Solar Facility. Considerable acreage within the norther tier of these lands was by BLM throughout the 1990s, per voluntary land exchange, during its Land Tenure Adjustment (LTA) land consolidation program funded by Edwards Air Force Base (EAFB).[7] The LTA program addressed the concerns of the U.S. Air Force, BLM and San Bernardino County relative to consolidating lands supporting sensitive resources into public ownership, avoiding scattered leapfrog private land development, and preserving airspace vital for military training purposes. Primary sensitive resources addressed by this land consolidation program were the state/federally listed threatened Agassiz's desert tortoise (*Gopherus agassizii*); the state listed threatened Mohave ground squirrel (*Xerospermophilus mohavensis*), or MGS; and the California special concern plant, Barstow woolly sunflower (*Eriophyllum mohavense*).

The North of Edwards DFA is situated just west of lands designated as critical habitat for Agassiz's desert tortoise[8]; a portion of which has recently (2006) been designated by BLM for the desert tortoise and MGS as an Area of Critical Environmental Concern (ACEC).[9] Several properties in the area have been acquired by CDFW directly adjacent to this DFA in coordination with the LTA program; which are currently managed as ecological reserves. The North of Edwards DFA itself was recognized as part of a crucial linkage habitat for MGS in the BLM's 2005 West Mojave Plan; initially being proposed for ACEC designation. Ultimately however, this area was designated as a core component of a Mohave Ground Squirrel Habitat Management Area[10] prior to being proposed as the North of Edwards DFA.

[6] Bureau of Land Management (BLM). 2016. Mohave Ground Squirrel. DFA-BIO-IFS-4 & DFA-BIO-IFS-5. Page 192 in "Land Use Plan Amendment. Desert Renewable Energy Conservation Plan DRECP. Land Use Plan Amendment to the California Desert Conservation Plan, Bishop Resource Management Plan, and Bakersfield Resource Management Plan". California State Office. Sacramento, CA. http://www.drecp.org/finaldrecp/lupa/DRECP_BLM_LUPA.pdf.

[7] Bureau of Land Management (BLM). 1988. Western Mojave land tenure adjustment project final environmental impact statement/report. BLM Library, Denver Service Center. Denver CO. https://ia601707.us.archive.org/31/items/westernmojavelan00unit/westernmojavelan00unit.pdf.

[8] U.S. Fish and Wildlife Service. 1994. Endangered and Threatened Wildlife and Plants; Determination of Critical Habitat for the Mojave Population of the Desert Tortoise. Final Rule. FR Volume 59, No. 26. Pages 5820-5866. http://ecos.fws.gov/docs/federal_register/fr2519.pdf.

[9] Bureau of Land Management (BLM). 2005.West Mojave Plan Documents. California Desert District. Moreno Valley, CA. http://www.blm.gov/ca/st/en/fo/cdd/wemo.html.

[10] Bureau of Land Management (BLM). 2006. Record of Decision West Mojave Plan. Amendment to the California Desert Conservation Area Plan. California Desert District. Moreno Valley, CA.

The range of MGS is one of the smallest for any species of ground squirrel in North America;[11] extending from Antelope Valley on the west to the Mojave River in the east; and from the San Bernardino Mountains in the south to the Coso Mountains in the north. However, an assembled database of unpublished studies and surveys undertaken between 1998-2012 suggests that extirpations have occurred throughout much of the southern part of the historic range.[12] Of the eight known important MGS populations within its range, five occur wholly or partially in San Bernardino County. However, only one important MGS population, on EAFB, is known to occur south of State Route 58. This population connects to other MGS populations north of this highway via crucial linkage habitats in the Boron-Kramer vicinity and North of Kramer DFA.

In good rainfall years, MGS are fairly active and populations are known to expand. Dispersal occurs in suitable saltbush (*Atriplex* spp.) and/or Joshua tree (*Yucca brevifolia*) plant communities supporting high shrub diversity. In drier years, MGS reproduction and survival is often limited, with dispersal minimized. Over a period of dry years, MGS populations often contract. Habitat loss, fragmentation, and degradation of linkage areas can preclude recolonization of important MGS population areas following drought, and this appears to have occurred throughout the western Mojave Desert.

Several geographic information systems (GIS) models prepared for the DRECP (i.e., Data Basin maps) indicate that remaining undeveloped lands surrounding Boron and comprising the North of Edwards DFA support one of the last most intact MGS linkages between southern, eastern and northern populations. This linkage intactness is expected to continue despite ongoing borax mining in Boron and planned State Route 58/U.S. 395 highway improvements at Kramer Junction. However, utility-scale renewable energy development east of the Rio Tinto Boron (formerly U.S. Borax) Mine and development of the North of Edwards DFA, has a strong potential to sever this crucial linkage.

If this weren't enough, the U.S. Fish and Wildlife Service[13] has acknowledged that temperatures in MGS habitat have increased and are likely to increase. If hotter and drier summers, as well as more extreme weather patterns continue as they have for the past decade, MGS is likely to be negatively affected; as a reduced level of activity, reproduction and population dispersal are predicted. Contractions and reductions of the highly diverse shrub community common to suitable MGS habitat, particularly those plant species considered to provide critical forage in dry years, also have a strong potential to occur as the result of climate change.[14]

http://www.blm.gov/style/medialib//blm/ca/pdf/pdfs/cdd_pdfs/wemo_pdfs.Par.4dfb777f.File.pdf/wemo_rod_3-06.pdf.

[11] Hoyt, D.F. 1972. Mohave Ground Squirrel Survey, 1972. California Department of Fish and Game Special Wildlife Investigations Report. Sacramento, CA. 10 pp.

[12] Leitner, P. 2015. Current Status of the Mohave Ground Squirrel (*Xerospermophilus mohavensis*): a Five Year Update (2008-2012). Western Wildlife 2:9–22. http://www.tws-west.org/westernwildlife/vol2/Leitner_WW_2015.pdf.

[13] U.S. Fish and Wildlife Service (USFWS). 2011. Endangered and Threatened Wildlife and Plants; 12-month Finding on a Petition to List the Mohave Ground squirrel as Endangered of Threatened. FR Vol. 76, No. 194: 62214-62258. https://www.gpo.gov/fdsys/pkg/FR-2011-10-06/pdf/2011-25473.pdf.

[14] Comer, P.J., B. Young, K. Schulz, G. Kittel, B. Unnasch, D. Braun, G. Hammerson, L. Smart, H. Hamilton, S. Auer, R. Smyth, and J. Hak. 2012. Climate Change Vulnerability and Adaptation Strategies for Natural Communities: Piloting Methods in the Mojave and Sonoran Deserts. Report to the U.S. Fish and Wildlife Service. NatureServe,

All of the preceding highlights a fundamental direction to protect the few known MGS population core areas and functional habitat connections between these areas to prevent loss of genetic interchange and possible local extirpation of a species following stochastic events such as drought.[15] There have been several climate change modeling scenarios prepared which indicate the resilience of shrubland communities in the North of Edwards vicinity, even in the context of predicted climate change sensitivities. Chief among these is the analysis prepared by University of California Santa Barbara's Bren School for the California Energy Commission[16], which indicates there is a better than average likelihood that shrub communities in the Boron Northeast and North of Edwards DFA areas will remain relatively unchanged with increased temperatures, weather shifts and reduced precipitation.

In summary, the preceding information underscores the importance of the Boron East and North of Kramer DFA lands relative to long-term management of the state-listed threatened MGS. Considerable acreage has been acquired in the vicinity at taxpayer expense to safeguard military training associated with Edwards AFB and benefit long-term conservation of MGS. Adjacent lands are managed for desert tortoise and MGS recovery. The North of Edwards DFA and adjacent lands have been identified by BLM, the Mohave Ground Squirrel Technical Advisory Group and others[17] as crucial to long-term conservation of this imperiled species. Climate change scenario analyses focusing on the region also bolster the wisdom of protecting the area's remaining intact native plant communities; rather than facilitating utility-scale renewable energy development that could quite possibly sever a currently viable linkage between southern, eastern and northern MGS populations.

In reference to the state-listed threatened MGS, we have noted that the Glossary prepared for the draft REC Element refers to the term "listed species" as limited to species addressed by the Endangered Species Act (ESA). This definition should be expanded to include species also listed per the California Endangered Species Act (CESA).[18] This legislative act states that all native fishes, amphibians, reptiles, birds, mammals, invertebrates, and plants, and their habitats, threatened with extinction and experiencing a significant decline, will be protected or preserved. The CDFW will work with all interested persons, agencies and organizations to protect and preserve such sensitive resources and their habitats.

Further, we note that the Glossary does not include a clear definition of the term "conservation". This would seem to be an omission given the title of this planning effort. Per the Merriam-Webster

Arlington, VA. http://www.natureserve.org/conservation-tools/climate-change-vulnerability-index-ecosystems-and-habitats.

[15] Mohave Ground Squirrel Technical Advisory Group. 2010. Mohave Ground Squirrel Conservation Priorities. California Department of Fish and Wildlife. Sacramento, CA.

[16] Bren School of Environmental Science and Management. University of California, Santa Barbara. 2013. Cumulative Biological Impacts Framework for Solar Energy Projects in the California Desert. Santa Barbara, CA. http://www.energy.ca.gov/2015publications/CEC-500-2015-062/index.html.

[17] Inman, R.D., T.C. Esque, K.E. Nussear, P. Leitner, M.D. Matocq, P.J. Weisberg, T.E. Dilts and A.G. Vandergast. 2013. Is There Room for All of Us? Renewable Energy and *Xerospermophilus mohavensis*. Endangered Species Research Vol. 201-18. http://www.int-res.com/articles/feature/n020p001.pdf.

[18] California Fish and Game Code Section 2050-2069. California Endangered Species Act. http://www.leginfo.ca.gov/cgi-bin/displaycode?section=fgc&group=02001-03000&file=2050-2069.

dictionary: the term conservation is "a careful preservation and protection of something; especially: planned management of a natural resource to prevent exploitation, destruction, or neglect."
We also recommend the term "sustainable" (i.e., meeting the needs of the present without compromising the future, with not completely using up or destroying natural resources) be included in the Glossary. Defenders firmly believe the terms "conservation" and "sustainable" are key to managing land use in San Bernardino County consistent with the Countywide Vision.[19]

Finally, we urge the County to pursue participation in the State of California's Regional Investment Conservation Strategy (RCIS) program addressed by Assembly Bill (AB) 2087, to facilitate smart, long-term conservation planning as part of the County's renewable energy future. Inclusion in this program would facilitate integration of the County's planning efforts with the goals, objectives and desired outcomes outlined in the BLM's adopted DRECP LUPA. Development of a voluntary conservation planning process such as the RCIS Program would also enable full realization of the County-wide Vision, capitalizing on the County's people, geography and economy; in a manner which development can invest in, as well complement, protection of natural resources and the environment.

Thank you for the opportunity to review and comment on the draft Renewable Energy and Conservation Element of the San Bernardino County General Plan. Only by maintaining the highest environmental and quality of life standards with regard to local impacts, can renewable energy production in San Bernardino County be truly sustainable. We look forward to our continued participation in this forward-thinking planning process.

Sincerely,

Thomas B. Egan
California Desert Representative
Defenders of Wildlife
P.O. Box 388
Helendale, CA 92342
tegan@defenders.org

[19] San Bernardino County & San Bernardino Association of Governments (SANBAG) 2011. Countywide Vision. San Bernardino County, CA. http://www.sbcounty.gov/cao/vision/report.aspx.

From: jack
To: Mawby, Linda
Subject: renewable energy
Date: Tuesday, September 20, 2016 12:13:48 PM

Wanton, unrestricted use of "open lands" for solar fields is finally, fortunately, coming into disfavor. The question has been, which open lands ??

Certainly not the meadows of Yosemite or the rim of the Grand Canyon! Rather the choice seemed to be mostly the "worthless" deserts of the US.

Somehow the 'worthless' lands came to include or even favor those places where people chose to live. In their unfortunate naiveté people expected their neighborhoods and environment to remain pleasant and satisfying. But no – still "worthless" per those profiting from solar fields --BESIDES WHICH IS THE CONVENIENT AND LUCRATIVE INFRASTURCTURE EXISTING **THANKS TO THESE COMMUNITIES**.

Incorporated areas have dealt with this circumstance accordingly. Disgraceful and shameful if county unincorporated authorities will not likewise serve their citizens.

Jack Fuller

61338 Alta Mura
Joshua Tree

Linda Mawby
San Bernardino County Government Center
385 N Arrowhead Avenue, First Floor
San Bernardino, CA 92415-0187

Submitted via email to Linda.Mawby@lus.sbcounty.gov

October 12, 2016

Dear Ms. Mawby,

The Large-scale Solar Association (LSA) appreciates the opportunity to offer comments on the San Bernardino County Draft Renewable Energy and Conservation Plan. LSA is a non-partisan solar industry group whose purpose is to support utility-scale solar development through appropriate policy mechanisms. Member companies in the LSA represent leaders in the utility-scale solar industry. Collectively, LSA's members have generated over 7,000 construction jobs, dozens of permanent clean-tech jobs, and have contributed millions of dollars in sales tax and property tax revenues, as well as impact fees to the County of San Bernardino.

San Bernardino County currently has over 1,500 MW of solar online and under construction, making it one of the top solar counties in the State. We appreciate the County's early adoption of responsible planning and permitting, which has been critical to California's progress toward a 50% Renewables Portfolio Standard. The solar industry is committed to continued partnership with the County to ensure future development of environmentally responsible and affordable utility-scale solar power that brings environmental and economic benefits to your communities.

To that end, LSA is concerned that the Draft Renewable Energy and Conservation Element was developed with an inherent bias against utility-scale solar development at a time when wholesale renewable energy is critical to providing clean, affordable, and reliable electricity to Californians. The County should encourage cost-effective development of wholesale renewable energy in order to avoid expensive and unnecessary cost shifts to customers resulting from more expensive projects. Furthermore, the County could benefit immensely from positioning itself as a hub of clean energy development, and by establishing partnerships with renewable energy companies, community colleges, and the local labor force to help California and the nation meet clean energy goals.

The REVEAL Initiative Report calculates the amount of renewable energy needed to meet the County's interim goal for 2027 as 7.6 billion kWh.[1] Two billion kWh were produced by 2014, resulting in a delta of 5.6 billion kWh between current renewable generation and the County's 2027 interim goal for renewable energy. In looking at the REVEAL report, the County only

[1] REVEAL Initiative Report. June 2016

produces about 14% of the renewable energy needed to meet the County's energy demand in 2027. The Draft Element does not describe how or whether it is capable of satisfying the majority of that growth in demand in an affordable manner if the County plans to restrict wholesale renewable energy development in favor of distributed, net-metered systems, which, while an important and valuable component of the renewable energy mix, cannot independently satisfy the County's goals for renewable energy.

On a higher level, the Bureau of Land Management recently finalized the Record of Decision for the Desert Renewable Energy Conservation Plan (DRECP) Land Use Plan Amendment (LUPA). This plan severely restricts utility-scale development on BLM lands and will require additional accommodation of renewable energy development on private lands in order to meet state and federal renewable energy goals. We also understand that the County Board of Supervisors has passed a resolution calling "attention to the commitment from BLM and the County's expectation that any necessary revisions to the LUPA will be forthcoming once the County completes its Renewable Energy Element." Continued coordination with state and federal agencies, as well as stakeholders, will likely be necessary as the Renewable Energy Action Team begins to plan for renewable energy development with the Counties.

More specific comments on components of the Draft Element are described below.

Renewable Energy Goal 2: Renewable Energy Systems

LSA offers strong support for Renewable Energy Goal 2, which calls for San Bernardino County to become home to diverse and innovative renewable energy systems to provide reliable and affordable energy to the Valley, Mountain, and Desert regions. This is a laudable goal that requires consistent approaches in other county policies, such as updates to development codes and land use designations. In particular, Objective 2.1, which is to support access to community-oriented renewable energy (CORE) generation by 2030, is also a worthy objective, but depends in part on the degree to which the County decides to prioritize CORE over utility-scale renewable energy, rather than acknowledging the benefits of utility-scale renewable energy to the community and including larger projects in the definition of CORE. LSA's comments on several other goals and policies, below, will highlight some potential challenges to achieving Renewable Energy Goal 2, as written, in the interest of helping the County meet its broader energy goals.

Renewable Energy Goal 3: Community Oriented Renewable Energy (CORE)
While LSA understands the County's interest in and commitment to CORE, the focus on on-site rooftop or ground-mounted accessory renewable energy production has potential to jeopardize affordability, reliability, environmental suitability, and efficiency of renewable energy systems developed by the County.

1. RE Policy 3.2.
    - RE Policy 3.2.1. This policy will require the county to establish and maintain specific standards for CORE generation facilities, appropriate to the Valley,

Desert, and Mountain regions. LSA suggest that the county consider the following principles for these standards:
    - CORE projects should result in an economic benefit to the County through jobs (direct and indirect), community improvement funds, and development of clean and affordable renewable energy to promote public health of the community.
    - CORE projects should consider the water-saving benefits of solar PV energy operations.
  - RE Policy 3.2.3. This policy encourages development of community-shared solar programs that allow residents and businesses to purchase shares of renewable energy generation in order to offset electricity bills. LSA supports this type of program and suggests that the County clarify that utility-scale projects (>10-20 MW) can be eligible to provide the generation to serve communities in order to reduce costs for residents and businesses.
2. RE Policy 3.3. This policy suggests limiting utility-scale renewable in unincorporated areas of the County to sites consistent with the San Bernardino County Development Code. LSA feels strongly that the Development Code currently provides sufficient guidance to commercial solar developers. Furthermore, the code is subjective enough to offer the flexibility that the County needs to be able to determine project-specific impacts on a case-by-case basis.
3. RE Policy 3.5, LSA notes that the Development Code already provides sufficient guidance to developers to minimize ground disturbance, soil erosion, flooding, and sand and dust blowing.
4. RE Policy 3.8 requires opportunities to incorporate public art and encourage design features that provide screening in various sites, particularly public spaces, nonresidential facilities, and multi-family buildings. This is a nice goal, but the requirement should only apply to public facilities. Broad application throughout the County could drive costs of renewable energy projects up.
5. RE Policy 3.9 encourages continued economic benefits to the County through renewable energy development. LSA supports this goal and looks forward to working with the county to enhance and convey the economic benefits of utility-scale solar development to the community.
    - RE 3.9.2 encourages myriad programs on renewable energy installation, which LSA also supports.
    - RE 3.9.3 encourages innovation zones for manufacturing in unincorporated areas of the County. Again, LSA supports this goal.

Renewable Energy Goal 4: Environmental Capability

LSA appreciates the County's thoughtful approach to the intersection of energy and the environment, and would like to highlight the myriad requirements and processes in place to ensure that large-scale solar facilities avoid, minimize, and mitigate environmental impacts. The Draft Element notes that solar PV is highly desirable due to low lifecycle water consumption, and acknowledges that PV projects have to undergo rigorous review, including consideration of water consumption, before they are permitted. LSA would like to emphasize that life-cycle

water consumption is minimal at utility-scale PV solar facilities, particularly when compared to more traditional types of energy generation. While water consumption is highest during construction of PV facilities in order to appropriately mitigate for dust and particulate matter emissions, water consumption drops to minimal, near-zero levels during operations. As the industry evolves, we anticipate further reductions in water consumption. LSA is proud of the track record we have for siting and developing projects in an environmentally responsible manner, and would like to highlight a recent report "The Environmental and Public Health Benefits of Achieving High Penetrations of Solar Energy in the United States" by the National Renewable Energy Laboratory.[2] This report uses a scenario-analysis approach in which two "SunShot Vision" scenarios (14% by 2030 and 27% solar by 2050) are compared with a baseline scenario in which no new solar is deployed after 2014 to assess the potential benefits of all incremental solar deployment. LSA recommends that the County incorporate the findings of this report into the next iteration of the Draft Element.

1. RE Policies 4.1-4.3 require a variety of measures that are already required through project-level and CEQA reviews.
    - RE Policy 4.3.1 requires a reduction of visual impacts through something referred to as "nature-oriented geometry." LSA seeks clarification regarding the meaning of this term and how that differs from other measures required through existing permitting channels to reduce visual impacts.
2. RE 4.4 requires decommissioning plans to provide reclamation of the site to "a condition at least as good as that which existed before the lands were disturbed, or another appropriate end use that is stable (i.e. with interim vegetative cover), prevents nuisance, and is readily adaptable for alternative land uses." LSA suggests striking the requirement to return the site to "the then existing conditions." The second, alternative requirement to return it to an appropriate end use with principles (preventing nuisance, adaptable for alternative uses, etc.) is currently required in decommissioning plans and is a for more attainable requirement.
    - RE 4.4.3 requires "any structures" created during construction to be demolished and all material to be recycled, to the greatest extent feasible. LSA notes that in some cases, it is best to restrict demolition to a limited depth, which may mean that some components are not technically demolished. Furthermore, while we support recycling of structures, LSA suggests that this policy also allow for reuse of materials and structures, which may be feasible and beneficial at the time of decommissioning. As an alternative to some of these challenges, LSA recommends that this policy require structures to be "decommissioned," rather than "demolished." Such a change can allow for the best use of structures (e.g. demolition, re-use, or repowering) at the end of the project's life.
    - With the exceptions noted above, the requirements set forth in RE 4.4.1-4.4.4 are consistent with elements of decommissioning plans currently required for utility-scale solar facilities.

[2]Ryan Wiser et al. The Environmental and Public Health Benefits of Achieving High Penetrations of Solar Energy in the United States. National Renewable Energy Laboratory. May 2016 NREL/TP-6A20-65628 LBNL-1004373

3. RE Policy 4.6 provides guidance relative to habitat conservation and mitigation, and should include the requirement not only to avoid sensitive habitat, but to "avoid, minimize, and mitigate, when feasible, sensitive habitat through site selection and project design." Other components of RE Policy 4.6 are current practice through project level reviews.
4. RE Policy 4.8 encourages developers to design projects in ways that provide sanctuaries for native bees, butterflies, and birds. LSA is actively engaged in discussions of how best to enhance habitat for pollinators, but notes that such goals may pose potential risks of impacts to other wildlife. At this time, LSA recommends inserting language to clarify that this should be done "where feasible and appropriate." While this is an admirable goal, further study and discussion is necessary. The National Renewable Energy Laboratory is currently working with renewable energy developers to study the benefits of co-location with solar and agriculture, part of which includes an investigation of low-impact site preparation practices for ground mounted solar projects to enhance pollinator habitat. LSA recommends that County staff reach out to Jordan Macknick, the primary contact with NREL to learn more about the Innovative Site Preparation and Impact Reductions on the Environment (InSPIRE) program.[3]

Renewable Energy Goal 5: Siting

Renewable Energy Goal 5 requires renewable energy facilities to be located in areas that address County standards, local values, community needs, and environmental priorities. To make this goal more achievable and less subjective, LSA recommends additional clarity to emphasize that the following policies are encouraged "when appropriate and feasible" in order to achieve this goal. An alternative is for the Draft Element to simply require renewable energy to be located consistent with County zoning, plans, and policies.

1. RE Policy 5.1 encourages the siting of renewable energy on disturbed or degraded lands. LSA recommends that while the county can prioritize development on disturbed or degraded lands, it should not foreclose the need for and suitability of greenfield development. LSA supports development of projects on disturbed and degraded lands, but notes that such lands that are suitable for utility-scale solar projects are finite, and are not without additional challenges in terms of remediation, public health, and community acceptance. Thus, the presumption that development on disturbed or degraded lands is preferable under all circumstances is not accurate. While we are aware that the County's solar ordinance already includes such a presumption, it is more reasonable – and effective – to address the specific facts of each proposed project on a case-by-case basis under CEQA and other applicable legal review processes to assess such things as environmental, socioeconomic, and other considerations. In short, there is no reasonable basis for creating different standards for projects proposed for disturbed vs. greenfield sites.
2. RE Policy 5.2 limits projects greater than 10 MW to specific types of sites in unincorporated parts of the County, which is unnecessary and unwarranted, inconsistent with County zoning, at odds with State mandates and priorities, and threatens an unequal application of the law. Again, CEQA review and similar project-specific processes are the appropriate mechanisms under which to assess the compatibility and scale of proposed renewable energy projects with existing zoning. This policy would place

[3] http://www.nrel.gov/analysis/staff/jordan_macknick.html

unreasonable restrictions on development of renewable energy versus other industrial uses (e.g. mining, agriculture). LSA recommends broadening this policy to include marginalized agricultural lands and lands alongside transportation corridors. Ideally, this policy should clarify that renewable energy siting should be consistent with existing County zoning, plans, and policies.

3. RE Policy 5.3 requires collaboration with utilities and RE generation facility developers to encourage collocation of transmission and intertie facilities. Siting close to transmission is optimal for renewable energy developers as well; however sometimes additional infrastructure is required. We understand that the County is currently engaged in the Renewable Energy Transmission Initiative (RETI) 2.0 process, which involves state and regional stakeholders in discussions around renewable energy planning, transmission needs, and environmental data. LSA is also engaging in that process.
4. RE Policy 5.4 encourages renewable energy projects to be compatible with conservation of the scenic and recreational assets. This policy is vague and unnecessary to LSA because utility-scale solar development and tourism are not inherently incompatible. As such, this policy could be used either in favor of or against a project depending on one's attitude toward renewable energy. In fact, despite the growth of renewable energy development in the County, visitation to Joshua Tree National Park has been increasingly consistently for several years.[4]
5. RE Policy 5.5 encourages coordination with the Department of Defense on siting of renewable energy facilities. LSA supports this effort and welcomes dialogue between the County, DOD, and the solar industry about how to maximize renewable energy output of DOD lands.
6. RE Policy 5.6 discourages conversion of productive agricultural lands to solar development. LSA recognizes the importance of agriculture to the region, however we also believe that solar development provides an alternative beneficial use to the County that may, in some cases, be more productive than farming depending on the soil quality and water availability of the site. Solar may also serve as a temporary use, and could be returned to agricultural land after the life of the project. If a landowner determines that solar is in fact the highest and best use for a site, the landowner should have the flexibility to convert his or her land. We therefore suggest again that the County continue to explore when conversion or co-location are appropriate, but should not limit landowners in their rights to use their land as they see best.

Renewable Energy Goal 6: County Government Systems

RE Goal 6 states that County regulatory systems will ensure that renewable energy facilities are designed, sited, developed, operated and decommissioned in ways compatible with our communities, the natural environment, and applicable environmental laws. Section 5 of the REVEAL Initiative Report includes a variety of options for the County to maximize economic

[4] In 2013, Joshua Tree National Park visitation was 1.4 million. In 2014 it increased to 1.6 million and in 2015 it was up to 2 million. https://irma.nps.gov/Stats/SSRSReports/Park%20Specific%20Reports/Annual%20Park%20Recreation%20Visitation%20(1904%20-%20Last%20Calendar%20Year)

benefits from renewable energy development. In fact, it states that the County is positioned to gain 800,000 to 1.1 million jobs in order to meet the State's 50% RPS. LSA notes that utility-scale solar currently contributes economic benefits through the following avenues:

- Property taxes
- Sales and use taxes
- County fees and other public benefits
- Direct and indirect jobs
- Job training

Further, the direct and indirect benefits associated with CORE development outlined in Table 8 of the Reveal Initiative Report would be partially to wholly offset by increased electricity costs to consumers, whereas the low cost of procurement of utility-scale solar and wind projects serves as an additional benefit to the County.

1. RE Policy 6.1 seeks to ensure consistency, clarity, and timeliness in the development permitting process for RE generation facilities. LSA fully supports this policy and suggests that this policy apply to all renewable energy development; not just CORE.
2. RE Policy 6.2 seeks to establish mechanisms by which the County can restore and maintain the nexus between costs and benefits in RE development. LSA notes that the cost-benefit equation over the life of a renewable energy project is typically in local government's favor. Short-term increases in service demand during construction are more than offset by a long-term reduction in service demand compared to most other land uses. Furthermore, this does not account for County impact fees, other project-specific public benefits, or mitigation.
3. RE Policy 6.4 supports the governor's initiative to obtain 50% of the energy consumed in the state through RE generation sources by 2040. LSA also supports this goal and suggests that the County do everything it can to allow for swift implementation of this policy, rather than preclude low-cost renewable energy development that can be deployed quickly and in an environmentally responsible manner.
4. RE Policy 6.5 encourages pilot projects to demonstrate energy efficiency retrofit investments and renewable energy opportunities.

    - RE 6.5.1: Where feasible, install renewable energy projects on County facilities that provide visible, public examples of the County's commitment to cost-effective renewable energy. LSA supports this policy and notes that utility-scale solar is currently the most cost-effective mechanism to achieve the County's objectives. To that end, the County should consider establishing a program that allows utility-scale solar developers a defined process for incrementally contributing to meeting this policy, such as a program to fund energy efficiency retrofits or electric vehicle charging stations and carports. Such a program could offset the County's power use while acquiring cost savings for San Bernardino County residents.

In conclusion, LSA appreciates this opportunity to comment on both the REVEAL Initiative Report as well as the Draft Renewable Energy and Conservation Element and urges the County to create new opportunities to develop utility-scale solar projects on private lands, as well as Community-oriented renewable energy projects. Utility-scale projects can help the County take

massive strides toward its renewable energy goals at the lowest cost to the County and to energy consumers. LSA is committed to ensuring that the County continues to receive the benefits of utility-scale solar projects.

Sincerely,

Danielle Osborn Mills
Senior Policy Advisor
Large-scale Solar Association

Cc: San Bernardino County Planning Commission

To: County of San Bernardino
Land Use Services
SPARC Team
Attn: Linda Mawby

From: Concerned Residents of the "North Slope" Area (Lucerne Valley to the Morongo Basin)
Contributions prepared by individuals below on behalf of our Communities:
Lorrie Steely, Mojave Communities Conservation Collaborative
Marina West, resident, Landers
Brian Hammer, resident Adelanto/Lucerne Valley

Date: 9/12/16

RE: Comments: Draft Renewable Energy and Conservation Element (Element)

Ms. Mawby,

On Friday, September 9, 2016 I (Marina West) called and spoke to you regarding the sudden announcement of a 30-day comment deadline for the Draft Element. You informed me at that time that comments will be taken up until the hearing is concluded but I was encouraged to get comments submitted by Monday September 12, 2016, if I wanted those included in the Land Use Services "staff-report". I found this to be confusing and in conflict of what we have been told in the past, however in the spirit of cooperation, we have done our best to put together our concerns and we offer the following contained herein.

The memorandum dated July 28, 2016 from Terri Rahhal, Planning Director, to the Planning Commission clearly states the initiation of a public review period of at least 60 days from the Planning Commission Workshop date of August 4, 2016. While we respect that staff must have time to "consider" comments received in preparation for the next public hearing, we were very disturbed to find that all the resource material links were shut down from public review sometime after September 8, 2016.

To that end, the information links that were previously available must be restored and the comment period extended so that the public is provided at least 60-days to review the published material and make comments BEFORE Land Use Services staff needs to evaluate those comments.

I must reiterate that we strongly object to this forced shortened timeframe.

General observations:

The Element refers to the Development Code in multiple sections. Which Development Code version? The current one or a future one or both? These references to the Development Code should be removed and replaced with the actual language that specifically addresses each of these items that currently tie back to the Code.

Is this document the appropriate place to mention the connection to California Environmental Quality Act (CEQA) and possibly National Environmental Policy Act (NEPA) in the whole process?

Throughout this entire document the word "encourage" is used repetitively. In most cases this refers to the County encouraging the action by another entity or organization over which there is no control. This document must contain more *specific language* to identify what *specific actions* will be taken in order to achieve the goals identified.

Throughout this entire document references are made to monitoring, considering, and then allowing changes to be made. No changes should be made to the Policy without the opportunity for public review and comment.

Item specific comments/suggestions/observations:

Page 2, Figure 1, A visit to the cited website proved futile in locating the information that was used to develop the figure. Please provide better metadata about the information source(s) used to create this figure? Was roof-top solar included in the renewables section of the graphed data?

Page 5, the "Guiding Principles" do not mention roof-top solar for homes, businesses, and County facilities. The only emphasis is on community oriented generation. In the multiple SPARC meetings attended it was made quite clear by the stakeholders that roof-top solar was the most desirable option and should be first in consideration. Roof-top solar should be placed at the top of the list in the Element.

Page 6, Environmentally-Oriented, last bullet. "Monitor RE generation facilities **during construction** and throughout their useful lilves to ensure operations continue to conform to conditions of use.

Page 9, the Technical Analysis section analyzed …" the County's energy demand characteristics and experience with renewable energy development to date." and "data on local energy usage." This analysis should be in an appendix to the Element.

Page 14, The public review Draft Element was completed for review in the late summer and fall of 2016, anticipating consideration by the Planning Commission and the Board

of Supervisors in public hearings **in the end of the year.** Why then are we being rushed to submit our comments in 30 days, "if we want them included in staff reports"? Page 16, The second paragraph states the Element contains eight goals. There are only 6 goals itemized below that paragraph.

Page 16, Goal 5: The word "address" should be replaced with "meet".

Page 16, Goal 6 does not match Goal 6 description on page 40.

Page 19, How does the Objective a reduction in electric and natural gas useage relate to Goal 1 of optimizing renewable energy?

Page 19, RE 1.2.3: Example of "Encourage" vagueness: Encourage utilities……The County has no control over utilities. In what way will the County "encourage utilities"?

Page 22, RE 2.1.1 uses the term RE development standards. Are these development standards that are to created and implemented into the Development Code?

Page 22, RE 2.2.1 references energy storage consistent with Development Code requirements. There are not such requirements at this time.

Page 22, RE 2.2.2 Define and allow energy storage facilities as an accessory component of RE generation facilities. Question: Where? This is not included in the definition section in this document?

Page 28, RE 3.2.5 Encourage the utilization of microgrid technologies…..this is very encouraging and attractive. How will this be achieved?

Page 33, RE Policy 4.3 is specific to visual environment. 4.3.1 describes actions to be taken to achieve minimizing the impacts to the visual environment; minimized vegetation clearing, conservation of pre-existing plants, replanting of native plants, maintenance of natural landscapes are all mentioned in this section. These are EXCELLENT ways to minimize impacts, these should also be included in RE Policy 3.5, specifically RE 3.5.1.

Page 33, RE 4.4.2 Provide for an inspection after all decommissioning. This needs to be more specific. Provide for a inspection "by an arbitrary inspector" or by "inspection to include the approval of San Bernardino County".

Page 34, RE Policy 4.6 should also include the actions described in 4.3.1 regarding vegetation and plants. This section is entirely too vague. We have provided exhaustive examples of site design which should be incorporated into this section.

Page 36, First paragraph, last sentence references the resolution passed by the Board of Supervisors. This is entirely too vague. Fifteen years from now this specific document will be lost in the cobwebs. The resolution number, date and the content should be included herein. In addition, attention must be paid to any projects that may desire to be considered for approval that are not within those specific 5 designated areas. In the event that applications are received for other unincorporated areas within the County, there should be specific language that only projects that will benefit local communities and generate enough energy for that community plus a small percentage to be sold back to the grid to cover the utilites operating costs of operation and maintenance. There is the potential for many small "community-scale" projects to accumulate in one area which will have the same negative impact cumulatively as utility scale projects in the same area. I.E. Camp Rock Road in Lucerne Valley is currently facing this reality. Specific language needs to be included to clearly state that community scale is just that for use by the local community, and no "clumping" of projects should be permitted in one area.

Page 37, RE Section 5.2.1, subsection iii references "fallow agricultural lands". This definition is too broad. Agricultural lands that have been fallow for over twenty years can and do recover to full climax plant and animal communities. There are many examples of this in northern Lucerne Valley. This definition language should be tightened up to only include agricultural lands that have been fallowed less than twenty years.

Page 37 RE Section 5.2.1, subsection ix references "industrial zones". There are many areas with industrial zones that are in close proximity to Rural Living and Commercial land uses that are unsuitable for solar development. This subcategory should be removed.

Page 37 RE 5.2.1, subsection i references "Other sites that reflect the significantly disturbed nature…". This is a large loop-hole that allows for solar development on almost any site that is not virgin desert. All sites that would be suitable are addressed in subsections i through viii. **This item should be removed.**

Page 40 RE Section 6.1.3 "Establish and maintain design guidelines for ground-mounted accessory RE generation facilities in residential areas and Rural Living land use designations to address issues of aesthetics, safety, flood risks, wind, and dust." Who establishes the guidelines? Who pays for their creation and maintenance? The guidelines should be written and placed in the Element. When these industrial scale developments are improperly permitted in residential areas or Rural Living designations there MUST be some consideration for impact to the community. **Exhaustive comments have been provided specifically for these guidelines and should be included herein. This section is entirely too vague.** Project setbacks and buffers are needed to screen the project from community view. Installations in and around communities should be fixed tilt only and no greater in maximum height than 12 foot. The noisy "tracker systems" should be prohibited in rural living communities.

Page 40 RE Section 6.1.4 Question: A system? This is vague for what this section entails and needs more detail.

LUCERNE VALLEY ECONOMIC DEVELOPMENT ASSOCIATION (LVEDA)

To: County LUS – SPARC Team – Linda Mawby

From: Chuck Bell, Pres. 760 964 3118 chuckb@sisp.net
P. O. Box 193
Lucerne Valley, CA 92356

Date: 9/15/16

RE: COMMENTS: DRAFT RENEWABLE ENERGY AND CONSERVATION ELEMENT (SPARC)

Somehow the 60 day comment period morphed into a lot less. The SPARC Forum site I was using pretty much shut down last Thursday – so we don't know if there were changes from the 7/29/16 draft after the Planning Commission workshop. We understand that comments will be accepted by Monday 9/16. Due to the 'surprise' notice of the shortened comment period – these comments are more cryptic than thorough. (Plus you ruined the first Sunday of football season☹).

Let's not get all this stuff tucked away hither, yon and wherever in the Dev. Code and General Plan like the community plans goals/policies are intended. The final RE Element needs to be a separate document that can be readily referenced by staff, developers and the public.

GENERAL:

This is mostly a policy document – capturing the essence of the Framework Plan and what we have been saying over the years – which is much appreciated. You have been listening. But it doesn't address specific issues critical to our communities – that should be in this document – not spread out in the Development Code or wherever.

Lot of references to CCAs – 'community solar' – micro grids – roof top – parking lot – backyard "point of use" projects, etc. Good.

Needs a policy that RE generation within this County only has to cover the power demand in this County – not using our resources to subsidize/generate power for the rest of s. Calif. that also has sufficient solar resources.

County needs to determine amount of MWs that can be generated on commercial parking lots within the entire County. (An intern could do this with Google mapping).

Some of the "encourage" statements need to be "require/mandate".

Not enough substance re: protecting property values from misplaced projects. Needs to be added to "land-use" sections.

Need stronger criteria for water requirements for construction – applicants must specify source(s) and provide approvals. Need more emphasis on "non-potable water" for construction (ie: Mojave Water Agency's State Water pipelines).

Need a statement/objective re: the Mojave River Basin Adjudication (Judgment) – covering much of the desert region affected by potential RE projects - where water rights are apportioned out – and any consumption over 10 AC'/year requires obtaining (renting/buying) unused water rights from a stipulating party within the Sub-Area where the project is located.

Consider panel heights for industrial-scale projects – ie: no more than 8' or 12' at optimum panel tilt.

Does Table 1 more or less preclude industrial–scale wind projects? If so – good.

Public notification of project applications needs to be more expansive – local community groups can help.

Need policy – (in tandem with cooperation with other entities) - County advocate and work with SCE re: helping get PPA's, etc. for even small projects.

In Chapter 1 – need policy: County needs to require developer/SCE to quantify cost of power to consumers from each industrial-scale solar project.

SPECIFIC:

Goal 2: Need less emphasis on wind energy. Not as reliable or predictable as solar – comes and goes – difficult for grid operators to manage the electrons – having to decelerate/accelerate peaking plants to accommodate it – thus increasing pollution and GHG from natural gas, etc. generation.

2.4.2: "Require" inclusion of RE facilities for onsite use in new developments.

3.5.1: Soil erosion – needs active "enforcement". County CE is spread too thin and needs beefing up. There have been numerous violations on the sites of recently built solar PV projects throughout the desert portion of the County. What about no grading/land disturbance during windy spring/winter months? Grading should only be for building and utility slabs. Mounting posts should be drilled and pile driven, leaving the terrain essentially undisturbed and at least some of the native vegetation intact.

3.5.2: "Bonding" for decommissioning/restoration needs to be included in this policy as it is in 4.4.1 (ie: SMARA) – what we have been advocating for years. And - If a plant ceases to produce the planned/permitted amount of power output for any reason – X% of the field is no longer functioning – that it be decommissioned, demolished and land restored – or conveyed to an entity to resume the intended production.

3.9.1: "Local hiring" only really works for smaller "point of use" PV. Industrial-scale projects are and will be unionized with outside workers and vendors – as experienced by IBEW's use of CEQA to literally force developers into compliance.

4.2: "Disrupt, degrade or alter local hydrology". This absolutely has to be a siting criterion. With this standard - the 2 existing industrial-scale 20 MW PV projects in Lucerne Valley (now called Lone Valley Solar) wouldn't have been approved – and the proposed 20MW Solar One's application next to them (pending County review) would not have been accepted.

4.3.1: "Visual" – Glare from Lone Valley's panels dominates the view shed within a significant portion of Lucerne Valley. Not easy to mitigate. That's why location is critical.

4.6: Why not just "avoid" sensitive habitat – not just when "feasible"? Plenty of places to put this stuff with no impacts. Note: So as not to confuse the issue – mitigation "on site" for these projects (especially industrial-scale) is difficult if not impossible. Mitigation is what occurs (when it can) "on-site". "Off-site" is not "mitigation"- it is called "compensation or offsets" – and should be required when on-site work isn't enough to 'mitigate' the project.

4.7: "Conservation offsets on public lands" – Good. Could be a fight with CDFW which wanted compensation only on private lands for the West Mojave Plan.

P. 36: "Encourage RE on BLM's DFA's". As is - major problem for us with all the BLM DFA's proposed in Lucerne Valley. Need stronger adherence to the County/BLM agreement (MOU?) to reconcile the RE Element with the DRECP – to assure DFA's compatibility with the County's RE objectives. Also must include in the County/BLM negotiations all the State School Lands that would be available after exchange with BLM for industrial-scale projects – particularly in the vicinity of Johnson Valley/Old Woman Springs Ranch – a major impact on Lucerne and Johnson Valleys – with no or minimal transmission systems – with native desert environments that totally contradict the RE's (5.2) siting criteria.

P. 37: Siting – in "Industrial Zones"- over 10MWs? Even a 5 MW is a pretty big project. We don't want them in our few acres zoned "Regional Industrial". Takes up valuable, specifically zoned ground that can generate real industry, local jobs, taxes, etc. PV Solar has no real economic value to us – other than what power it can generate. No mention of the specific "PV Solar Zone or Overlay" that we have been advocating. Mostly just siting criteria – so looks like it perpetuates the County's current position – "in any zone with a CUP" – or maybe only in an "Industrial Zone"? Confusing and unclear. However – the strict siting/environmental/etc. criteria that we have been advocating - that the Element captured - would limit many locations. (Note: we are working with Karen Watkins re: how we include our proposed solar PV property into our pending Lucerne Valley Community Plan).

From: Jennifer Cusack
To: Mawby, Linda
Cc: Kevin Richardson; Justin Toledo
Subject: REVEAL Initiative Report and Renewable Energy Element Draft Comments
Date: Wednesday, September 07, 2016 1:35:12 PM

Here are some discussion points for today's meeting based on the findings in the Aspen REVEAL Initiative Report. Kevin Richardson will be at the meeting today to discuss. This seeks to inform the basis for the Renewable Energy Element. If there is a need to have ASPEN consultants discuss this matter directly with our folks we can also arrange for that.

I look forward to seeing you this afternoon and work toward a final draft. Thank you again for including SCE in the discussion and draft review.

1. Given that the overall theme seems to be a push towards smaller distribution interconnections. SCE has forwarded to our Distribution Engineers for comments and has not heard back.

2. Regarding RETI 2.0, mentioned on p. 2-17, the RETI 2.0 Transmission Technical Input Group (TTIG) is not doing any new analyses per say. Instead, the TTIG is looking at past studies to indicate current transmission capacity and the impacts that various amounts of renewable development would have in certain identified areas.
    a. From a transmission perspective, RETI 2.0 likely won't be providing any ground breaking findings for San Bernardino County. The South of Kramer and Lucerne Valley transmission constraints will still be there.
    b. The last TTIG RETI 2.0 presentation is here: http://docketpublic.energy.ca.gov/PublicDocuments/15-RETI-02/TN212802_20160816T100746_Revised_Presentation__Transmission_Technical_Input_Group_81516.pdf

3. Regarding recent CAISO Transmission Plans, the CAISO Generation Interconnection Process is a parallel process to the CAISO Transmission Plan and just because upgrades aren't coming out of the CAISO Transmission Plan, doesn't mean upgrades won't come out of the Generation Interconnection Process. In addition to a reliability analysis, the CAISO Transmission Plan studies a few renewable portfolios provided by the CPUC's RPS Calculator to determine if policy upgrades are necessary to accommodate those renewable scenarios from the RPS Calculator. Although it may be unlikely due to cost, in the Generation Interconnection Process, developers could choose to fund transmission upgrades identified in their studies and therefore transmission could be triggered outside of the CAISO Transmission Plan.

4. On p.2-18, the Jasper Substation has been renamed to Calcite Substation. The name "Jasper" is already an existing 12 kV circuit in Redlands and in order to avoid confusion with operating the system, our Grid Operations department did not want the same name used twice.

5. In addition to the DERiM maps shown on p. 2-19, SCE also offers Pre Application Reports (PARs), which are $300 reports in 30 days that detail the transmission capacity and constraints for a chosen point of interconnection.
    a. SCE's PAR form for projects inquiring about distribution interconnections is located here: https://www.sce.com/wps/wcm/connect/968c8072-2fa9-485f-a1c0-ed60fcce5c02/FORM_Rule21_PreApplicationRequest_Form_19-922_2016-08-16+%28002%29.pdf?MOD=AJPERES
    b. The CAISO PAR form for projects inquiring about interconnections on the CAISO controlled grid is located here: http://www.caiso.com/Pages/documentsbygroup.aspx?GroupID=4b7bb8ca-c45d-41a3-8193-47e6ee1746f0

6. On p. 3-2, SCE Transmission Planning agrees that "…future projects may be challenged under the existing infrastructure and may require upgrades to the transmission system depending on the size, location, and MW output of the projects."

7. On p. 3-3, SCE Transmission Planning agrees with the Aspen's literature review that renewable development near properties or residences doesn't necessarily cause potential loss of property value.

8. On p. 4-11, SCE Transmission Planning agrees the County should favor energy project alternatives that utilize

existing rights-of-way as preferable to projects that require entirely new corridors.

9. On p. 4-16, regarding the statement "Additionally, localized CORE production reduces electricity transmission losses compared to electricity moved long distances over transmission lines (where in general 8-15 percent of the energy is lost)", SCE Transmission Planning believes 8-15 percent losses is rather large for the transmission system.

10. On p. 5-5, SCE Transmission Planning also supports locating utility-orientated projects on degraded lands.

11. SCE does not agree with the Mountainview Power Plant statement on page 31 of the Draft Renewable Energy Element and requests correction or retraction. (see email I sent earlier)

This is our preliminary comments for discussion, please feel free to contact me if you have any questions.

Jennifer Cusack
Local Public Affairs/Gov. Affairs Rep.
Southern California Edison
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Visit us online: www.sce.com

SoCalGas

A Sempra Energy utility

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Linda Mawby, Senior Planner
County of San Bernardino
Land Use Services Department
385 N. Arrowhead Av, First Floor
San Bernardino, CA, 92415-0187

RE: SAN BERNARDINO COUNTY DRAFT RENEWABLE ENERGY AND CONSERVATION ELEMENT

Dear Ms. Mawby,

Southern California Gas Company (SoCalGas) is one of California's investor-owned utilities regulated by the California Public Utilities Commission. We are the nation's largest natural gas distribution utility, providing energy to 20.9 million consumers throughout 500 communities. SoCalGas' service territory encompasses approximately 20,000 square miles in diverse terrain throughout Central and Southern California.

SoCalGas appreciates the opportunity to submit comments on the Draft Renewable Energy and Conservation Element of the County of San Bernardino's County Wide General Plan. These comments have been composed pertaining to the Goals depicted in the Draft, with particular attention to Goals 2, 3 and 6.

The comments provided regard the following topics:

- Renewable Natural Gas;
- Technology Neutrality; and
- Infrastructure Resiliency.

1. Renewable Natural Gas

SoCalGas believes that there are important pathways utilizing natural gas including renewable natural gas that achieve both criteria and greenhouse gas pollution reductions faster and more economically than just "decarbonizing" electric generation. SoCalGas is focused on "decarbonizing the pipeline."

SoCalGas supports RE Goal 2 stating that the County "will be home to diverse and innovative renewable energy systems that provide reliable and affordable energy" to its regions. However, the policies delineated within this goal seem to favor consideration of only zero-emission renewable energy technologies such as wind, solar and "bioenergy." Yet the term "bioenergy" is not clearly defined within the document. Based on the general definition of that term, bioenergy pertains to energy produced from a living organism[i]. With this, it can be reasoned that "bioenergy" can refer to "biogas." To this end, renewable natural gas, or biomethane, and biogas are important sources of carbon neutral, renewable energy. Unlike other sources of renewable energy—such as solar and wind—biomethane doesn't need the sun to shine or the wind to blow. Waste materials can be converted into deliverable, renewable energy that is available around the clock. The energy produced when biomethane fuels electric generation is considered renewable similar to solar and wind and can be counted towards California's Renewable Portfolio Standards. When used as a transportation fuel, biomethane has one of the lowest carbon intensities of all transportation fuels.

To this end, we believe renewable natural gas can be seen as a renewable energy source that aligns with the policies outlined within Goal 2. Not only is it a cost-effective (RE Policy 2.4) feasible emerging and experimental renewable energy technology (RE Policy 2.3), but it helps accelerate zero net energy and grid neutrality (RE Policy 2.5), while also furthering energy efficiency (RE Policy 2.6). Further, renewable natural gas can help the state reach the governor's initiative to achieve 50% energy consumption from renewable sources (RE 6.4).

For these reasons, SoCalGas requests that renewable natural gas should be included as a renewable energy source to be supported along with solar and wind in the policies outlined in Goal 2 of the Element.

2. Technology Neutrality

SoCalGas believes that natural gas is an important energy resource for California as it provides a low-cost, efficient and reliable source of clean energy. Natural gas can be a foundation for new energy pathways that will not only deliver energy with virtually near-zero emissions but do so more cost-effectively than relying only on electric technologies.

Section 3 of the Element focuses on community-oriented distributed energy generation (DER) technologies, primarily regarding localized renewable energy facilities that serve the ideal of "local production, local consumption." While SoCalGas agrees that greater prevalence of DER technologies should be a priority, the policies outlined in this section seem to largely focus on use of solar technologies as suggested solutions. However, near-zero natural gas technologies can also play an integral role as a form of community-oriented distributed generation technology. Specifically, combined heat and power (CHP) can serve as a form of onsite DER technology to help separate cities and communities from the electricity grid as well as help diversify their energy mix, thereby increasing local energy security. CHP technologies powered by microturbines can allow a business or other building, such as a hospital, to generate its own electricity *and* heating, allowing the building to be disconnected from the grid. In providing an alternate source of energy, CHP helps efficiently create a broader and diverse mix of energy resources while increasing energy efficiency (RE Policy 6.5).

SoCalGas recommends that the language in the Element be changed to reflect a *technology-neutral* mindset, advocating **both** zero and near-zero emission technologies (such as fuel cells, CHP, and microturbine systems) among their policy strategies, explicitly listing examples of these technologies as needed.

3. Infrastructure Resiliency

Finally, SoCalGas feels there is an additional consideration that should be taken into account regarding the goals outlined in the Renewable Energy Element and the suggested policies. Senate Bill 379, adopted October 2015, requires cities and counties to now incorporate climate adaptation and resiliency strategies applicable to their localities into any updates to their general plans. Increasing and/or expanding use of renewable energy technologies can play an integral role in these strategies. As these technologies are types of distributed generation, they serve as sources of local, reliable power that can increase the resiliency of the energy system. In the case of climate events that damage electric infrastructure, cities and counties with onsite DER can avoid impacts from any power outages as these technologies are black start and islandable – they don't rely on the electricity grid to operate.

With this, it should be noted that there is a substantial divergence in relative risk to electric infrastructure versus the natural gas system from impacts due to climate events. While electric infrastructure is largely aboveground with considerable exposure to events such as wildfire, sea level rise, high winds and storms, the natural gas system is inherently more resilient as a large majority of its infrastructure is underground.

Further, according to the California Energy Commission staff paper on Potential Impacts of Climate Change on California's Energy Infrastructure and Identification of Adaptation Measures (Staff Paper)[ii], "Climate change appears to have little impact on natural gas availability since most of the supply comes from basins

located in Alberta, the Rockies, and the Southwestern United States." With this, DER technologies connected to the natural gas system, like CHP systems, natural gas microturbines and fuels cells, can help manage electricity use and enhance the resiliency of a city's or county's energy system. Not only can CHP provide energy with a very low overall emissions profile, but it is also an islandable, black start technology that can provide clean energy separate from the grid – all the while being less exposed to climate risks compared to other DER technologies like solar and wind. With this, it is seen how CHP effectively "improves resiliency to grid failures and increasing energy prices." (RE Policy 3.4.)

Given these considerations, SoCalGas recommends that consideration of increasing system resiliency through adaptation strategies is incorporated into the Renewable Energy Element either as an individual goal or as a supporting policy of one of the existing goals, such as Goals 2 or 3.

Conclusion

In summary, SoCalGas supports the general goals outlined in the draft Renewable Energy Element for San Bernardino County's Countywide Plan, including promoting renewable energy system diversity, increasing use of DER technologies and improving energy system resiliency. However, given the comments stated above, we have developed several goals of our own that we would like to see accomplished in the duration of the development process for the Countywide Plan. These include the following:

Goal 1 – The Element should include consideration of renewable natural gas (i.e., biomethane) as a renewable energy resource in addition to those explicitly listed throughout the document, and also convey a technology neutral mindset in the language of the supporting policies. The County should look to prioritize and incentive renewable natural gas development and SoCalGas would be happy to partner in such efforts.

Goal 2 – The Element should add consideration of energy system resiliency in its supporting policies, highlighting relative vulnerabilities and strengths of particular renewable energy resources and technologies.

Goal 3 – SoCalGas would like to engage in in-person meetings with the County to have a more active role in the development process of the Countywide Plan.

SoCalGas appreciates your consideration of these comments for the Draft Renewable Energy and Conservation Element of the San Bernardino County's County Wide General Plan. We would appreciate the opportunity to follow up with the County regarding these comments and the rest of the Plan development process. If you have any questions, please feel free to contact me by telephone or email.

Sincerely,

Geoffrey Danker, AICP
Senior Policy & Planning Advisor
Southern California Gas Company

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[i] "What Is Bioenergy?" *UC Davis Bioenergy Research Center*. Accessed August 18, 2016. http://bioenergy.ucdavis.edu/outreach.php.

[ii] Potential Impacts of Climate Change on California's Energy Infrastructure and Identification of Adaptation Measures, CEC, Staff Paper, January 2009, CEC-150-2009-001.

Name not available (unclaimed)
September 14, 2016, 7:19 AM
Claim or invite others to claim

What do you like about Goal 1 on Energy Conservation and Efficiency and its related objective and policies?

Totally agree

Is there anything you would change or add about Goal 1 on Energy Conservation and Efficiency and its related objective and policies?

No response.

Name not available (unclaimed)
September 7, 2016, 7:23 AM

What overall comments do you have about the Draft Renewable Energy & Conservation Element?

In our world today, it is obvious that radical steps must be taken if we are avoid further species extinction, damage to bees and other pollinators, extreme weather and other unintended consequences of "industry" and the chemicals it has produced in the last 100+ years.
There are things we like to do, or consider fun, like riding motorized vehicles in "wild" areas and on lakes or damming rivers to generate electricity for our homes, businesses, and increasing numbers of hi-tech devices. We must remember that living animals and plants live in these wild places and in the lakes and rivers, and that we are destroying their homes with the noise, chemicals released from our motors, and in the case of damming rivers, preventing fish like salmon from continuing to produce young. We are spoiling our own nest and destroying our food sources.
Large commercial solar farms are equally damaging to the plants and animals, as well as being unsightly and lowering values of adjacent property owner's lots.
I support rooftop solar everywhere, on homes, big box stores...why not every building in cities and towns?
Big companies could just as easily make money and provide jobs by building small as by these huge environment-destroying solar arrays.
Thanks for the opportunity to comment on these important issues to all of our lives.

Richard Selby
September 7, 2016, 10:29 AM

What do you like about Goal 1 on Energy Conservation and Efficiency and its related objective and policies?

No response.

Is there anything you would change or add about Goal 1 on Energy Conservation and Efficiency and its related objective and policies?

I
We are concerned about the methodology behind the word "Encourage" as its applied here. To "encourage" passive solar design in the desert is difficult at best. All residential construction by the year 2020 will be required to be "Net Zero" in energy use & production by the new building codes. This will definitely accomplish these desired effects. Will there be penalties for not complying with the Green Code Optional upgrades when the county hasn't adopted them?

Richard Selby
September 7, 2016, 10:43 AM

What do you like about Goal 2 on Renewable Energy Systems and its related objective and policies?

All looks good!

Is there anything you would change or add about Goal 2 on Renewable Energy Systems and its related objective and policies?

No!

Richard Selby
September 7, 2016, 10:51 AM

What do you like about Goal 3 on Community-Oriented Renewable Energy and its related objective and policies?

No response.

Is there anything you would change or add about Goal 3 on Community-Oriented Renewable Energy and its related objective and policies?

Policy 3.3: We would like to see the county add a "Renewable Energy Land Use District" (RELUD) that further breaks down renewable energy into specific types with its own requirements, like Industrial Solar with specific standards dealing with the impacts of large acreage land disturbance & community. Biomass with air quality standards. Algae farms located adjacent to industry that produces tons of co2, for example.

Richard Selby
September 7, 2016, 10:54 AM

What do you like about Goal 4 on Environmental Compatibility and its related objective and policies?

All good but I assume this relates to large scale or what? Where does onsite single residential fit?

Is there anything you would change or add about Goal 4 on Environmental Compatibility and its related objective and policies?

Define RE development as to scale.

Richard Selby
September 7, 2016, 10:58 AM

What do you like about Goal 5 on Siting and its related objective and policies?

OK

Is there anything you would change or add about Goal 5 on Siting and its related objective and policies?

Policy 5.2; We don't agree with the use of good industrial site for solar due to industry may bring good jobs in the future, solar doesn't. Other forms of renewable energy production probably OK!

Richard Selby
September 7, 2016, 11:01 AM

What do you like about Goal 6 on County Government Systems and its related objective and policies?

No response.

Is there anything you would change or add about Goal 6 on County Government Systems and its related objective and policies?

We're just concerned that the county will streamline the permitting process when there are too many potential impacts to address during these processes.

Is there anything you would change or add about Goal 4 on Environmental Compatibility and its related objective and policies?

Policy 4.7 (Encourage mitigation for RE generation facility projects to locate conservation offsets on public lands) is inconsistent with one of the CORE values specified in this report (i.e., Conservation of natural and cultural resources. Stewardship that conserves ...environmental, scenic...assets... ensures healthy habitats for sensitive plants and wildlife... ; as well as is inconsistent with Countywide Habitat Preservation/Conservation Framework Development prepared for the County by Dudek (2015)), in that it does not identify (or encourage identification) of specific areas of non-public land within the county for conservation of sensitive plants, wildlife or associated habitat. Nor does this policy acknowledge that there are private entities such as mitigation banks and various community groups (as opposed to public agencies) approved by various public agencies, to hold and acquire fee title lands or conservation easements for the express purpose of appropriately managing such lands for the express purpose of plant/animal/habitat conservation in perpetuity. The use of public lands as a mitigation bank for RE project impacts that can not be avoided is but one piece of the puzzle. There are several agency-approved entities who enrich local communities in the county through the acquisition and hands-on management of conservation lands which not only further Policies 4.1, 4.2, and 4.6; but also further Policy 4.3 by acquiring open space lands buffering certain RE projects, as well as providing much needed open space parks situated in proximity for county residents to conveniently enjoy. Recognizing the role non-public lands and responsible mitigation bank entities play in furthering the overall goal 4 of environmental compatibility, and taking proactive steps in identifying all high-value conservation lands, as well as least-conflict RE development areas and all strategies to conserve high-value conservation lands, is a sound investment in achieving Goal 3 (Community-oriented renewable energy facilities will be prioritized to complement local values and support a high quality of life in unincorporated communities) of the County's Renewable Energy and CONSERVATION Element.

Considerable private lands within the county, particularly within the Mojave Desert, are in private land ownership which support habitat for key focal species and habitats. Examples include the Mojave River, which is primarily in private ownership (specifically high value riparian wooded habitat suitable for listed species such as the endangered least Bell's vireo & southwestern willow flycatcher, other neotropical migratory birds and numerous species of special concern such as the western pond turtle; as well as moving sand/dune habitat necessary for the Mojave fringe-toed lizard); certain slopes of the Cady Mountains and Pisgah Valley which are critical for the protected golden eagle and threatened desert tortoise; specific North Slope San Bernardino Mountains locales which are critical for as many as five endangered/threatened carbonate endemic plant species; specific small locales which support ever-important desert springs (important for most wildlife, particularly desert bighorn sheep in certain mountain ranges), movement corridors as well as rare limited plant populations (some of which occur nowhere else in the state or elsewhere); and critical linkages for threatened species like the extremely limited-distribution, endemic Mohave ground squirrel in the north of Edwards/Kramer vicinity and along the western edge of the county.

The identification of all open space lands that may be necessary to support focal plant and wildlife species, regardless of ownership, as well as least conflict renewable energy lands, is a necessary first step in designing an effective renewable energy and conservation plan or general plan element. Following, this step, an identification of lands which have been set aside specifically for conservation is a critical procedure, so that species information data gaps, inadequate or ineffective land management, and crucial linkage wildlife corridors can be identified for planning and protection purposes.

With the looming impact of climate change and its myriad effects upon plants and wildlife, even more lands within private ownership, particularly in the western Mojave Desert per recent research, are likely to be identified as crucial, and will be necessary to manage specifically for conservation purposes, if we are to effectively conserve certain focal species within the county over the long term.

Thomas Egan
August 13, 2016, 7:35 AM

What do you like about Goal 4 on Environmental Compatibility and its related objective and policies?

Policies 4.1 (protect sensitive biological resources); 4.2 (ensure that RE facilities do not disrupt, degrade or alter the local hydrology and hydrogeology); 4.3 (encourage siting to avoid, minimize and mitigate visual impact); 4.4 (require RE developers to provide and implement a decommissioning plan that provides for reclamation of the site to a condition at least as good as that which existed before the lands were disturbed); 4.6 (Avoidance of sensitive habitat through site selection and project design, when onsite mitigation is not possible or adequate conduct mitigation offsite in an area designated for conservation); and 4.8 (encourage RE developers to design projects that provide for sanctuary for native bees, butterflies and birds).

Thomas Egan
August 29, 2016, 4:53 PM

What do you like about Goal 5 on Siting and its related objective and policies?

No response.

Is there anything you would change or add about Goal 5 on Siting and its related objective and policies?

Least conflict areas for RE development/siting need to be identified, proximal to energy need and existing transmission load infrastructure. Equally important, areas for environmental conservation need to be identified to ensure this environmental priority is secured throughout our county, which address long term management and uncertainties associated with climate change. Energy generation should benefit county residents over that of energy consumers living outside our county.

Vickie Paulsen
August 13, 2016, 8:22 AM

What do you like about Goal 1 on Energy Conservation and Efficiency and its related objective and policies?

The last sentence of the first paragraph. I'm a big fan of rooftop gardens for the flat-roofed large-area stores and warehouses. More expensive to construct the roof to hold them, but enormously effective in keeping the temps even inside the buildings, cooling all the surrounding territory, and enhancing air quality. They can also provide park space for employees and thus a happier work environment.

Is there anything you would change or add about Goal 1 on Energy Conservation and Efficiency and its related objective and policies?

No, but it's a reality that "affordable" comes with an initial higher price. We have to be willing to pay that price one way or another.

October 17, 2016

(Sent by email: Linda.Mawby@lus.sbcounty.gov)
Planning Commission for
San Bernardino County
c/o Ms. Linda Mawby
County of San Bernardino Government
Center Covington Chambers- First Floor
385 North Arrowhead Ave.
San Bernardino, Calif. 92415

Dear Members of the Planning Commission:

Re: Draft Renewable Energy and Conservation Element

We are a coalition made up of the following community groups, businesses, agencies and individuals: Lucerne Valley Economic Development Association (LVEDA), Johnson Valley Improvement Association, Homestead Valley Community Council, Morongo Basin Conservation Association, Lucerne Valley Market/Hardware, Basin and Range Watch, California Desert Coalition, Desert Protective Council, Alliance for Desert Preservation ("ADP"), Mojave Communities Conservation Collaborative, Brian Hammer, Marina D. West, John Smith, Pat Flanagan, Bill Lembright, Jim Harvey and Jenny Wilder. Together, we represent a broad spectrum of residents, businesses, organizations, recreationists and conservationists in the High Desert of San Bernardino County.

This letter sets forth our comments on the proposed draft, dated July 29, 2016, of the Renewable Energy and Conservation Element ("RECE") of the County's General Plan, and supplements oral comments made by some members of our coalition at the Planning Commission's RECE workshop on August 4, 2016 and at a meeting with Terri Rahhal (in Lucerne Valley) on September 20, 2016, as well as written comments submitted by ADP to the Planning Commission by way of a letter dated September 2, 2016 (the "September 2, 2016 Letter").

As noted in the September 2, 2016 Letter, the proposed RECE makes great strides in the right direction, compared to the utility-scale approach embraced by SPARC in its earlier stages. The proposed RECE now points toward a much more enlightened emphasis on point-of-use models. The Distributed Generation model promotes the highest number of long-term high paying local jobs, sustains the tax base through property value preservation, and protects the

valuable open spaces so critical to the economies of most of the desert communities. It is the fastest, safest, and cleanest way to ramp up renewable energy generation in San Bernardino County (which will sometimes be referred to in this letter as the "County").

We will suggest below the addition of language and overlay zones that, if incorporated into the RECE, would allow its stated goals and objectives to become concrete realities.

1. The Centerpiece of the RECE Must Be Overlay Zones Showing the Only Places Where Utility-Scale Solar Will Be Permitted.

The RECE needs simplicity and clarity. Developers, planners, contractors, the labor force and the general populace need a clear statement on where industrial-sized solar renewable energy projects can go. Vague criteria will not make this clear. Geographically specific maps, i.e., solar overlay zones -- stating exactly where such projects can be developed – will provide such clarity.

On February 17, 2016, the San Bernardino County Board of Supervisors adopted a resolution tentatively designating five sites as the only places that utility-scale can go, subject to the projects otherwise satisfying the County's criteria ("Resolution"). A copy of the Resolution is attached to this letter, as is a map that depicts those five sites. This was not the first time that the County has articulated its foremost values and priorities in terms of siting large-scale renewable projects. In a Position Paper, dated February 3, 2015, which was submitted by the County with reference to the draft DRECP, the County stated that the communities of Newberry Springs, Stoddard Valley, Johnson Valley, Lucerne Valley and Apple Valley were not appropriate for DFA's.

The proposed RECE mentions the Supervisors' Resolution as a guiding principle when it comes to locating utility-scale projects. This is good, but the RECE should go farther. The RECE should build on the work done by the County in its Resolution, and in its Position Paper, by specifically stating that the five sites designated by the Resolution are, subject to environmental review, the only places in the County where utility-scale will be allowed. Overlay zones should be created for that purpose in the RECE on the five sites.

The Resolution designated each of the five sites -- which are seriously degraded, away from population centers, and relatively close to existing transmission – pursuant to a landscape-level, "least-conflict" approach similar to the one ostensibly advocated in the Phase I, public-

lands component of the DRECP[1], even though Phase I of the DRECP essentially turned its back on its own stated ethos and data.[2]

Applying such a Phase I approach to the County's private lands – which, in general terms, involved ruling out, as locations appropriate for utility-scale, populated areas and regions critical to maintaining ecological processes/habitat linkages, while favoring such development on heavily degraded lands adjacent to existing transmission corridors – the five sites designated in the Resolution emerged as the only logical and appropriate locations for large-scale renewable energy development in the County.[3]

Enclosed with this letter are the following maps, each of which was considered in identifying the five sites:

(1) a map included in Ms. Penrod's "California Desert Connectivity Project" (Penrod et al. 2012) – which is duly lauded in the draft DRECP as providing "a comprehensive and detailed habitat connectivity analysis for the California deserts" (App. Q (Sections 3.4.1 and 3.4.2)) – depicting the "Desert Linkage Network," upon which is overlaid the Desert Tortoise TCA Habitat Linkages (as prepared for the DRECP by the USFWS -- one of the four state and federal agencies sponsoring the DRECP). These combined linkages reflect the interconnections between individuals of a species and among species, with a focus on how they subsist, migrate and

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[1] Our coalition – several members of which have submitted vigorous protests regarding the DRECP -- is not by any means endorsing the DRECP given that, among other things, its Phase I Land Use Planning Amendment/FEIS released in September 2016 (the "BLM LUPA") places DFAs (Development Focus Areas, where utility-scale projects are to be actively streamlined and incentivized) adjacent to desert rural populations and severs widely-acknowledged wildlife linkages in the County, including ones called for by renowned wildlife biologist Kristeen Penrod and the United States Fish & Wildlife Service ("USFWS"). The BLM LUPA would not have done so had it remained true to the stated DRECP vision, which has thus far been honored only in the breach.

[2] The BLM LUPA claims that it serves "two sets of overarching goals": (1) identifying lands appropriate for utility-scale renewable energy development, while (2) "simultaneously providing for the long-term conservation and management of Special Status Species and vegetation types as well as other physical, cultural, scenic and social resources within the DRECP Plan Area . . ." But, rather than take up its stated mission of assessing a "full range of impacts" that utility-scale would have, and of conserving the "ecological processes of the Mojave and Sonoran deserts," the BLM has called for more than 8,000 MWs of utility-scale for federal land in the County. See Section 2 of this letter, which provides input on what the RECE should say about proposed BLM projects that conflict with the County's values.

[3] The RECE should also state clearly that utility-scale wind projects are prohibited altogether. This is the approach taken by Inyo County, a county that has a lot in common with our own.

procreate over time as part of a desert knit together by connectivity corridors as a living, breathing biome[4];

(2) a map showing the DRECP's DFAs, Variance Lands and Unallocated Lands overlaid on the Desert Tortoise TCA Habitat Linkages -- utility-scale renewable energy facilities are allowed by the DRECP on DFAs, Variance Lands and Unallocated Lands, notwithstanding that they impinge on recognized wildlife linkages;

(3) a map showing the ACECs (Areas of Critical Ecological Concern) and NLCS (National Landscape Conservation System) areas under the DRECP where utility-scale would be prohibited -- the ACECs and NLCS areas are anemic reflections at best of Ms. Penrod's Desert Linkage Network and the Desert Tortoise TCA Habitat Linkages, but further demonstrates the BLM's recognition that the County is laced with important habitat corridors that preclude industrial-scale development;

(4) a DRECP map depicting Overdraft Groundwater Basins in the County, which confirms that the County's most populated desert regions – its towns and north and eastern slope valley regions – have seriously depleted aquifers;

(5) a DRECP Conservation Value map, to which the five sites referenced in the Resolution have been added – areas that have been heavily degraded are depicted on that map as having lower "conservation value;"

(6) a DRECP map showing Special Recreation Management Areas/Extensive Recreation Management Areas under the BLM LUPA, where development of utility-scale renewables is precluded; and

(7) a DRECP map confirming that existing transmission is adjacent to those five sites.

Those maps – and the fact that Apple Valley, Lucerne Valley, Johnson Valley and Morongo Valley, among others, host well-established towns and dispersed desert rural communities that would be negatively impacted by industrial-scale renewables (among many other considerations, they draw from already overdrafted groundwater basins) – compel the conclusion, through a simple process of elimination, that the County's north and eastern slope valley areas must be kept off-limits to such large-scale development; they also confirm that there are highly degraded, transmission-adjacent, former and current industrial, mine and brownfield sites further north -- near Trona, Hinckley, North of Kramer Junction, El Mirage and

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[4] Ms. Penrod prepared a report for ADP (a copy of which is enclosed with this letter) – which embodied her comments on the draft DRECP – that expanded this linkage network well beyond that which is depicted in the attached map – among other things, her report demonstrates that almost all of Lucerne Valley should be protected from large-scale development as part of a far-reaching wildlife linkage network integral to connecting the intact landscape block of the San Bernardino Mountains with the desert region to the north.

Amboy -- where such development could be permitted, i.e., the five sites designated in the Resolution.[5]

Ensconcing those five sites in the RECE – as the only places in the County where utility-scale could be located – is crucial because the RECE will implement Phase II of the DRECP, which is to address private lands within counties in the DRECP Plan Area. As stated in the BLM LUPA:

> "Phase II builds off of the Renewable Energy Conservation Planning Grants (RECPG) that were awarded by the CEC to counties in the DRECP Plan Area. Phasing of the DRECP allows for additional work with the counties, which have primary land-use and permitting authority on private lands in their counties."[6]

Because the RECE for this County – the largest county in the United States – will become the cornerstone of the Phase II DRECP – and have a host of desert-wide, federal-level implications – the first priority of the RECE must be to incorporate solar overlay maps that makes it clear where utility-scale can and cannot go. Goals and objectives are important, but only an overlay clearly delineating where utility-scale is allowed provides the necessary clarity on this critical threshold question. The five sites identified in the Resolution provide for approximately 153,200 acres of land upon which utility-scale can be located, so the approach we are suggesting in this letter represents a careful balancing that would permit large-scale development, while also conserving the County's social and environmental fabric against the many harmful effects of wide-spread, serial industrialization.

Making all this even more imperative is that the Phase I BLM LUPA makes, according to our calculations, approximately 550,000 acres of DFAs, "General Public Lands" and "Variance Process Lands" throughout the County available for utility-scale renewable energy development, not to mention the thousands of acres of transmission that would have to be installed to accommodate approximately 8,000 MWs of utility-scale development on federal lands. Under the BLM LUPA, such development is to be streamlined and incentivized on the DFAs, which, along with the General Public Land areas, are intermingled among established north and eastern slope communities and sit astride recognized ecological connectivity corridors. In Kristeen Penrod's report for ADP (again, a copy is enclosed with this letter) – which embodied her comments on the draft DRECP -- she declared emphatically that "NO DFAs should be sited

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[5] The five sites also have the virtue of being located: (1) over ample groundwater supplies (moreover, the groundwater underlying the Trona, Hinckley and Amboy sites is non-potable, and can only be put to industrial uses); (2) outside of any military flight corridors; (3) on land that has a flat enough gradient to host utility-scale solar development; and (4) near communities that, according to ADP's dialogue with members of the Board of Supervisors, are not generally opposed to utility-scale development.

[6] Further, as correctly noted in the BLM LUPA, ". . . landscape goals can best be achieved when plans are implemented across ownership [meaning across a given region's publicly-held and private lands]."

within the Desert Linkage Network [which were created by the above-referenced "California Desert Connectivity Project" study], desert tortoise linkages, bighorn sheep intermountain habitat and Mohave ground squirrel linkages," and that "all these species-specific linkages and landscape linkages should automatically be included in the Reserve Design" as ACEC, NLCS lands and the like . . .". She also noted that the DFAs proposed for the "Pinto Lucerne Valley and Eastern Slopes" subarea showed a serious disregard for well-established data and studies relating to the preferred and critical habitats and connectivity corridors for 37 Covered Species, as well as other focal species. She concluded that, based on biological habitat and connectivity issues alone, the Apple Valley, Lucerne Valley and Johnson Valley DFAs radically threaten the health and survival of many special status species.

Notwithstanding Ms. Penrod's impeccably researched and reasoned objections, the BLM LUPA adopted each of those DFAs in the BLM LUPA.[7]

With the continuing viability of the County's human and natural communities at stake – and recognizing that the County will soon come under siege from utility-scale development on BLM land that is outside of its jurisdiction and direct control – the County must seize the opportunity to mold the RECE in a way that protects and prioritizes the welfare and sustainability of those very interdependent communities, and provides assurance to the people of this County that our desert will not become a national dumping ground for big, grid-oriented energy projects, where the profits and power are sent out of the County, while all the downsides remain here.

2. The RECE Should Require that, in Determining Whether or Not to Grant Requests for Any Approvals Needed for Utility-Scale Projects on BLM Lands, the County Must Apply All Identified Criteria to Achieve and Preserve the County's Priorities and Objectives, including Protection of its Human and Natural Communities.

As noted above, the BLM LUPA streamlines and incentivizes utility-scale projects on DFAs, which, along with the General Public Lands and Variance Lands areas, are intermingled among established towns and north and eastern slope communities, and which sit astride recognized ecological connectivity corridors. While BLM lands in the County are not within the County's direct land use planning jurisdiction, it is likely that as to at least some BLM projects the County will be called upon to grant various types of discretionary approvals – such as well permits and rights of way -- needed to establish utility-scale projects on BLM lands. In conjunction with such requests, it is highly possible that the County will be included as a CEQA/NEPA co-lead agency, as was the case for the proposed Soda Mountain solar project. When the County receives such requests, it should use its authority to apply criteria identified in

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[7] In establishing those DFAs, the BLM also ignored the above-referenced Position Paper submitted by the County in opposition to the draft DRECP, wherein the County stated that DFAs need to be removed from the communities of Newberry Springs, Stoddard Valley, Johnson Valley, Lucerne Valley and Apple Valley.

the RECE to achieve and protect the County's priorities and goals, including the protection of its human and natural communities to the greatest extent possible.

In that regard, we recommend that the RECE state that, if the County is called upon to grant such discretionary approvals, it must carefully weigh the benefits that would accrue from the proposed project to the County and its residents against the harmful effects – short-term and long-term – that would be imposed on affected individuals, communities and ecological processes/habitat linkages.[8] The RECE should further state that, unless the benefits decidedly and demonstrably outweigh the burdens, the County must deny the requested discretionary approval.[9]

The County's Board of Supervisors has recently applied such a weighing process in connection with the proposed Soda Mountain solar project, where the County was asked to approve well permits for a large utility-scale project on BLM land (the County was also named co-lead CEQA/NEPA agency). The Board of Supervisors ultimately disapproved the project based, in large part, on its assessment that its anticipated benefits, i.e., its profits and generated power, would flow out of the County to enrich others, while its substantial economic and ecological burdens would be left behind for the County's residents to bear. Quite appropriately, the County put protection of its populace and conservation of its natural resources first.

It is particularly crucial that the County commit itself to the weighing process proposed above because the DRECP, by "phasing" itself to cover BLM land first, has created a BLM LUPA with many conservation areas truncated or left hanging, wildlife corridors that stop at the BLM's various borders with County private lands, and DFAs and Public Lands that, practically speaking, will direct renewable energy and transmission development on adjacent private, non-BLM lands in the County without any planning input from the people affected or the authorities with jurisdiction. Species, landscape connectivities and biomes know no political boundaries, and they will suffer irrevocable damage from big utility-scale projects, whether they are located on BLM land or private land in the County.

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[8] A utility-scale project proposed on federal land should, of course, also be required to comply with the siting requirements of the RECE, because large-scale development on federal land will directly and unavoidably affect County residents on neighboring private land. Further, as noted below in Appendix 1, the RECE should preclude utility-scale development on public or private land in the County on stressed or overdrafted groundwater basins.

[9] The RECE states (on p. 36) that the ". . . this Element encourages utility-oriented RE development on federal land in DRECP Development Focus Areas (DFAs), specifically those endorsed for this purpose by the Board of Supervisors resolution." The first portion of that sentence runs counter to our recommendation that, in weighing approvals needed for RE development on federal land, the County should prioritize achieving the RECE's goals, as well as protection of our human and natural communities, to the greatest extent possible, i.e., the County should *discourage* RE development on BLM land. The second portion of the quoted sentence must also be revised, because the Resolution endorsed the DRECP DFAs only to the limited extent that they might overlap with the five sites identified in the Resolution.

This means that, unless the RECE unequivocally identifies the objectives and priorities which are most important to the County in the process of planning for renewable energy development, and states just as unequivocally that any project requiring ancillary approvals from the County must meet the County's standards and criteria, the BLM, by going first, would be calling the shots for development of both renewable energy and transmission far beyond its boundaries.

3. The RECE Needs to Refine the Definition of "Community-Oriented Solar."

The proposed RECE rightly places a strong emphasis on community-oriented solar renewable energy, or CORE. The RECE does a good job of identifying the important County values which are served by strongly encouraging community-oriented solar while moving away from utility-scale.

Quite rightly, the RECE specifies that CORE is to serve local needs, create energy independence, reduce the need for new transmission, sustain sensitive natural resources and habitats and encourage economic growth.

However, the RECE should be more specific as to maximum size of individual projects and regarding the degree to which CORE projects can be concentrated in a given area. Further, the RECE should establish a more refined set of criteria, so that even if a project is under the maximums, it will be disallowed if its functional purpose and environmental effect is more like utility-scale. This is vital to prevent the proliferation of projects that paste on a "community-oriented" label but are, in fact, geared toward selling power to the grid.[10]

Examples of relevant criteria – of the sort that should be incorporated into the RECE -- include the following:

(a) The project should serve only the local community, with net metering, and with sales of excess wattage as lowest priority (no more than 5% of the project's maximum output);

(b) The nameplate capacity of a proposed community solar project must be proportionate to the current and reasonably anticipated needs of the community;

(c) The project should require only minimal new transmission infrastructure; and

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[10] A developer could break up a large-scale project into several smaller ones, call them community solar and concentrate them in the one locale. Or the developer could break up a large-scale project into smaller ones -- labelled community solar -- and disperse them. Or developers could concentrate so many CORE projects in one area that -- together -- their purpose and effect equates with utility-scale. In any of those cases, most of the power generated could be sold to the grid for the developer's profit, and our communities would mostly reap the detriments, which would include the overbuilding of projects labelled community solar.

(d) The cumulative megawatt capacity of community solar projects that can be put in a given area should be limited so that they do not become over-concentrated in any particular region.

Regarding (b) above, the proposed RECE (at p. 25) goes in the opposite direction, defining community-oriented renewable facilities as ones that "are *primarily* intended to serve the people near them." (Emphasis added.) Under that definition, up to 49.99% of a so-called community-oriented facility's output could be sold to the grid without sacrificing its favored CORE status. That sets the bar much too low -- projects selling up to half of their output should instead be considered utility-scale and, as noted above in Section 1 of this letter, confined to the five sites designated in the Resolution.

We recommend that the RECE be revised to specify that a project cannot be considered to be a CORE facility if its nameplate capacity exceeds -- by more than five per cent -- the current and reasonably foreseeable short-term requirements of the community which it is to serve.

4. The RECE Needs to Provide More Definite Siting Criteria for CORE Projects.

The proposed RECE must provide definitive parameters for where community solar projects are to be sited. Otherwise, community solar will not benefit the communities it is intended to serve, nor will it preserve natural resources and habitats.

Suggestions about siting criteria that should be added to the RECE are described below.

Community solar projects should not impinge on wildlife corridors. As noted above, biologist Kristeen Penrod – whose research is widely viewed as the gold standard by state and federal agencies -- has extensively mapped these corridors in San Bernardino County, and made it clear that they are the minimum needed to sustain the plant and animal species found in this County.

The RECE should have intelligent, refined criteria regarding siting on disturbed or degraded lands. Historically, "disturbed" and "degraded" have been terms frequently used to include almost any part of the desert that has experienced any degree of human development. Currently, most of the desert has a dispersed rural population which successfully coexists with an intact natural environment. This unique, and delicate, balance between human and natural communities could be destroyed by too much energy development, including CORE projects. The RECE should provide that community solar development take place on lands that have been severely degraded by human activity, like former brownfield, mining and industrial sites.

The proposed RECE also says "fallow agricultural lands" may be good to site new projects. But large portions of certain desert regions, such as Lucerne Valley, have at one time

been used for farming, but are now recovered or recovering desert lands. Siting criteria should be developed which are sensitive to these distinctions.

The proposed RECE should also incorporate siting criteria so that community scale renewables will not needlessly impinge on the communities they are intended to serve, with particular attention given to quality of life and visual values issue.

The proposed RECE calls for new subdivisions to set aside land for development of neighborhood solar. However, the siting criteria should emphasize and incentivize community solar systems which to the greatest extent possible use the built environment – that is, parking lots, rooftops and the like -- as opposed to ground-mounted solar. The benefits to everyone of these criteria are fairly obvious: less land disturbance, greater carbon sequestration, a reduction in blowing dust, and a sharp reduction in the large amounts of water required for construction and maintenance.

The proposed RECE should also develop siting criteria for community solar which minimize the need for new transmission infrastructure, because the addition of such infrastructure leads to sharply higher costs for the power consumer and environmental degradation.

5. The RECE Should Require Renewable Energy Developers to Provide Comprehensive Analyses of the Effects Their Projects Would Have on Groundwater Supplies.

The proposed RECE does not include any clearly-defined criteria by which County decision-makers can assess the degree to which proposed renewable energy projects, including CORE projects, will negatively impact the County's already stressed and over-drafted groundwater basins. This must be remedied if the RECE is to provide the far-sighted vision it aspires to. Water is an irreplaceable resource that is this County's lifeblood, and it is already threatened by a prolonged drought. It is also jeopardized by 20,000 MWs of new utility-scale renewable energy that the DRECP plans for the California desert.

The RECE should require that developers of renewable energy projects – other than rooftop or parking lot solar – provide, as part of the application process, a scientific and comprehensive analysis of the effects their projects would have on the County's groundwater supplies. The need for such a requirement becomes clear when such data as we have on the subject – which comes chiefly from the DRECP – are considered.

While the draft DRECP did not conduct a meaningful analysis of groundwater baseline data, it nevertheless made valuable observations about the tenuous state of the desert's groundwater basins. For instance, the draft DRECP acknowledged that its DFAs would be located primarily on already overdrafted groundwater basins from which the enormous volumes of water needed -- for the construction, maintenance and operations of large-scale generation facilities -- would have to be drawn. In that regard, it conceded (at IV.6-24) that "[d]evelopment would occur in 35 groundwater basins," that 14 of them are stressed or in

"overdraft or stressed," that "[m]ost (97%) of the developed area is within four ecoregion subareas [the High Desert areas of Los Angeles and San Bernardino Counties and the Imperial Valley]" -- which are the most populated areas of the California desert[11] -- and that "increased groundwater use in these sensitive basins can adversely affect water supplies and exacerbate impacts associated with overdraft conditions and declining groundwater levels."

The draft DRECP also stated that the total estimated water use for the new projects it sought to foster would be 91,000 acre-feet per year (IV.6-24), and that the "[r]enewable energy facilities permitted under the DRECP could influence the quantity and timing of groundwater recharge because construction would include grading the land surface, removing vegetation, altering the conveyance and control of runoff and floods, or covering the land with impervious surfaces that alter the relationships between rainfall, runoff, infiltration and transpiration [IV.25-45]." Solar energy – which was the renewable technology preferred in the DRECP -- "would result in the largest amount of grading so it would have the largest impact on groundwater recharge among the renewable technologies permitted under the DRECP [IV.25-45]."

According to the vastly understated language of the draft DRECP, the "use of groundwater for renewable facilities permitted under the DRECP would combine with [other uses of groundwater] . . . to result in a cumulative lowering of groundwater levels affecting basin water supplies and groundwater [IV.25-46]."

The draft DRECP also took note (IV.25-45) of the "[p]opulation growth and anticipated development summarized in Section IV.25.2.2" -- including "future residential development that would also use a large amount of groundwater continuously [IV.25-46]" and that would result from anticipated renewable energy and other projects -- as further contributing to the drawdown of desert groundwater basins.

Even more ominously, the draft DRECP noted that the proposed renewable energy projects would result in "compression [of groundwater basins that would reduce] the volume of sediment beds and lower land surface elevations, which can damage existing structures, roads, and pipelines; reverse flow in sanitary sewer systems and water delivery canals; alter the magnitude and extent of flooding along creeks and lakes. This compression of clay beds [that make up groundwater basins] also represents a permanent reduction in storage capacity" [IV.25-47]. The proposed renewable energy plants and transmission facilities "could also cause water-

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[11] When the DRECP's map of the Preferred Alternative DFAs (which, along with transmission corridors, was to entail approximately 177,000 acres of "ground disturbance" (IV.7-215)) is superimposed on top of the DRECP's Overdraft Groundwater Basins map, one sees that (with small exceptions) all of the High Desert DFAs – from the Antelope Valley east to the Johnson Valley -- were located within the boundaries of already overdrafted groundwater basins. Indeed, the DRECP conceded: "[u]nder the Preferred Alternative, development in BLM lands can affect groundwater in 12 basins characterized as either in overdraft or stressed" [Section IV.6 of the DRECP].

level declines in the same groundwater basins and contribute to the migration of the saline areas of groundwater basins" [IV.25-47].

According to the draft DRECP, the Upper Mojave groundwater basin -- which serves the DFA-encompassed region around Victorville, Hesperia, Apple Valley and parts of Lucerne Valley – has been sustained by surface water from the State Water Project (Figures III.6-6 and III.6-36) that can no longer be counted on due to the drought. The Upper Mojave basin is among the biggest users of groundwater (Figure III.6-13) and (III.6-58); groundwater pumping has caused land subsidence of "many tens of feet" in basins along the Mojave River, "and further east from the Lucerne Valley to Morongo Valley Region," as well as significant declines in well levels of up to five feet (Table III.6-1).

Additional important, reliable information does exist regarding the groundwater baseline and the effects of renewable energy projects on groundwater supplies. According to the State Water Resources Control Board (the "SWRCB") (in its comments to the draft DRECP):

> "Extensive development of solar and/or geothermal energy will require a large volume of water supply which is not readily available in a desert environment. Existing sources are already developed and many aquifers are under overdraft or stressed conditions. Extracting an additional 100,000 AF/Y of groundwater will make the situation worse. USGS-GAMA studies indicate that the majority of groundwater in the Basins and Ranges hydrologic province is thousands of years old (i.e., it takes thousands of years for groundwater to travel from the point of recharge to the point of discharge (well)).[12] Only small areas adjacent to the mountains are recharged directly by rainfall or snowmelt, and this groundwater is already developed. Even if there is younger groundwater with the aquifer, it occurs in a relatively thin layer on top of the older groundwater, and the older groundwater quality becomes worse with depth. The EIR/EIS should address the likelihood that eventually large scale development will require an outside source of water, or water treatment and recycling, instead of groundwater mining [p. 22 -23]."

The Upper Mojave groundwater basin, which underlies much the same region as the adjudicated "Alto" groundwater basin (a designation made by the Mojave Water Agency in its annual Watermaster reports) received, for a time in 2014, only 5% of its requested allocation (according to a December 2, 2014 article in the Desert Dispatch, that allocation was actually reduced to 0% for a time, then brought back up to 5% in light of recent rains -- the 5% allocation is the lowest ever made in the State Water Project's history because a sparse snowpack melted early and most of the state experienced near record lows in rainfall). The Alto basin's allocation

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[12] According to the SWRCB, "[i]n most areas of the desert, deeper, older groundwater is saline. Excessive pumping will likely cause migration of saline water into fresh water aquifers [p. 11]." The SWRCB also says that our aquifers represent a closed system where 66% of the groundwater is between 100 and 33,000 years old with the only "young" recharge coming from the mountains [p. 18].

from the Mojave Water District has, in turn, been ramped down to 60%. Eventually, any water stored in the ground as a sort of "rainy day fund" will run out.

In terms of construction usage, the 550 MW Desert Sunlight 250 project (on 4,400 acres of land) – and the 1,550 acre feet of water allocated to its construction – can be used as a metric. Forty projects of that size would produce just over the DRECP's targeted 20,000 MWs in renewable energy. Assuming that those forty projects would use a similar amount of water during their construction, construction of 20,000 MW of new renewable energy projects would consume 620,000 acre feet of water, which equates with approximately 20 billion gallons of water.

In their maintenance and operations, the utility-scale solar projects in the Lucerne Valley DFA would, according to data from the DRECP, consume almost 1,000 acre-feet of water **per year,** which is enough water to fill four Rose Bowls to the brim. On a DRECP-wide basis, if all 20,000 MW of generation were to come from the least water-intensive generation method – which is solar PV (as opposed to solar thermal, which requires many multiples more water in cleaning, as well as a great deal of additional water for cooling operations) – and the PV panels were washed only six times per year, the cleaning of the panels alone would consume .15 acre feet per year per megawatt of generation, which would amount to a total water expenditure of approximately 3,000 acre feet per year (20,000 times .15 = 3,000).

Projects on the BLM land will be drawing from the same groundwater basins that the rest of the County relies on – in effect, public and private "straws" will all be drawing from the same figurative milkshake. Nevertheless, the DRECP made no study of the impact on the desert's aquifers of siting 20,000 MWs of new generation facilities, nor did the DRECP include any real baseline data concerning the health or sustainability of those basins under current demands, or when the effects of an ongoing drought of historic proportions is factored in.

This puts the onus on those seeking to develop renewable energy facilities on the County's public and private lands to: (1) conduct and incorporate a comprehensive assessment as to how the siting of their proposed renewable energy generation would – in combination with other factors, including the plethora of utility-scale projects that will be developed on public land under the BLM LUPA -- affect relevant groundwater basins, i.e., to what degree would their sustainability be threatened; and (2) conduct a baseline study as to the current status of those aquifers – how much potable and non-potable water is each such groundwater basin currently holding? How much water is being pumped out of each basin by the residents and businesses currently relying upon them? How much water can be expected to recharge the basins, either from natural sources or from the State Water Project? Are the groundwater basins sustainable in view of the demands currently being made on them, and in view of their recharge rates, or are they approaching collapse, i.e., what are their tipping points? What is the likely effect of the ongoing, historic drought on our groundwater basins?

The RECE should require that renewable energy developers conduct such comprehensive groundwater analyses, and that the County decline to approve any projects on private land – or decline to provide discretionary approvals needed for projects on public land (see the discussion

above in Section 2) – unless the County is satisfied that the project would not compromise the viability of affected groundwater basins.

6. The Proposed RECE Should Adopt a Variable Approach, Recognizing the Differences Between the Desert and the Built Environment.

The values, concerns, constraints, and possibilities for renewable energy and conservation differ markedly between the desert portion of the County, and the built portions of the County. An obvious example is the presence of rooftops and parking lots in the built environment, making it possible to install solar pv systems which (1) generate power that can be consumed in the immediate vicinity, and (2) do not create many of the conflicts with County values which arise for projects proposed for the desert. The proposed RECE should recognize these differences, and articulate objectives and development criteria that take these differences into account. As just one example, the RECE can, by means of a combination of mandates and incentive programs, guide new construction in the built environment toward a goal of zero net energy.

7. Some of the Goals in the Proposed RECE Should Be Refined, and in Some Cases Be Revised, in Order to Realize its Stated Aspirations.

We suggest that some specific goals and related provisions of the proposed RECE should be refined and revised in ways that, if adopted, will allow for implementation of the goals it espouses.

We have appended our recommendations in this regard to this letter as Appendix 1.

8. Conclusion

We commend the progress made in the proposed RECE toward fostering renewable energy development that does not come at the cost of the County's human and natural communities. Incorporation of our comments will allow the RECE to achieve that goal. We look forward to continued participation in the RECE process.

Very truly yours,

<u>Community Associations, Businesses and Organizations</u>:

LUCERNE VALLEY ECONOMIC COUNCIL DEVELOPMENT ASSOCIATION

Chuck Bell, President

HOMESTEAD VALLEY COMMUNITY

Joanna Wright, President

JOHNSON VALLEY IMPROVEMENT ASSOCIATION

Betty Munson, Acting Secretary

MORONGO BASIN CONSERVATION ASSOCIATION

Sarah Kennington, President

LUCERNE VALLEY MARKET/ HARDWARE

Linda Gommel, Chief Executive Officer

BASIN AND RANGE WATCH

Kevin Emmerich, President

CALIFORNIA DESERT COALITION

David Miller, Board Member

DESERT PROTECTIVE COUNCIL

Terry Weiner, Projects and Conservation Coordinator

ALLIANCE FOR DESERT PRESERVATION

Richard Ravana, President

MOJAVE COMMUNITIES CONSERVATION COLLABORATIVE

Lorrie L. Steely, Founder

Individuals:

Brian Hammer, Analyst and Adjunct Professor (resident of Adelanto)

Marina D. West (resident of Landers)

John Smith (resident of Apple Valley)

Pat Flanagan (resident of Twentynine Palms)

Bill Lembright (resident of Lucerne Valley)

Jenny Wilder (resident of Apple Valley)

Jim Harvey (resident of Johnson Valley)

APPENDIX 1 TO THE LETTER, DATED OCTOBER 17, 2016, TO THE PLANNING COMMISSION FOR SAN BERNARDINO COUNTY REGARDING THE PROPOSED RECE

The RECE states, as its RE Goal 1, that "[t]he County will pursue energy efficiency tools and conservation practices that optimize the benefits of renewable energy." This is a laudable and well-stated goal, which prompts us to suggest the addition of the following sub-goals:

(1) "The County recognizes that renewable energy created for on-site use, such as rooftop or parking lot solar distributed generation, best optimizes the benefits of renewable energy by greatly reducing land disturbance and avoiding the need for the installation of new transmission infrastructure;" and

(2) "Encourage the use of 'combined heat and power' at facilities located in the County that are powered by coal, such as cement plants."

The RECE states the following in its RE 1.2.2 goal: "[e]ncourage property owners to participate in the HERO program for access to energy efficiency retrofit financing." Participation in the HERO program should certainly be encouraged, but, in view of the fact that HERO is not geared to commercial and industrial energy consumers, we would suggest the addition of the following sub-goal: "The County will, by means of renewable energy bonds and tax incentives, make funds available to those commercial and industrial energy consumers that cannot participate in the HERO program in order to encourage their adoption of self-generated renewable energy as their primary power source."

RE 1.2.7 states: "[e]ncourage passive solar design in subdivision and design review processes." We would propose adding to this goal – or inserting elsewhere in the RECE – that the County require that minimum amounts of rooftop solar be installed on new residential, commercial and industrial structures constructed in the County. Such a standard has been instituted by the City of Lancaster.

We would also suggest that the County incentivize installation of renewable energy systems by contractors based in the County, who use materials supplied by businesses based in the County.

Goals RE 2.2.1 and RE 2.2.2 state as follows: "[e]ncourage onsite energy storage with RE generation facilities, consistent with County Development Code requirements," and "[d]efine and allow energy storage facilities as an accessory component of RE generation facilities." Because energy storage will greatly enhance the effectiveness and penetration of intermittent solar distributed generation systems, we would suggest strengthening that goal to state as follows: "[i]ncentivize and encourage the installation of onsite energy storage as an ancillary component to distributed energy rooftop and parking lot solar distributed energy on residential, commercial, government and industrial sites."

RE Goal 2 states that "[t]he County will be home to diverse and innovative renewable energy systems that provide reliable and affordable energy to our unique Valley, Mountain, and Desert regions." We would suggest that this pivotal goal be revised to state as follows: "The County will be home to diverse and innovative renewable energy systems that provide reliable and affordable energy *that is appropriate to and compatible with* our unique Valley, Mountain, and Desert regions." Addition of the italicized language would help the County keep out forms of renewable energy production, such as utility-scale wind projects (like the proposed North Peak project) and solar thermal, that would have extremely harmful economic, social, aesthetic and environmental effects.[13]

To that end, the phrase, "wind energy," should be removed from RE Policy 2.1, which states "[s]upport solar energy generation, solar water heating, ***wind energy*** and bioenergy systems that are consistent with the orientation, siting and environmental compatibility policies of the General Plan." (Emphasis added.)

To take it a step further, we would also request that the RECE state affirmatively that utility-scale wind energy, solar thermal, parabolic trough and concentrated thermal facilities – including such facilities in combination with fossil fuel generation (like gas turbine power) -- cannot be established in the County. We are not opposed to small-scale wind energy generation that is truly an on-site "accessory use," provided that the RECE make it subject to rigorous criteria establishing maximum height, blade length, distance from point of use and noise emissions, among many other things.

RE 2.2.2 states as follows: "[d]efine and allow energy storage facilities as an accessory component of RE generation facilities." Energy storage facilities that are truly ancillary to small-scale renewable energy facilities -- such as rooftop/parking lot systems, community-oriented projects and micro-grids – most certainly should be allowed. But the RECE should not allow large storage facilities that would act as regional repositories for multiple remote RE and/or fossil fuel generators, other than in the five sites identified in the Resolution and perhaps in the built environment, i.e., the urban area south of the San Bernardino Mountains. RE 2.2.2 should be revised to make it clear that it is referring only to ancillary energy storage facilities. The County should not become the national (or state) dumping ground for the large energy storage facilities anticipated in the future, any more than it should become the dumping ground for utility-scale renewable plants.

RE 2.2.3 states "[e]stablish thresholds for conditions under which energy storage facilities are a primary use and subject to separate permit processes." RE 2.2.5 states: "[s]upport State policies and efforts by utility companies to plan for and develop energy storage

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[13] Wind projects are so inimical to birds that they are commonly referred to as "bird-blenders." Utility-scale wind would also be inappropriate in this County because it would interfere with low-flying military aircraft, be incompatible with the "CORE Values" stated in the RECE, and be contrary to the stated wishes of our communities.

technologies through legislative advocacy and coordination with utility companies." We would suggest striking those goals in their entirety, because they could be read as an encouraging establishment of large, centralized energy collection and storage facilities in the County that serve the grid, rather than the needs of local residents. While utility companies are indeed looking to develop such facilities, the RECE should not commit the County to promoting their agenda.

RE 2.4.2 states as follows: "[e]ducate developers about the County's RE goals and policies, and encourage the inclusion of renewable energy facilities for onsite use in new developments." This is a laudable goal. We would suggest that the RECE go a bit further, by mandating that all new residential, commercial and industrial buildings meet a specified threshold of solar pv self-generation. Municipalities, such as the City of Lancaster, have successfully put such rules in place.

RE 2.4.4 states as follows: "[e]ncourage installation of renewable energy systems on rental properties, multi-family buildings, and buildings with multiple commercial tenants by working with property developers and owners, using tools such as green leases, split incentive programs, and the California Solar Initiative's MASH program." Use of the cited tools will certainly advance the penetration of distributed generation, but owners of multi–tenant residential, commercial and industrial properties need incentives beyond those stated in RE 2.4.4. We would suggest adding the following language to that goal:

(a) establishment of an Enhanced Infrastructure Financing District[14] ("EFID");

(b) reduction of personal property taxes for specified periods;

(c) abatement of property taxes for specified periods;

(d) creation of empowerment zones that rebate monies used to create renewable energy generation and energy storage; and

(e) low or no interest financing for on-site generation through bond financing.

RE 2.5.3 states as follows: "[a]llow and encourage construction of new buildings or developments in remote locations with stand-alone energy systems not connected to the grid." We recommend that this "zero net energy" requirement apply to *all* new construction, and not just to that which occurs in "remote locations."

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[14] Under SB 628 (Beall), counties may create EFIDs to finance the construction or rehabilitation of a wide variety of public infrastructure and private facilities, including projects that implement a Sustainable Communities Strategy. An EIFD may fund these improvements with the property tax increment of whichever taxing agencies (cities, counties, and special districts, but not schools) consent.

RE 2.5.5 states as follows: "[c]ollaborate with incorporated cities and other jurisdictions to create region-specific ZNE programs." This language should be expanded to say that the County will take a leadership role in encouraging other jurisdictions within the County to adopt a region-wide ZNE program.

RE 3.1.1 states as follows: "[p]ermit accessory RE generation facilities that primarily serve on-site energy needs in all zoning districts, including micro-grid systems, with minimal regulation and permitting requirements." We would request that the phrase -- "and accessory energy storage" – be added after "accessory RE generation facilities."

RE 3.2.6 states as follows: "[e]ncourage infrastructure, net metering and regulatory systems that support CORE facilities." Because this is such an important policy statement, we would recommend inserting the phrase, "prioritize, facilitate and," in front of "encourage."

RE Policy 3.3 calls for the County to "[l]imit utility-oriented renewable energy generation facilities in unincorporated areas of the County to sites consistent with standards set forth in the Development Code."[15] RE Policy 5.2 states that "[l]arge utility-scale RE generation projects – 10 megawatts or more – on private land will be limited to the site-types below in the unincorporated County: [various types of lands are specified]." As per Section 1 of this letter, solar overlay zones should be established by the RECE on the five sites designated by the Resolution, and the RECE should specify that the five sites are the only places where utility-scale can, subject to environmental review, be established in the County. Hence Policy Nos. 3.3 and 5.2 (and RE Objective 5.2) should state explicitly that they apply only to the siting of utility-scale facilities on: (1) those five sites; and (2) any BLM land where such facilities are allowed under the BLM LUPA (as per the discussion above in Section 2 of this letter, such criteria can then be invoked by the County whenever its discretionary approvals are requested).

The RECE should be revised to preclude utility-scale development on public or private land in the County on stressed or overdrafted groundwater basins.

RE Policy 5.1 states the following: "[e]ncourage the siting of RE generation facilities on disturbed or degraded sites in proximity to necessary transmission infrastructure." We recommend that the visual impact of a proposed CORE project should also be included as a primary siting criteria. We would also suggest that the RECE specify that CORE projects exceeding 1 MW should not be located within 500 feet of a County Scenic Road.

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[15] There is a reference to siting criteria stated in the Development Code, which, of course, has yet to be formulated. Given the amount of time, effort and money that has been invested in the REVEAL process by the public and the County, we would urge that all significant siting criteria for utility-scale be stated to the greatest extent possible in the RECE, rather than be left to be fleshed out in future enactments.

The RECE should make it clear, in its 5.1 policy goals, that no wind turbine, solar thermal, parabolic trough or concentrated thermal facilities – including such facilities in combination with fossil fuel generation (like gas turbine power) – can, under any circumstances and regardless of their nameplate capacities, be considered as CORE projects. We make this suggestion because such facilities – especially when they are sized large enough to power entire communities – are damaging to adjacent residents and ecological systems.

Goal 4 states that "[t]he County will establish a new era of sustainable energy production and consumption in the context of sound conservation and renewable energy development practices that reduce greenhouse gases and dependency on fossil fuels." We would recommend adding the following sub-goal: "The County will establish enhanced air quality standards for monitoring and mitigation requirements on all renewable energy projects with a nameplate capacity greater than 1MW, which include the requirement that permanent monitoring devices be installed to measure PM 10 and PM 2.5, both upwind and downwind of project sites, during construction and throughout the operation of the facility." Also, a sub-goal should be added requiring the use of recycled water, to the greatest extent that it is available at or reasonably near a renewable energy project site, for the construction and maintenance of renewable energy facilities.

The explanatory text of the RECE states (on p. 32) that ". . . solar PV development applications would need to pass rigorous environmental review, including consideration of water consumption, before being permitted." That should be stated as one of the RE Goals in the RECE. In addition, we would recommend the RE Goals mandate a study sufficient to establish safe yield requirements for each County groundwater basin, as suggested above in Section 4 of this letter.

RE 4.6 states that "RE project site selection and site design shall be guided by the following priorities relative to habitat conservation and mitigation:

-- Avoid sensitive habitat, when feasible, through site selection and project design.

– Where necessary and feasible, conduct mitigation on-site.

– When on-site mitigation is not possible or adequate, conduct mitigation off-site in an area designated for conservation."

This goal should specify exactly what is meant by "sensitive habitat." The lack of definition allows the referenced requirement to be circumvented, as does inclusion of the phrase, "when feasible." In general, RE 4.6 needs to tightened up considerably, and made consistent with the conservation goals stated elsewhere in the RECE.

Section V of the proposed RECE addresses siting. As per Section 1 of this letter, solar overlay zones should be established by the RECE on the five sites designated by the Resolution, and the RECE should specify that the five sites are the only places where utility-scale can, subject to environmental review, be established in the County. As noted above, this section of

the RECE should state explicitly that the siting criteria it references applies only to the siting of utility-scale facilities on: (1) those five sites; and (2) any BLM land where such facilities are allowed under the BLM LUPA. On p. 36 of the RECE, there is a reference to development standards and siting criteria stated in the Development Code, which, of course, are yet to be formulated. Given the amount of time, effort and money that has been invested in the REVEAL process by the public and the County, we would urge that all significant development standards and siting criteria for utility-scale be stated to the greatest extent possible in the RECE, rather than be left to be fleshed out in future enactments.

Goal 6.1 states as follows: "[e]nsure consistency, clarity, and timeliness in the development permitting process for RE generation facilities." Our concern is that, pursuant to this goal statement, a truncated permitting process might be enacted that deprives local residents of any practical recourse should a project be proposed which offends the goals stated in the RECE. This is a big concern when it comes to utility-scale projects and CORE projects greater than 500 KV, especially given that the BLM intends to fill the County with 20,000 MWs of utility-scale renewables pursuant to the BLM LUPA. Affected residents often feel overlooked and overwhelmed by the current approval process under the Development Code. The RECE should make the process more transparent or more encouraging to public input, especially given that small-scale renewable energy proposals should, if they are consistent with the RECE, garner a great deal of local community support.

END OF APPENDIX 1

Resolution of San Bernardino County Board of Supervisors (February 17, 2016)

REPORT/RECOMMENDATION TO THE BOARD OF SUPERVISORS OF SAN BERNARDINO COUNTY, CALIFORNIA AND RECORD OF ACTION

February 17, 2016

FROM: **ROBERT A. LOVINGOOD, Vice Chairman and First District Supervisor Board of Supervisors**

SUBJECT: **RESOLUTION STATING POSITION ON THE PROPOSED LAND USE PLAN AMENDMENT IN PHASE I OF THE DESERT RENEWABLE ENERGY CONSERVATION PLAN**

RECOMMENDATION(S)

Adopt **Resolution No. 2016-20** establishing the County of San Bernardino's position on the proposed land use plan amendment in Phase I of the Desert Renewable Energy Conservation Plan, as published by the Bureau of Land Management in November 2015.

Public Comment: Neil Nadler, Lorrie Steely

(Presenter: Supervisor Robert A. Lovingood, First District, 387-4830)

BOARD OF SUPERVISORS COUNTY GOALS AND OBJECTIVES

Ensure Development of a Well-Planned, Balanced, and Sustainable County.
Pursue County Goals and Objectives by Working with Other Agencies.

FINANCIAL IMPACT

Approval of this resolution does not require the use of additional Discretionary General Funding (Net County Cost).

BACKGROUND INFORMATION

The Bureau of Land Management (BLM) is preparing to publish a Record of Decision regarding its adoption of a Land Use Plan Amendment (LUPA) necessary to implement the Desert Renewable Energy Conservation Plan (DRECP) as it pertains to federal lands. The County submitted a letter of protest to the BLM in December 2015 requesting an extension of the review time frame, but has received no response to date. This resolution will reiterate the County's concerns with the BLM's expected action, while noting that staff will continue to work with the BLM to address the issues raised.

cc: **w/ resolution**
BOS-Vice Chairman & 1st District Supervisor-Lovingood
CAO-Snoke
File - Supervisors w/ resolution
jll 2/18/16

ITEM 3

Record of Action of the Board of Supervisors

APPROVED
COUNTY OF SAN BERNARDINO
Board of Supervisors

MOTION	MOVE	AYE	AYE	SECOND	AYE
	1	2	3	4	5

LAURA H. WELCH, CLERK OF THE BOARD

BY Jennifer Hill

DATED: February 17, 2016

Rev 7-14-15

County staff has been actively involved in reviewing and commenting on the DRECP since its inception in 2010. On February 10, 2015 (Item No. 1), the Board of Supervisors (Board) approved and delivered comments on the DRECP to the California Energy Commission expressing the County's concerns. Later that spring, BLM advised the County of its intent to proceed to finalize and adopt the DRECP as it relates only to BLM lands. County staff informed BLM that the County's ability to evaluate and comment on this process, including the BLM's proposed LUPA and environmental document, were constrained by the fact that the County's Renewable Energy Element was still in progress and not yet complete. Furthermore, the process of preparing the Renewable Energy Element includes extensive public involvement that will be essential to formulating County land use policies for renewable energy, as well as County commentary on the LUPA. The Board recently executed an amendment to the County's 2008 Memorandum of Understanding with the BLM that included a commitment from BLM to amend its DRECP LUPA to match the County's objectives and land use designations.

The recommended resolution calls attention to the commitment from BLM and the County's expectation that any necessary revisions to the LUPA will be forthcoming once the County completes its Renewable Energy Element.

PROCUREMENT
N/A

REVIEW BY OTHERS
This item has been reviewed by County Counsel (Michelle Blakemore, Chief Assistant County Counsel, 387-5455) on February 12, 2016; Finance (Luther Snoke, Administrative Analyst, 387-4345) on February 12, 2016; and County Finance and Administration (Katrina Turturro, Deputy Executive Officer, 387-5423) on February 12, 2016.

RESOLUTION NO. 2016-20

A RESOLUTION OF THE BOARD OF SUPERVISORS OF THE COUNTY OF SAN BERNARDINO, STATE OF CALIFORNIA, ESTABLISHING THE COUNTY'S POSITION ON THE PROPOSED LAND USE PLAN AMENDMENT IN PHASE I OF THE DESERT RENEWABLE ENERGY CONSERVATION PLAN

On February 17, 2016, on motion of Supervisor Lovingood, duly seconded by Supervisor Hagman and carried, the following resolution is adopted by the Board of Supervisors of San Bernardino County, State of California.

WHEREAS, in November 2015, as "Phase I" of a multi-agency "Desert Renewable Energy Conservation Plan" (DRECP), the Bureau of Land Management (BLM) published a proposed land use plan amendment ("LUPA") and final environmental impact statement; and

WHEREAS, San Bernardino County (COUNTY) has expressed numerous concerns regarding utility scale renewable energy development adjacent to County unincorporated communities and rural areas; and

WHEREAS, COUNTY is currently preparing its own General Plan Renewable Energy Element to guide decision making via a standards-based approach to the siting of renewable energy projects; and

WHEREAS, the preparation of the Renewable Energy Element involves extensive public outreach which is not yet complete; and

WHEREAS, an evaluation of the Development Focus Areas (DFAs) contained in the LUPA cannot be completed without having first completed the Renewable Energy Element, including the public review process; and

WHEREAS, COUNTY and BLM entered into a Memorandum of Understanding (MOU) for processing environmental reviews in March 2008 that allows "the BLM and COUNTY to achieve consistency by collaborating on the development and review of joint environmental documents where feasible, and maximizing coordination between the two jurisdictions"; and

WHEREAS, COUNTY and the BLM have entered into an amendment to the 2008 MOU in December 2015, in which the BLM consented to initiate, if needed, an Amendment to the DRECP LUPA land use designations in order to match the COUNTY's objectives and land use designations; and

WHEREAS, COUNTY is in good faith relying on BLM's commitment to initiate and process the aforementioned amendment;

NOW, THEREFORE, BE IT RESOLVED that:

COUNTY will continue to act as a cooperating agency in the review of renewable energy projects under BLM jurisdiction, pursuant to the 2008 MOU; and

COUNTY indicates its general and tentative support for five (5) of the Development Focus Areas (DFAs) identified in the BLM DRECP LUPA (North of Kramer Junction, Trona, Hinkley, El Mirage, and Amboy), recognizing that further COUNTY evaluation of all BLM DFAs will continue in the preparation, public review and ultimate adoption of its Renewable Energy Element; and

The final analysis of the five (5) DFAs may confirm, modify or eliminate the tentative support stated herein; and

COUNTY continues to express its strong concern about DFAs in other areas of the County; and

Project-specific comments will be prepared by COUNTY for any future proposed renewable energy projects in all BLM DFAs; and

COUNTY will, upon adoption of the Renewable Energy Element, engage BLM and recommend LUPA revisions consistent with the process contained in the MOU.

PASSED AND ADOPTED by the Board of Supervisors of the County of San Bernardino, State of California, by the following vote:

AYES: SUPERVISORS: Robert A. Lovingood, Janice Rutherford, James Ramos
Curt Hagman, Josie Gonzales

NOES: SUPERVISORS: None

ABSENT: SUPERVISORS: None

* * * * *

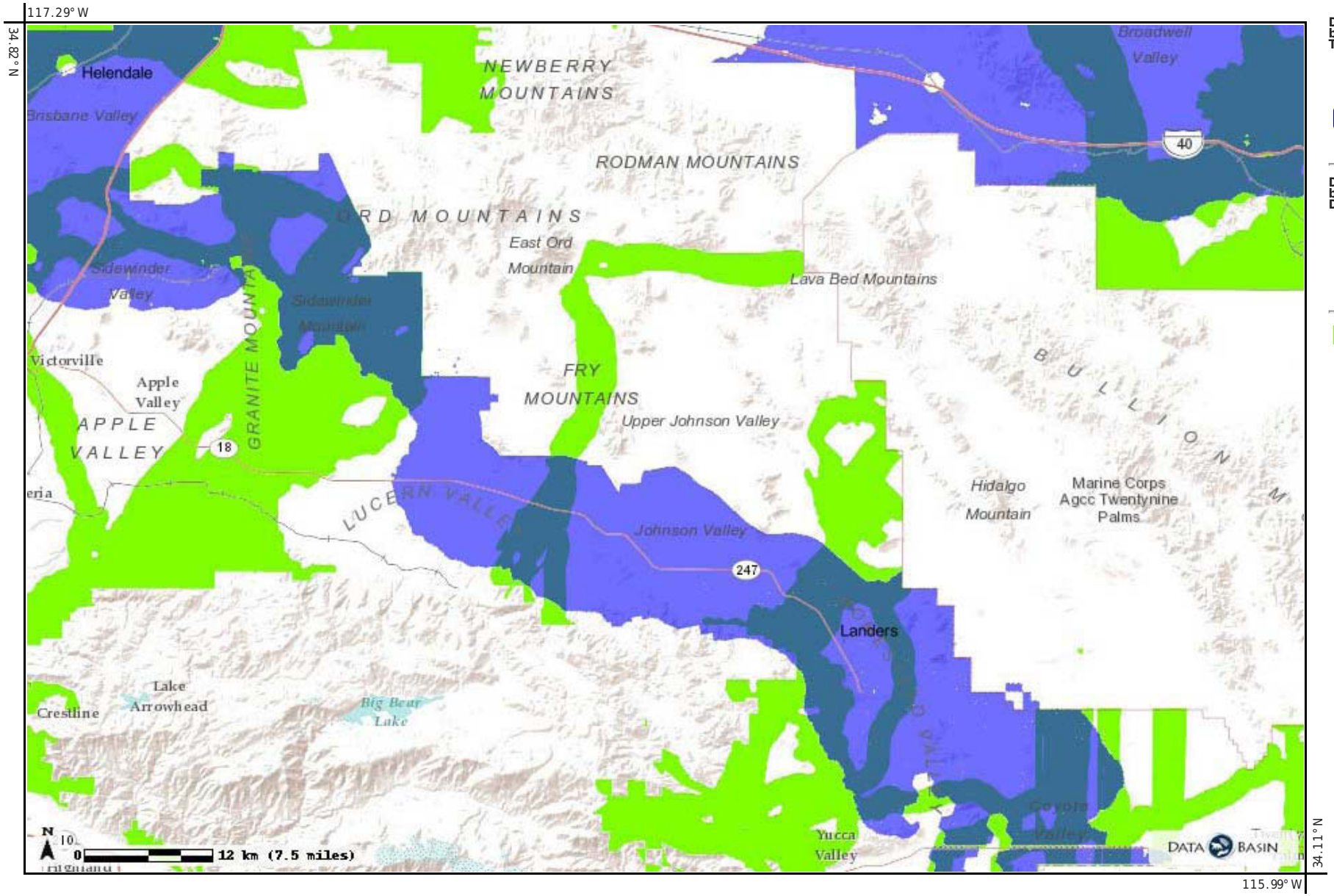
STATE OF CALIFORNIA)
) ss.
COUNTY OF SAN BERNARDINO)

I, **LAURA H. WELCH**, Clerk of the Board of Supervisors of the County of San Bernardino, State of California, hereby certify the foregoing to be a full, true and correct copy of the record of the action taken by the Board of Supervisors, by vote of the members present, as the same appears in the Official Minutes of said Board at its meeting of February 17, 2016. Item 3 jll

LAURA H. WELCH
Clerk of the Board of Supervisors

By Jennifer Chung
Deputy

Map Depicting Desert Linkage Network, Upon Which is Overlaid Desert Tortoise TCA Habitat Linkages



Legend

Desert Tortoise TCA Habitat Linkages: Reserve Type

Displaying: **Reserve_Ca**

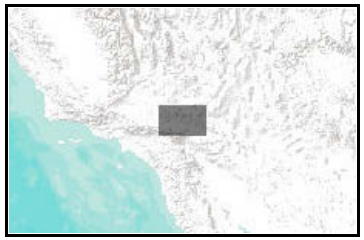
Linkage

Desert Tortoise TCA Habitat Linkages: Reserve Design Role

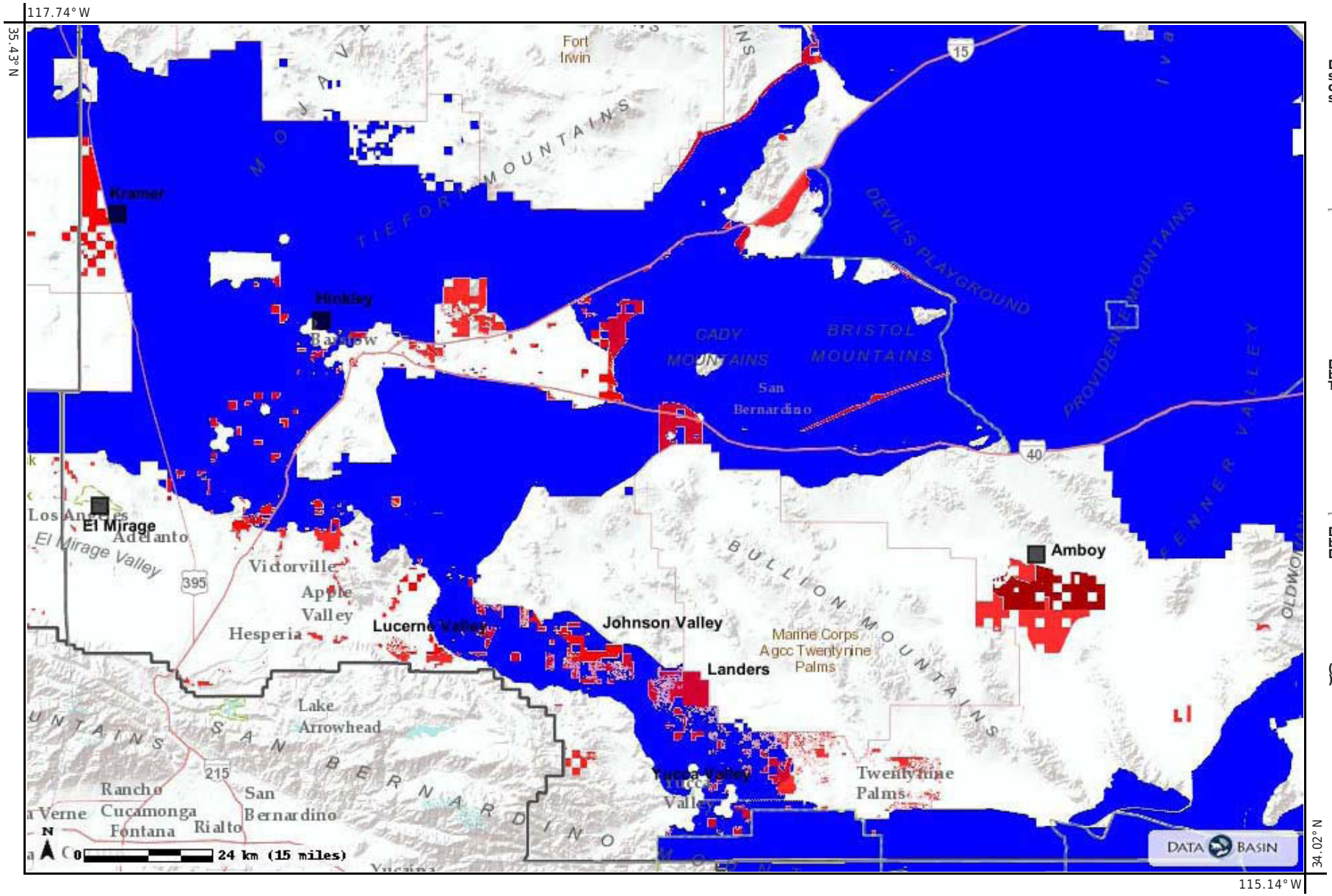
Displaying: **Essential_**

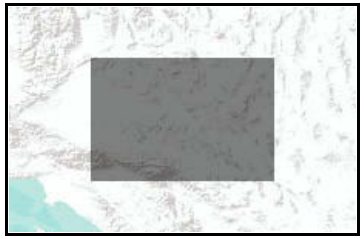
CA Desert Linkage Network, SC Wildlands Previous Linkage Designs

Landscape Blocks



Map Depicting the DRECP's DFAs, Variance Lands and Unallocated Lands, as Overlaid on the Desert Tortoise TCA Habitat Linkages





Legend

County Boundaries, DRECP

Development Focus Areas (DFA) and Variance Process Lands, DRECP Proposed LUPA and Final EIS

Displaying: **AltCategor**

- Development Focus Areas
- Variance Process Lands

United States Bureau of Land Management Unallocated Lands, DRECP Proposed LUPA and Final EIS, Preferred Alternative

Desert Tortoise TCA Habitat Linkages: Reserve Type

Displaying: **Reserve_Ca**

- High Priority Habitat
- Linkage
- Tortoise Conservation Area

Desert Tortoise TCA Habitat Linkages: Reserve Design Role

Displaying: **Essential_**

- Primary
- Secondary
- Not in Reserve

(continued on next page)

Legend (cont.)

New Drawing 10

Map Details

Datasets

County Boundaries, DRECP

https://drecp.databasin.org/datasets/2a42fb061dc2418da60f5ce655244126

Credits: Dudek

Layers:
- County Boundaries, DRECP

Development Focus Areas (DFA) and Variance Process Lands, DRECP Proposed LUPA and Final EIS

https://drecp.databasin.org/datasets/15fbd81db7984c22be7fc144fc262c47

Credits: Dudek

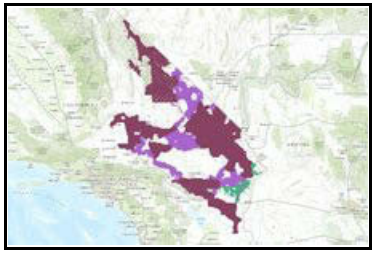
Layers:
- Development Focus Areas (DFA) and Variance Process Lands, DRECP Proposed LUPA and Final EIS

United States Bureau of Land Management Unallocated Lands, DRECP Proposed LUPA and Final EIS, Preferred Alternative

https://drecp.databasin.org/datasets/335776d7f014480cae5840049b59cf14

Credits: Dudek

Layers:
- United States Bureau of Land Management Unallocated Lands, DRECP Proposed LUPA and Final EIS, Preferred Alternative



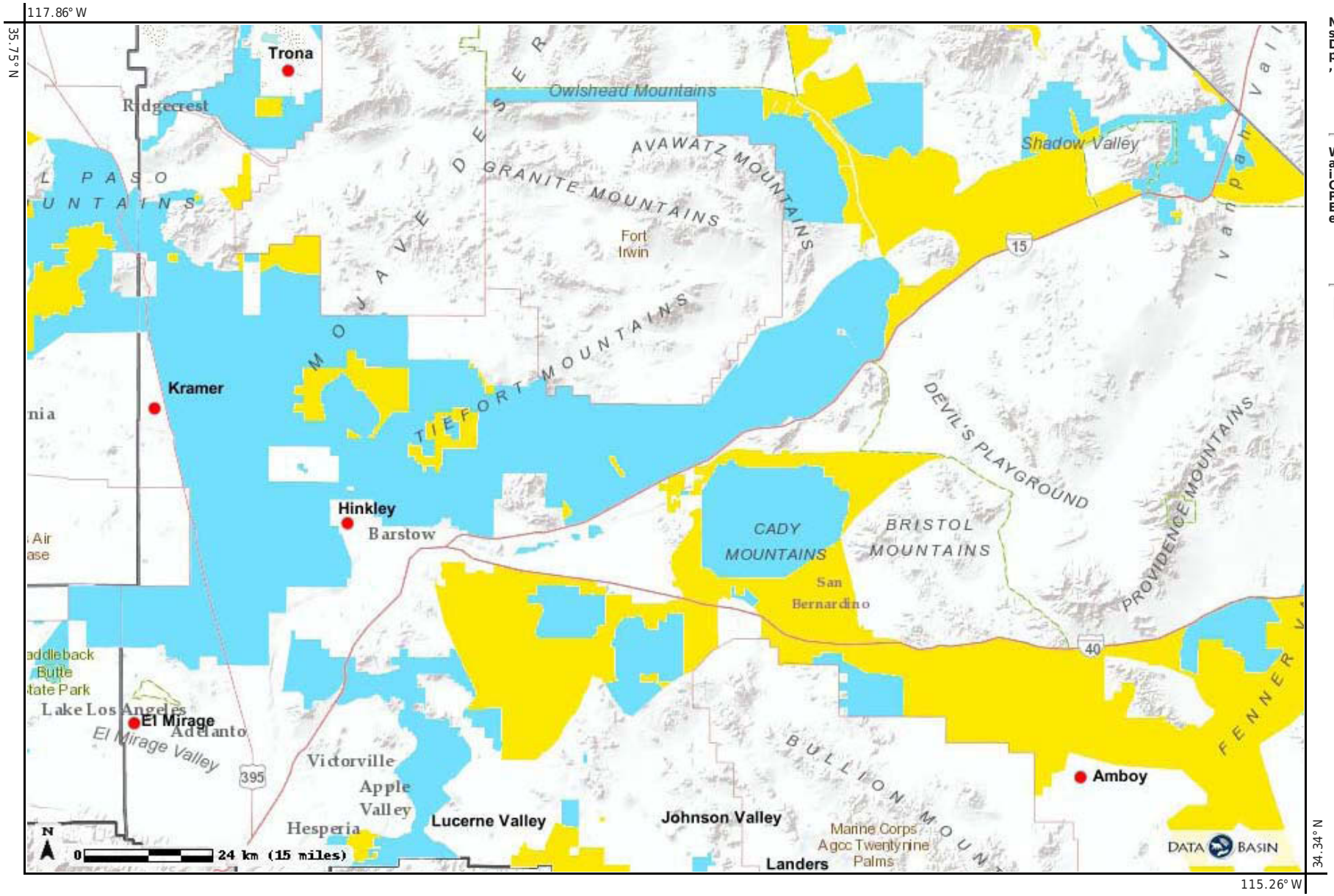
Desert Tortoise TCA Habitat Linkages, DRECP

https://drecp.databasin.org/datasets/df8194c0ea964312ac4bef6a1e923ebc

Credits: Brian Croft, US Fish and Wildlife Service, San Bernardino, CA - 909-382-2677 John M. Taylor, US Fish and Wildlife Service, Palm Springs, CA - 760-322-2070 Ken Corey, US Fish and Wildlife Service, Palm Springs, CA - 760-322-2070 Pete Sorensen, US Fish and Wildlife Service, Palm Springs, CA - 760-322-2070 Cat Darst, US Fish and Wildlife Service, Desert Tortoise Recovery Office, Ventura, CA - 805-644-1766 University of Redlands, Redlands, CA

Layers:
- Desert Tortoise TCA Habitat Linkages: Reserve Type
- Desert Tortoise TCA Habitat Linkages: Reserve Design Role

Map Depicting ACECs and NLCS Areas Under DRECP



Legend

National Landscape Conservation System (NLCS) Designations, DRECP Proposed LUPA and Final EIS, Preferred Alternative

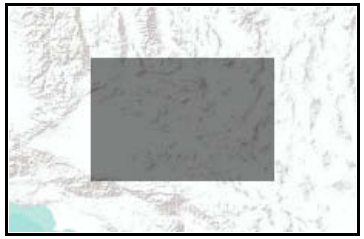
Displaying: **NLCS**

- National Landscape Conservation System

Wildlife Allocation (WA) and Areas of Critical Environmental Concern (ACEC) Designations, DRECP Proposed LUPA and Final EIS, Preferred Alternative

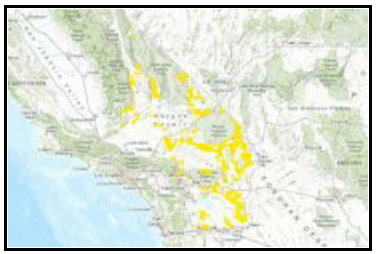
- Areas of Critical Environmental Concern

- County Boundaries, DRECP
- New Drawing 2



Map Details

Datasets



National Landscape Conservation System (NLCS) Designations, DRECP Proposed LUPA and Final EIS, Preferred Alternative

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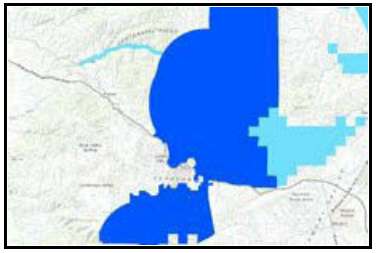
Credits: Dudek

Layers:
- National Landscape Conservation System (NLCS) Designations, DRECP Proposed LUPA and Final EIS, Preferred Alternative



Wildlife Allocation (WA) and Areas of Critical Environmental Concern (ACEC) Designations, DRECP Proposed LUPA and Final EIS, Preferred Alternative

https://drecp.databasin.org/datasets/e425c68a97be41d094569378319d4da5

Credits: California Energy Commission, U.S. Bureau of Land Management, California Department of Fish and Wildlife, U.S. Fish and Wildlife Service, Dudek

Layers:
- Areas of Critical Environmental Concern

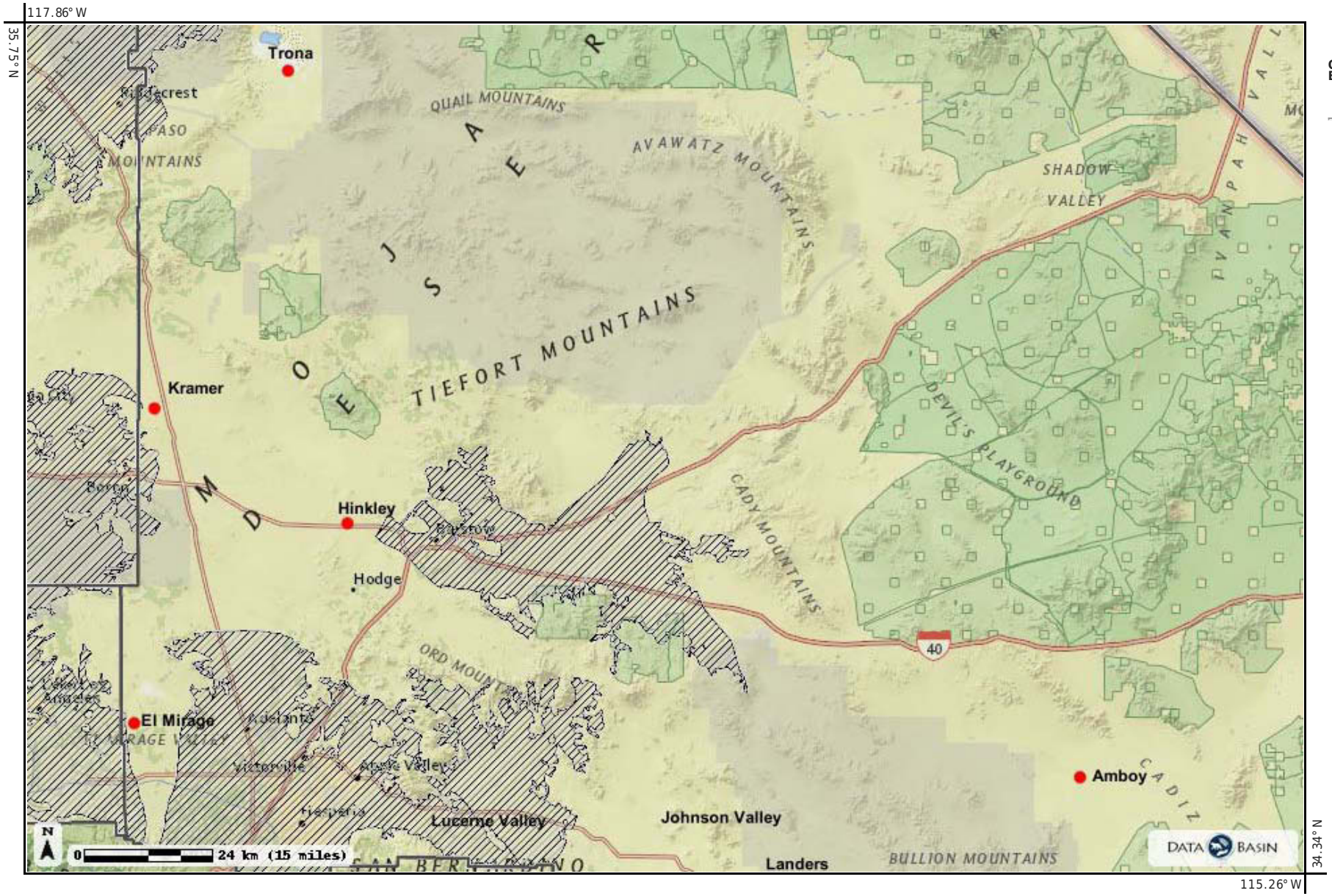
County Boundaries, DRECP

https://drecp.databasin.org/datasets/2a42fb061dc2418da60f5ce655244126

Credits: Dudek

Layers:
- County Boundaries, DRECP

DRECP Map Depicting
Overdraft Groundwater Basins



Legend

County Boundaries, DRECP

Overdraft Groundwater Basins, DRECP

Overdraft

New Drawing 2

Map Details

Datasets

County Boundaries, DRECP

https://drecp.databasin.org/datasets/2a42fb061dc2418da60f5ce655244126

Credits: Dudek

Layers:
- County Boundaries, DRECP

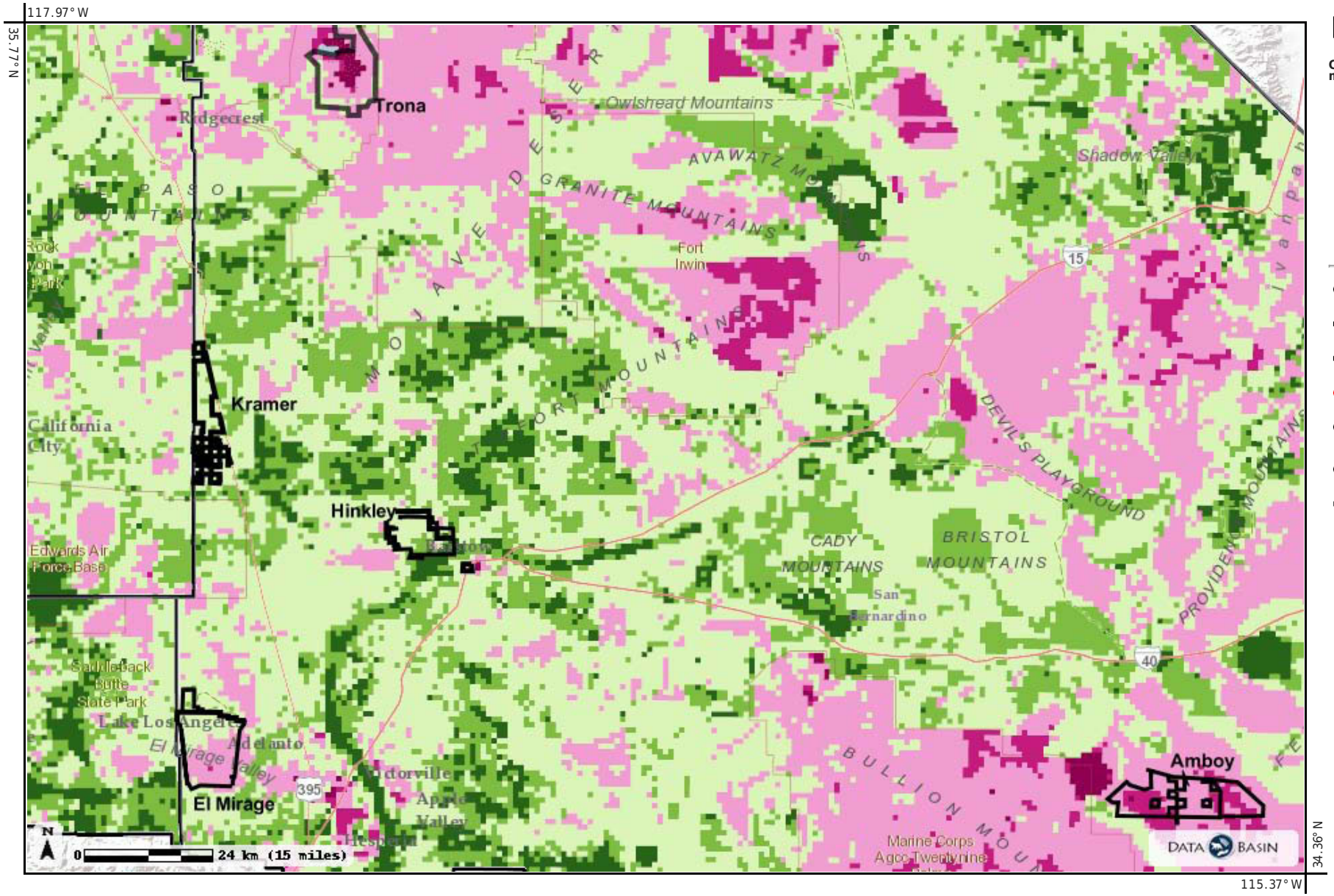
Overdraft Groundwater Basins, DRECP

https://drecp.databasin.org/datasets/b120d954b4ba4634b0f50d24d770874a

Credits: Dataset provided by HydroFocus, Inc.

Layers:
- Overdraft Groundwater Basins, DRECP

DRECP Conservation Value Map



Legend

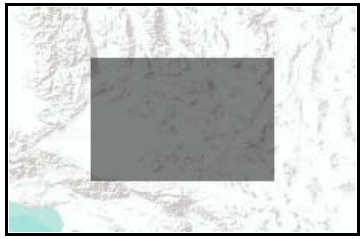
County Boundaries, DRECP

Conservation Value (1km), DRECP

Displaying: **Conservation Value**

- Very High
- High
- Moderately High
- Moderately Low
- Low
- Very Low

- New Drawing 1
- New Drawing 1
- New Drawing 6
- New Drawing 5
- Hinkley Town Intactness Maps
- New Drawing 2
- New Drawing 3



Map Details

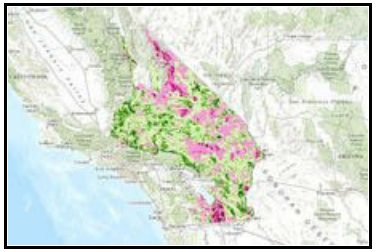
Datasets

County Boundaries, DRECP

https://drecp.databasin.org/datasets/2a42fb061dc2418da60f5ce655244126

Credits: Dudek

Layers:
- County Boundaries, DRECP



Conservation Value (1km), DRECP

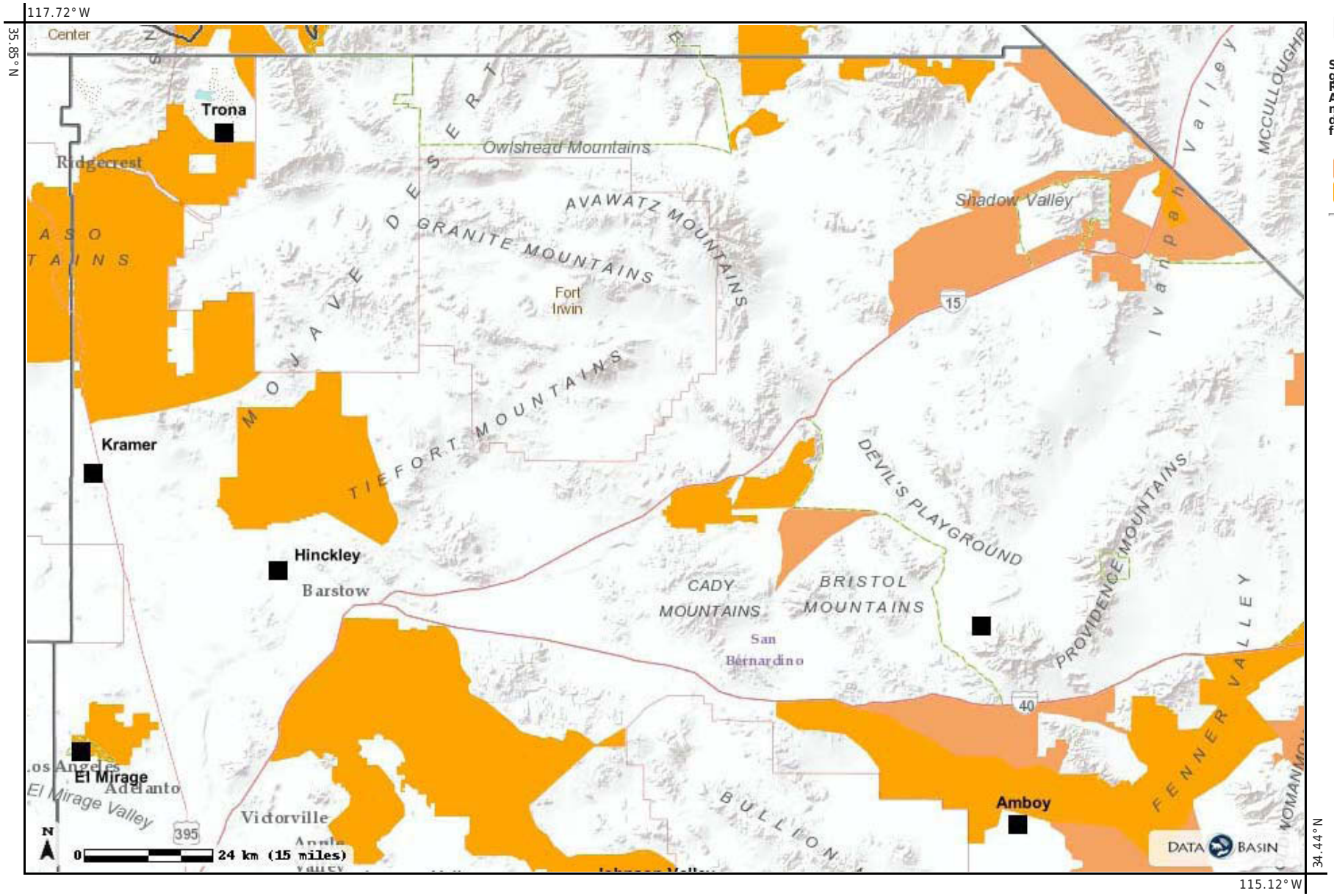
https://drecp.databasin.org/datasets/7459c5fb283b4a9abf5f763f4c572138

Credits: Conservation Biology Institute

Created using data produced by California Dept. of Fish and Wildlife, UC Berkeley, UC Davis, UC Santa Barbara, US Geological Survey, Dudek, and CBI.

Layers:
- Conservation Value (1km), DRECP

Map Depicting DRECP Special Recreation Management Areas/Extensive Recreation Management Areas



Legend

County Boundaries, DRECP

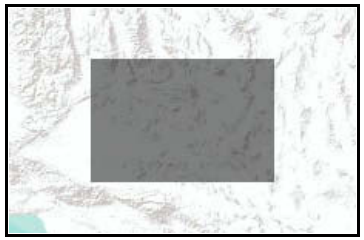
Special Recreation Management Area/Extensive Recreation Management Area (SRMA/ERMA) Designations, DRECP Proposed LUPA and Final EIS, Preferred Alternative

Displaying: **Merged**

ERMA

SRMA

New Drawing 10



Map Details

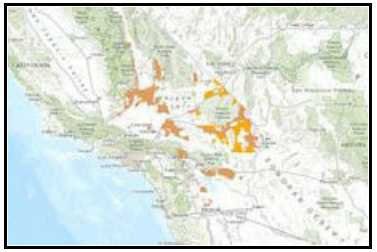
Datasets

County Boundaries, DRECP

https://drecp.databasin.org/datasets/2a42fb061dc2418da60f5ce655244126

Credits: Dudek

Layers:
- County Boundaries, DRECP



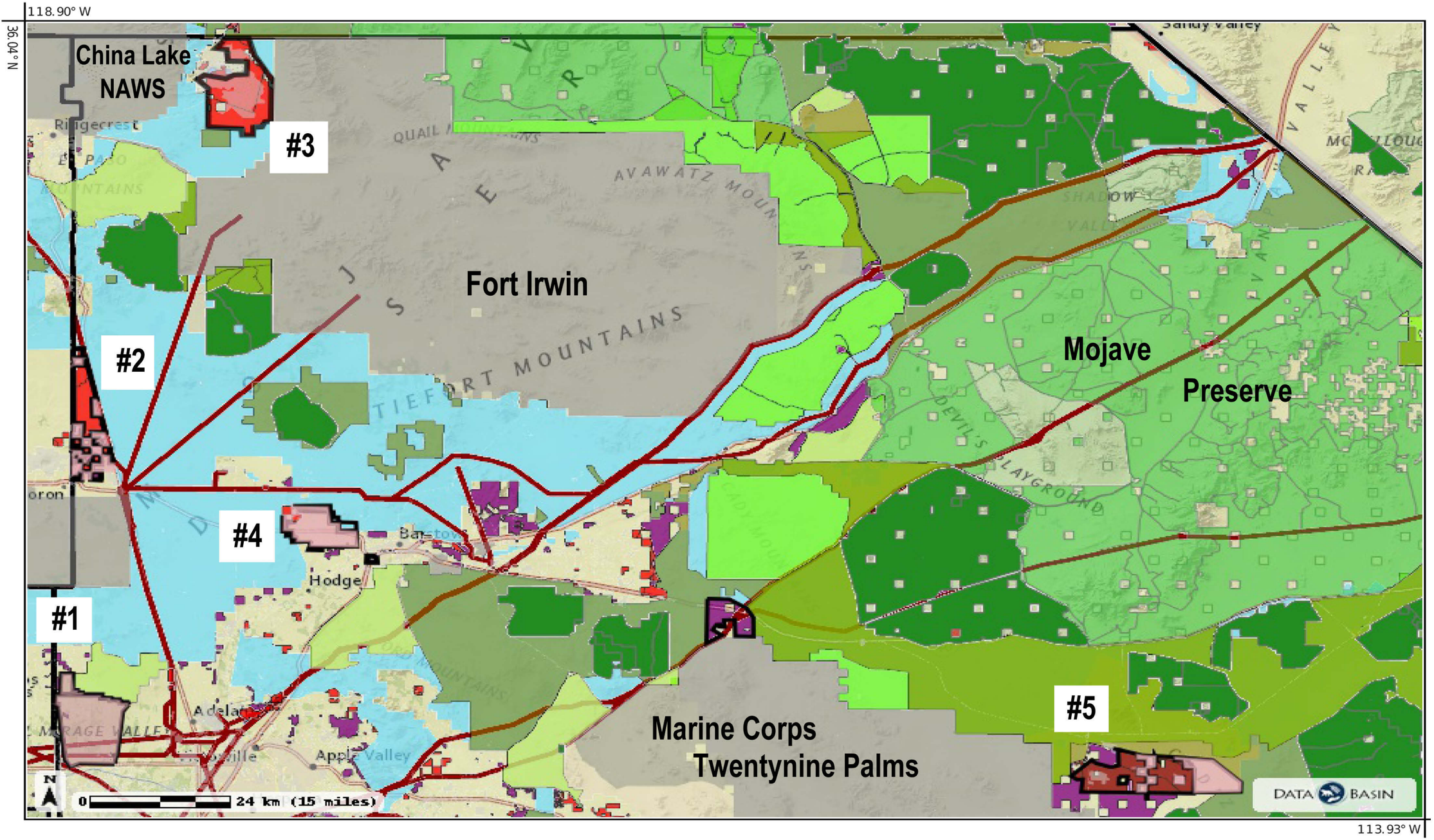
Special Recreation Management Area/Extensive Recreation Management Area (SRMA/ERMA) Designations, DRECP Proposed LUPA and Final EIS, Preferred Alternative

https://drecp.databasin.org/datasets/a3a2288f21234b1e844fcac0e8c4c915

Credits: Dudek

Layers:
- Special Recreation Management Area/Extensive Recreation Management Area (SRMA/ERMA) Designations, DRECP Proposed LUPA and Final EIS, Preferred Alternative

Map Depicting Five Sites Identified in Board of Supervisors' Resolution and Adjacent Transmission



Number Legend

1. El Mirage
2. North Kramer
3. Trona
4. Hinkley
5. Amboy

Legend

- National Parks and National Preserves, DRECP
- BLM Wilderness Areas, DRECP

Other Lands, DRECP
Displaying: **Type**

- Impervious and Urban
- Military
- Tribal Lands
- OHV Areas

National Landscape Conservation System (NLCS) Designations, DRECP Proposed LUPA and Final EIS, Preferred Alternative
Displaying: **NLCS**

- NLCS

- Proposed Feinstein Bill Monument, DRECP Proposed LUPA and Final EIS
- County Boundaries, DRECP

Development Focus Areas (DFA) and Variance Process Lands, DRECP Proposed LUPA and Final EIS
Displaying: **AltCategor**

- Development Focus Areas
- Variance Process Lands

- Transmission Lines (>= 230 kV)

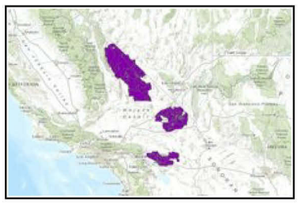
DRECP Boundary, DRECP Proposed LUPA and Final EIS

- DRECP Boundary

- United States Bureau of Land Management Unallocated Lands, DRECP Proposed LUPA and Final EIS, Preferred Alternative
- Wildlife Allocation
- Areas of Critical Environmental Concern
- Amboy Private DFA
- Kramer Private DFA
- Hinkley Private DFA
- El Mirage Private DFA
- New Drawing 1
- New Drawing 1
- New Drawing 1
- New Drawing 6
- New Drawing 5

Map Details

Datasets

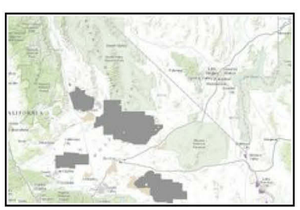


National Parks and National Preserves, DRECP
http://drecp.databasin.org/datasets/f51706ff25fa47788753ab473d454b50

Credits: Conservation Biology Institute
Layers:
- National Parks and National Preserves, DRECP

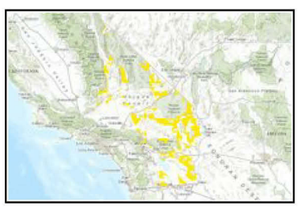
BLM Wilderness Areas, DRECP
http://drecp.databasin.org/datasets/27a3bf3c244e4468ac46ab11a5b21774

Credits: Conservation Biology Institute
Layers:
- BLM Wilderness Areas, DRECP



Other Lands, DRECP
http://drecp.databasin.org/datasets/5b4b5ed7757245469476d508a08902a2

Credits: California Energy Commission, U.S. Bureau of Land Management, California Department of Fish and Wildlife, U.S. Fish and Wildlife Service, Dudek, DRAFT Desert Renewable Energy Conservation Plan (DRECP) and EIR/EIS.
Layers:
- Other Lands, DRECP

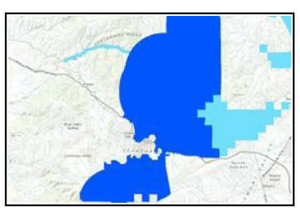


National Landscape Conservation System (NLCS) Designations, DRECP Proposed LUPA and Final EIS, Preferred Alternative
http://drecp.databasin.org/datasets/b9dc3c500af641cfbd9ee76ea6da7ad5

Credits: Dudek
Layers:
- National Landscape Conservation System (NLCS) Designations, DRECP Proposed LUPA and Final EIS, Preferred Alternative

Proposed Feinstein Bill Monument, DRECP Proposed LUPA and Final EIS
http://drecp.databasin.org/datasets/95171d8ec57d4803abcbc52a41aeaed8

Credits: California Energy Commission, U.S. Bureau of Land Management, California Department of Fish and Wildlife, U.S. Fish and Wildlife Service, Dudek, DRAFT Desert Renewable Energy Conservation Plan (DRECP) and EIR/EIS.
Layers:
- Proposed Feinstein Bill Monument, DRECP Proposed LUPA and Final EIS



Wildlife Allocation (WA) and Areas of Critical Environmental Concern (ACEC) Designations, DRECP Proposed LUPA and Final EIS, Preferred Alternative
http://drecp.databasin.org/datasets/e425c68a97be41d094569378319d4da5

Credits: California Energy Commission, U.S. Bureau of Land Management, California Department of Fish and Wildlife, U.S. Fish and Wildlife Service, Dudek
Layers:
- Wildlife Allocation
- Areas of Critical Environmental Concern

County Boundaries, DRECP

http://drecp.databasin.org/datasets/2a42fb061dc2418da60f5ce655244126

Credits: Dudek

Layers:
- County Boundaries, DRECP

Development Focus Areas (DFA) and Variance Process Lands, DRECP Proposed LUPA and Final EIS

http://drecp.databasin.org/datasets/15fbd81db7984c22be7fc144fc262c47

Credits: Dudek

Layers:
- Development Focus Areas (DFA) and Variance Process Lands, DRECP Proposed LUPA and Final EIS

Transmission Lines (>= 230 kV)

http://drecp.databasin.org/datasets/02d6558fa6fe45f6977cf7be4afa0f09

Credits: Dudek

Layers:
- Transmission Lines (>= 230 kV)

DRECP Boundary, DRECP Proposed LUPA and Final EIS

http://drecp.databasin.org/datasets/58fa78605578482aa27955052341ee85

Credits: Desert Renewable Energy Conservation Plan, Dudek

Layers:
- DRECP Boundary, DRECP Proposed LUPA and Final EIS

United States Bureau of Land Management Unallocated Lands, DRECP Proposed LUPA and Final EIS, Preferred Alternative

http://drecp.databasin.org/datasets/335776d7f014480cae5840049b59cf14

Credits: Dudek

Layers:
- United States Bureau of Land Management Unallocated Lands, DRECP Proposed LUPA and Final EIS, Preferred Alternative

California Desert Connectivity Project

by

Kristeen Penrod,
SC Wildlands

SC Wildlands
Science & Collaboration for Connected Wildlands
P.O. Box 1052, Fair Oaks, CA 95628
(877) Wildland www.scwildlands.org

Via email only February 23, 2015
California Energy Commission
Dockets Office, MS-4, Docket No. 09-RENEW EO-01
1516 Ninth Street
Sacramento, CA 95814-5512
docket@energy.ca.gov

RE: SC Wildlands' comments on the Draft EIR/EIS for the DRECP

SC Wildlands' mission is to protect and restore systems of connected wildlands that support native species and the ecosystems upon which they rely. SC Wildlands was engaged by the Alliance for Desert Preservation to review, critique and comment on the DRECP and to make recommendations for improvements to the Reserve Design specifically in the Pinto Lucerne Valley and Eastern Slopes Ecoregion. Comments herein are focused on the Preferred Alternative.

Enhancing connectivity and linking natural landscapes has been identified as the single most important adaptation strategy to conserve biodiversity during climate change (Heller and Zavaleta 2009). All of California's climate adaptation strategies (CNRA 2009, 2014), frameworks (Gov. Brown, CEPA, ARB 2014), and action plans (CDFG 2011; CNRA, CDFA, CEPA 2014) identify maintaining connectivity as one of the most important adaptation strategies to conserve biodiversity and support ecological functions during climate change, with statutory authority and legislative intent found in AB 2785 (2008).

Meeting renewable energy production goals is essential to help combat climate change, but the vast scale of Development Focus Areas (DFA) being proposed for renewable energy developments in the California deserts are likely to impact habitat connectivity, alter essential ecosystem functions, and eliminate opportunities for species to shift their ranges in response to climate change. The potential impacts, specifically to wildlife and their ability to move across the landscape, are enormous. Strategically conserving and restoring functional connections between habitat areas is an effective countermeasure to the adverse effects of habitat loss and fragmentation, and it is an essential mitigation measure for climate change.

A Linkage Network for the California Deserts (Penrod et al. 2012), commissioned by the Bureau of Land Management and The Wildlands Conservancy, was intended to provide more information to natural resource agencies and the general public concerning where and how to maintain connectivity and sustain ecological functions in a changing climate. The study area encompassed the entire DRECP planning area with a buffer into the neighboring Sierra Nevada and South Coast Ecoregions. The Desert Linkage Network was designed to help meet the following Biological Goals and Objectives of the DRECP "*At the landscape-level, the Plan-wide*

BGOs address creating a DRECP-wide, connected, landscape-scale reserve system consisting of large habitat blocks of all constituent natural communities. The reserve system maintains ecological integrity, ecosystem function and biological diversity, maintains natural patterns of genetic diversity, allows adaptation to changing conditions (including activities that are not covered by the Plan), and includes temperature and precipitation gradients, elevation gradients, and a diversity of geological facets to accommodate range contractions and expansions of species adapting to climate change".

The Desert Linkage Network (Penrod et al. 2012) was developed in part based on the habitat and movement requirements of 44 different focal species (Table 1) that are sensitive to habitat loss and fragmentation. These focal species were selected to represent a diversity of ecological interactions and are intended to serve as an umbrella for all native species and ecological processes of interest in the region. These 44 focal species capture a diversity of movement needs and ecological requirements and include area-sensitive species, barrier-sensitive species, less mobile species or corridor-dwellers, habitat specialists, and ecological indicator species. Seven of these focal species are also Covered Species under the DRECP, including Bighorn sheep, Mohave ground squirrel, pallid bat, burrowing owl, Bendire's thrasher, desert tortoise and Mojave fringe-toed lizard, and 3 of these species (bighorn sheep, desert tortoise and Mohave ground squirrel) were also used as "Reserve Drivers".

In addition to linkages designed for focal species, the Desert Linkage Network (Penrod et al. 2012) was also designed to be robust to climate change. As climate changes the focal species' distributions and the land cover map is likely to change; indeed it is likely that many land cover types (vegetation communities) will cease to exist as the plant species that define today's vegetation communities shift their geographic ranges in idiosyncratic ways (Hunter et al. 1988). We used the land facet

Table 1. Desert Linkage Network Focal Species (Penrod et al. 2012)

Mammals	
Mountain lion	*Puma concolor*
Badger	*Taxidea taxus*
Kit fox	*Vulpes macrotis*
Bighorn sheep	*Ovis canadensis*
Mule deer	*Odocoileus hemionus*
Ringtail	*Bassariscus astutus*
Mojave ground squirrel	*Spermophilus mohavensis*
Round-tailed ground squirrel	*Spermophilus tereticaudus*
Desert pocket mouse	*Chaetodipus penicillatus*
Little pocket mouse	*Perognathus longimembris*
Southern grasshopper mouse	*Onychomys torridus*
Pallid Bat	*Antrozus pallidus*
Birds	
Burrowing owl	*Athene cunicularia*
Loggerhead shrike	*Lanius ludovicianus*
Cactus wren	*Campylorhynchus brunneicapillus*
Black-tailed gnatcatcher	*Polioptila melanura*
LeConte's thrasher	*Toxostoma lecontei*
Bendire's thrasher	*Toxostoma bendirei*
Crissal thrasher	*Toxostoma crissale*
Greater roadrunner	*Geococcyx californianus*
Herpetofauna	
Desert Tortoise	*Gopherus agassizii*
Chuckwalla	*Sauromalus obesus obesus*
Rosy boa	*Lichanura trivirgata*
Speckled rattlesnake	*Crotalus mitchellii*
Mojave rattlesnake	*Crotalus scutulatus*
Mojave fringe-toed lizard	*Uma scoparia*
Collared lizard	*Crotaphytus bicinctores*
Desert spiny lizard	*Sceloperus magister*
Desert night lizard	*Xantusia vigilis*
Red spotted toad	*Anaxyrus punctatus*
Plants	
Joshua tree	*Yucca brevifolia*
Blackbrush	*Coleogyne ramosissima*
Desert willow	*Chilopsis linearis*
Arrowweed	*Pluchea sericea*
Cat claw acacia	*Acacia greggii*
Mesquite	*Prosopis glandulosa*
Mojave yucca	*Yucca schidigera*
Big galleta grass	*Pleuraphis rigida*
Paperbag bush	*Salazaria mexicana*
Invertebrates	
Yucca moth	*Tegeticula synthetica*
Desert green hairstreak	*Callophrys comstocki*
Bernardino dotted blue	*Euphilotes bernardino*
Desert ("Sonoran") metalmark	*Apodemia mejicanus*
Ford's swallowtail	*Papilo indra fordi*

approach (Brost and Beier 2010) to design climate-robust linkages. A land facet linkage consists of a corridor for each land facet, plus a corridor for high diversity of land facets. Each land facet corridor is intended to support occupancy and between-block movement by species associated with that land facet in periods of climate quasi-equilibrium. The high-diversity corridor is intended to support short distance shifts (e.g. from low to high elevation), species turnover, and other ecological processes relying on interaction between species and environments. The focal species linkages and land facet linkages were combined and then refined (e.g., adding riparian connections, removing redundant strands) to delineate the final Desert Linkage Network.

Table 2. Land Ownership in the Linkage Network (Penrod et al. 2012)	Acres
Bureau of Land Management	2,663,847
Department of Defense	366,394
National Park Service	109,475
California State Lands Commission	82,517
California Department of Fish and Game	19,664
United States Fish and Wildlife Service	16,322
The Wildlands Conservancy	13,894
California Department of Parks and Recreation	9,943
United States Forest Service	8,801
Special Districts	3,230
Other Federal	2,148
Cities	1,076
Friends of the Desert Mountains	818
Riverside Land Conservancy	313
Counties	242
Private Lands	930,500
Total Desert Linkage Network	4,229,184

The Desert Linkage Network encompasses 4,229,184 acres. At the time the report was released in 2012, approximately 68% (2,932,291 acres) of the linkage network enjoyed some level of conservation protection (Table 2) mostly in land overseen by the Bureau of Land Management, National Park Service, California State Lands Commission, California Department of Fish and Wildlife, US Fish and Wildlife Service, and The Wildlands Conservancy. An additional 9% (366,394 ac) of the Linkage Network is administered by the Department of Defense, providing some level of conservation for these lands, though not included in DRECP. Thus, the Linkage Network includes substantial (78%) public ownership under the No Action Alternative.

We applaud the DRECP for delineating 1,804,000 acres of the Desert Linkage Network as BLM LUPA Conservation Designations (ACEC, NLCS, or Wildlife Allocation; Table IV.7-71) under the Preferred Alternative, which together with the Existing Conservation Areas and Conservation Planning Areas, would conserve 71% (2,612,000 acres) of Total Available Lands (3,682,000) in the Desert Linkage Network. However, we firmly believe that the other 1,070,000 acres of the Desert Linkage Network is essential to achieving **Goal L1: "**Create a Plan-wide reserve design consisting of a mosaic of natural communities with habitat linkages that is adaptive to changing conditions and includes temperature and precipitation gradients, elevation gradients, and a diversity of geological facets that provide for movement and gene flow and accommodate range shifts and expansions in response to climate change".

The first page of the Executive Summary uses the word "transparent" to describe the DRECP's approach but the document is chock full of black box assumptions and analyses that fail to fully and accurately disclose impacts. Section I.3.4.4.3 says, "the reserve design envelope was developed from a systematic and objective approach (Margules and Pressey 2000; Carroll et al.

2003; Moilanen et al. 2009) using several independent methods that were iteratively evaluated and refined". The Evaluation and Refinement is described as "exhaustive interactive GIS comparisons in collaborative mapping sessions," which isn't too terribly systematic or objective. This section also says that, "Important areas for desert tortoise, Mohave ground squirrel, and bighorn sheep were based on REAT agency interpretations of the species distribution models and recent occurrence data for these species, which correspond to the BGOs for these species"; also not systematic or objective, especially since most occurrence data is gathered when developments are proposed and thus cover only a portion of these species ranges. This section also says that "quantitative GIS analyses were conducted periodically throughout the evaluation and refinement process to quantitatively track and assess the capture of the species, natural communities, and landscape elements/processes". In order to fully and accurately disclose impacts, the actual results of those GIS analyses should be in Volume IV rather than after the results have been put through the mysterious acreage calculator.

The Impact Analyses and reported acreages are completely nebulous. As described in Section IV.7.1.1, "the reported impact acreage (e.g., acres of impact to natural communities or Covered Species habitat) is based on the overlap of the DFAs and the resource (e.g., mapped natural community or modeled Covered Species habitat) times the proportion of the impacts from Covered Activity development anticipated with the DFA". The results of the impact analyses are reported in an onerous number of tables with relatively meaningless acreages based on assumptions about proportions of DFAs that will actually be impacted. There are NO maps showing the overlap of the DFA's and the resource (e.g., mapped natural community or modeled Covered Species habitat). In Volume IV: Environmental Consequences/Effects Analysis, Section IV.07 Biological Resources, there is only ONE Figure, Figure IV.7-1 Subunits, in the entire section. While there is a whopping total of 311 tables associated with this same section, Tables IV.7-1 through IV.7-311. These 311 tables slice and dice the "Conservation Analyses" and "Impact Analyses" in various ways, generally starting with Plan-Wide and then breaking it down by BLM LUPA, NCCP, GCP, Subregions, Covered Species, etc. The various Conservation Analysis tables report actual acreages while the Impact Analysis tables report Total Impact Acres generated by the mysterious black box. For example, the Plan Wide Preferred Alternative includes 2,024,000 acres of DFAs and transmission corridors but says only about 177,000 acres will actually be impacted. Nowhere does the document report actual acreages of how the 2,024,000 acres of DFAs and transmission corridors in the Preferred Alternative overlap for example, habitat for the 37 Covered Species or the Desert Linkage Network. Instead, all of the impact analysis tables associated with the Preferred Alternative relate to the 177,000 acres of reported "Total Impact Acreage". All tables in Volume IV should add a column to report actual acreage of DFA overlap with resources alongside the reported "Total Impact Acreages". Maps must be included to show where the DFAs coincide with these resources. And, please do not answer in the Response to Comments that the Data Basin Gateway is serving this purpose; it is an excellent supplemental resource but should not replace basic disclosure of impacts. As currently written, the DRECP approach to impact analysis is anything but transparent.

Section I.3.4.4.3 says the Desert Linkage Network was one of several inputs to a focal species, natural communities, and processes approach, which created "an initial reserve design envelope using better information with less uncertainty". Section I.3.4.4.3 (I.3-26) Reserve Design Methods and Appendix D, D.3.6., refers to a composite map of KEY covered species, natural

communities and processes as "reserve drivers" (i.e., desert tortoise, Mohave ground squirrel, bighorn sheep, microphyll woodland, dunes and sand resources, flat-tailed horned lizard, hydrologic features, and West Mojave corridors, rare natural communities, and environmental gradients), which were selected because they are "*important to the overall DRECP conservation strategy and generally occur across a range of ecoregion subareas and habitats of the Plan Area, such that conserving the areas important for the reserve drivers would also conserve areas important for the other Covered Species and natural communities*". There is no figure for this "Composite Map of Key Reserve Drivers" in the document and it is NOT one of the 500+ data layers available for public review on the Data Basin Gateway. While it is clear from ES Figure 5 that landscape connectivity was one of the reserve drivers for many of the conservation designations, Table D-2 in Appendix D Reserve Design Development Process and Methods, indicates that the data generated by Penrod et al. (2012) was only used as a "Reserve Driver" in the Western Mojave, which is ironic because the Western Mojave is particularly hard hit with DFAs that could sever connectivity or significantly reduce functional habitat connectivity.

The 37 Covered Species were selected (Appendix B) because they are ALL "important to the overall DRECP conservation strategy. How well do the "Reserve Drivers" (I.3.4.4.3 Reserve Design Methods and Appendix D, D.3.6) capture modeled habitat for all of the "Covered Species"? A quick review of the species distribution models in relation to the Development Focus Areas (DFA) show that several covered species are NOT so well covered by the Key Reserve Drivers (e.g., gila woodpecker, greater sandhill crane, mountain plover, tricolored blackbird, Swainson's hawk, willow flycatcher, Yuma clapper rail, Alkali mariposa lily). For example, a quick GIS analysis for tricolored blackbird revealed that 60% of its habitat falls within DFAs. Further, another 9% of the tricolored blackbird modeled habitat is Undesignated and available for "disposal (Table 3). This analysis did not even factor in transmission lines. Maps should be included for each of the 37 Covered Species showing their modeled habitat, recorded occurrences and when applicable designated critical habitat in relation to DFAs, FAAs,

Table 3. Tricolored blackbird habitat overlap with integrated Preferred Alternative

Designation - Preferred Alt Integrated	**Acres**	**%**
BLM ACECs	7,910.17	3%
BLM ACECs and NLCS	2,243.56	1%
BLM Wildlife Allocation	2,694.56	1%
Conservation Planning Areas	47,566.51	17%
Development Focus Areas	***165,526.27***	***60%***
Future Assessment Areas	114.79	0%
Impervious and Urban Built-up Land	8,361.00	3%
Legislatively and Legally Protected Areas	11,525.35	4%
Military	6,597.31	2%
Military Expansion Mitigation Lands	133.95	0%
Open OHV Areas	34.64	0%
Tribal Lands	40.09	0%
Undesignated	25,125.55	9%
Total Modeled Tricolored Blackbird Habitat	**277,873.76**	**100%**

SAAs, and Undesignated land. This is the type of disclosure of impacts this is required under the legal framework provided under 1.2. Currently, the only maps for ALL 37 Covered Species are buried in Appendix C to Appendix Q, *Baseline Biology Report.* All 37 Covered Species should be Reserve Drivers.

Currently, Table IV.7-47 Plan-Wide Impact Analysis for Covered Species Habitat – Preferred Alternative is the closest the Plan gets to disclosing impacts to ALL of the 37 Covered Species. The tricolored blackbird analysis above shows 60% (165,526 acres) of the species habitat falls within DFAs, while Table IV. 7-47 reports only 8,000 acres of Total Impact for this species. There is NO reason why both of these acreages cannot be reported in Table IV.7-47. Table IV.7-57, Plan-Wide Conservation Analysis for Covered Species Habitat – Preferred Alternative is the closest the Plan gets to disclosing how poorly the 37 Covered Species are actually covered by the plan - only 19 of the 37 species have 50% or more or their habitat conserved under the Preferred Alternative. Not even all of the Reserve Drivers are very well "Covered" by the Preferred Alternative. Which begs the question – how well does the reserve design capture the needs of the 123 "Non-Covered" special status species?

I.3.4.4.5 DRECP Plan-Wide Reserve Design Envelope for Each Alternative

The following standards and criteria were used to develop the Interagency Plan-Wide Conservation Priority Areas (and Conceptual Plan-Wide NCCP Reserve Design):
Conserve important habitat areas that also provide habitat linkages for the movement and interchange of organisms within the Plan Area and to areas outside the Plan Area.
o Important habitat linkage areas were included in the NCCP Conceptual Plan-Wide Reserve Design using species-specific linkage information for key Covered Species, including desert tortoise (*Gopherus agassizii*), Mohave ground squirrel (*Xerospermophilus mohavensis*), and desert bighorn sheep (*Ovis canadensis nelsoni*).
o Landscape-scale, multispecies habitat linkage information was used to identify movement corridors between habitat blocks inside and outside the Plan Area.
o Species-specific threats and stressor information was incorporated to identify the linkage areas critical for inclusion in the NCCP Conceptual Plan-Wide Reserve Design.

One of the DRECP Planning Goals in section 1.2 of the Executive Summary is to "Preserve, **restore**, and enhance natural communities and ecosystems including those that support Covered Species within the Plan Area". However, it appears that several "fuzzy logic" models of intactness were the primary drivers used to identify the DFAs, regardless of whether the DFAs make up the majority of a given Covered Species habitat. "*In order to minimize habitat fragmentation and population isolation, DFAs were sited in less intact and more degraded areas. Based on the terrestrial intactness analysis developed for the DRECP area, approximately 87% of the DFAs in the Preferred Alternative are characterized by low or moderately low intactness. Therefore, a majority of the DFAs are in locations with existing habitat fragmentation and population isolation such that development of Covered Activities in these areas would not appreciably contribute to additional effects".* Yet, habitat loss and fragmentation is precisely why many of the 37 Covered Species and 123 Non-Covered Species are listed as threatened, endangered or sensitive in the first place!

The California Desert Connectivity Project (Penrod et al. 2012) is briefly described in III.7.7-246. This is the ONLY place in the entire document that refers to "23 crucial linkage planning areas within the Plan Area". Actually, there were 22 linkage planning areas but nowhere are these crucial linkages actually identified by name. And nowhere are the 22 crucial linkages actually analyzed by linkage. Instead, baseline conditions of the Desert Linkage Network and impacts to the linkage network are analyzed by Ecoregion Subareas, which is relatively meaningless in the context of landscape connectivity since several of the linkages span more than one Ecoregion Subarea. Further, Figures III.7-26 through 7-36 do not label any of the Landscape Blocks intended to be served by the 22 crucial linkages. The discussion in Vol. III Pages 7-248 through 7-271 provides virtually NO information beyond what is already summarized in Tables III.7-69, 7-82, and 7-96 other than vague geographical references, like "providing connectivity between mountain ranges within the ecoregion subarea". Of particular note, is that none of the targeted Landscape Blocks outside of the Plan Area (e.g., Sierra Nevada, San Gabriel Mountains, San Bernardino Mountains) are labeled or depicted in Figure III.7-26 or in the subareas maps, or in any other maps in the entire document. Yet, several areas of the DRECP refer to the importance of maintaining connectivity beyond the Plan boundary. The DRECP repeatedly refers readers to Penrod et al. 2012 but that document was analyzed and organized by linkage not Ecoregion Subareas, so it is impossible to evaluate and compare baseline conditions or impacts as described in the DRECP to the Desert Linkage Network.

The ENTIRE Section, III.7.8 Landscape Habitat Linkages and Wildlife Movement Corridors (III.7 7-245 to 7-248), is VERBATIM to what is provided in Appendix Q on this topic. There is a serious overuse of the Copy/Paste function throughout the document. Typically, an Appendix provides the reader with more relevant information related to the topic being discussed, beyond just the literature cited section. This section of the DRECP alone refers to Appendix Q 23 times! Why not just include the references within the section and consolidate the numerous literature cited sections?

The Preferred Alternative estimates a Plan-Wide Total Impact Area for the Desert Linkage Network of 28,000 acres (Table IV. 7-52) based on the overlap of the DFAs with the Desert Linkage Network times the proportion of the impacts from Covered Activity development anticipated with the DFA (IV.7-263). However, based on a GIS analysis of the overlap of the Integrated Preferred Alternative with the Desert Linkage Network, the actual acreage of the DFAs that overlap the Desert Linkage Network is 205,650 acres – which must be disclosed! There is also an additional 198,177 acres in the Linkage Network identified as Undesignated in the Preferred Alternative. Undesignated areas are described in the glossary as *BLM-administered lands that do not have an existing or proposed land allocation or designation. These areas would be open to renewable energy applications but would not benefit from the streamlining or CMA certainty of the DFAs.* Page II.3-381 under II.3.2.3.4.2 states: "In non-designated lands (i.e. lands not covered by the specific CMAs below), make lands available for disposal through exchange or land sale". Does this mean that nearly 200,000 acres of the Desert Linkage Network would be "available for disposal"? Shouldn't this be factored into the "Impact Analysis"? And fully disclosed in the Total Impact Acreage? Additionally, Future Assessment Areas cover 37,377 acres and Special Analysis Areas cover another 29,342 acres of the Desert Linkage Network. Between the DFAs, Undesignated, FAAs and SAAs areas, over 470,547 acres of the Desert Linkage Network could be open to renewable energy applications. There are NO maps that show

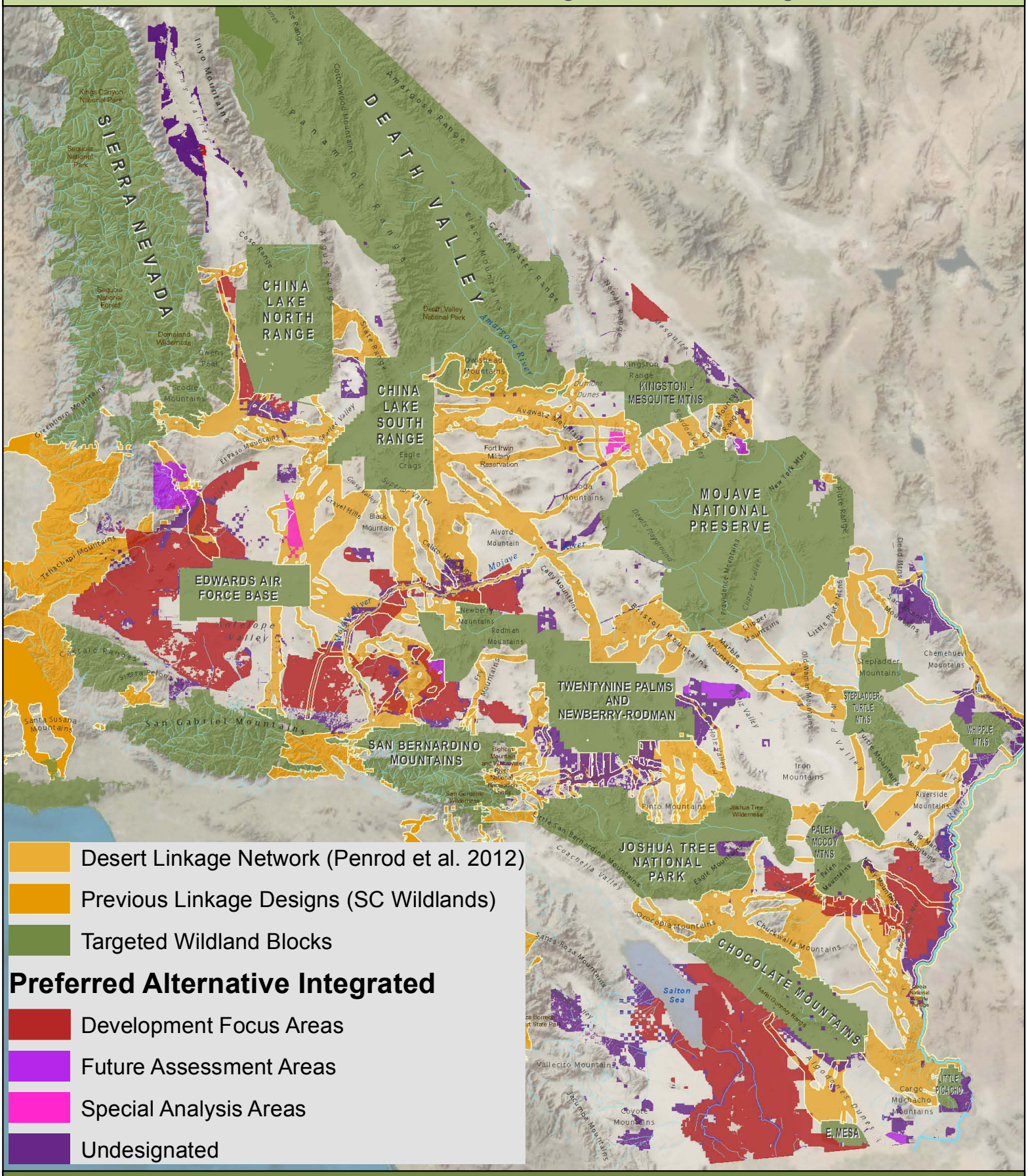
how the DFAs, FAAs, SAAs, Variance Lands, or Undesignated Lands in the Preferred Alternative coincide with the Desert Linkage Network, not to mention transmission corridors! Volume IV is the **Environmental Consequences / Affects Analysis** yet this section repeatedly refers to maps in Volume III, "Affected Environment Figures III.7-26 through III.7-36 in Chapter III.7 of Volume III shows the desert linkage network for the Plan Area and in each ecoregion subarea". Maps must be included in Vol. IV for the entire Desert Linkage Network and each of the six subareas that would be impacted. As Figure 1 shows, several linkages are completely severed or severely constrained by DFAs, FAAs and Undesignated land.

Undesignated Lands: II.3-9 Table II.3-1 Interagency DRECP Plan-Wide Preferred Alternative identifies 1,323,000 acres of Undesignated lands (i.e., BLM Unallocated Land), 709,000 acres of which is within BLM LUPA (Table II.3-42). This 1.3 million acres of BLM land is NOT clearly depicted in FIGURE II.3-1 Interagency Preferred Alternative but instead appears to be lumped with Impervious and Urban Built-up Land (5,547,000 acres in Table II.3-1), which the legend describes as "Existing Developed Areas". This is EXTREMELY misleading. These Undesignated lands overlap several areas of high conservation value, including but not limited to habitat for Covered Species, "Reserve Drivers" (e.g., bighorn sheep mountain habitat, bighorn sheep intermountain habitat, desert tortoise intact habitat and fragmented habitat in the Desert Tortoise TCA Habitat Linkages), and numerous areas of the Desert Linkage Network. Further, while much of the Mojave River itself is designated as Conservation Planning Areas in the Preferred Alternative, Undesignated lands or DFAs are located in the uplands along most of the Mojave River. II.3-381 One of the bullets under II.3.2.3.4.2 Conservation and Management Actions states: "In non-designated lands (i.e. lands not covered by the specific CMAs below), make lands available for disposal through exchange or land sale". Is Undesignated, BLM Unallocated and "non-designated lands" synonymous? Does this mean that over 1.3 million acres of existing public land administered by BLM will be available for "disposal"? Where is the impact analysis regarding these lands?

There is no mention of Undesignated, BLM Unallocated, or Non-designated lands in Volume III Environmental Setting/Affected Environment, not in III.13 BLM Lands and Realty - Land Use Authorizations and Land Tenure or III.7 Biological Resources. This is a serious oversight that must be addressed. IV.7-281 is the only place that mentions Undesignated Areas, *"Approximately 471,000 acres were not designated as Reserve Design Lands under the Preferred Alternative that were identified in the conceptual reserve envelope, which is primarily comprised of BLM-administered lands in the Plan Area without BLM LUPA conservation designations over them"*. What about the other 852,000 acres of Undesignated lands mentioned in Table II.3-1? IV.13 only mentions Undesignated Lands in reference to FAA, SAA, and DRECP Variance lands but Undesignated Lands cover a far greater area than what is included in these designations. Maps must be included in Volumes III and IV that clearly depict ALL Undesignated lands.

The entire discussion describing the six different subareas of the Desert Linkage Network that "could be adversely impacted in DFAs and transmission corridors" is inadequate (IV.7-264 and 7-265). Each subarea is allocated one poorly written paragraph that vaguely describes impacts, e.g., "there are DFAs in a portion of the desert linkage network". Impacts should be analyzed and described in reference to the 22 crucial linkages delineated by Penrod et al. (2012) and further

Figure 1. Desert Linkage Network Conflicts



evaluated by the focal species and land facet linkage networks, rather than ecoregional subareas. The DRECP should disclose where DFAs completely sever or significantly constrain a linkage, not just provide acreages and describe proportions of subareas. As the lead author in Penrod et al. (2012), I should not have difficulty deciphering the descriptions of impacts to the linkage network. Further, this entire discussion is meaningless without maps that include detailed annotation of all the areas referenced in the text. Lead biologists, Cartographers and Copy Editors should work together to ensure that geographical and locational references in the text are included on the maps (see bold type in following paragraph). Typically, zoomed in maps have more annotation. The maps must clearly and accurately show where DFAs, FAAs, SAAs, Variance Lands and Undesignated lands and Transmission Corridors coincide with the Desert Linkage Network.

This is an example of one of the six poorly written paragraphs allocated to discussing Plan-Wide conservation of and impacts to the Desert Linkage Network (IV.7-264), "*In the Pinto Lucerne Valley and Eastern Slopes subarea, there are DFAs in a portion of the desert linkage network that connects the* ***Grapevine Canyon Recreation Lands*** *to the* ***Granite Mountains*** *in Lucerne Valley; however, no DFAs are located in the habitat linkage between the* ***Ord Mountains*** *and the Granite Mountains across the Highway 18 east of* ***Apple Valley****. There are also DFAs in the linkage that connects* ***Black Mountain*** *to the* ***Mojave River****. DFAs under the Preferred Alternative are sited to avoid and minimize impacts to wildlife movement in this subarea by maintaining movement corridors between the* ***San Bernardino Mountains*** *and the Mojave Desert, including in the Ord Mountains to Granite Mountains linkage area and in the* ***Bighorn Mountain*** *area that connects to* ***Johnson Valley*** *and the* ***Morongo Basin****. General terrestrial wildlife movement may be affected locally by the development of Covered Activities in these DFAs; however, the siting of DFAs, the reserve design, and the CMAs related to wildlife movement and Covered Species would offset the impacts on general terrestrial wildlife movement".* The linkages in the Desert Linkage Network in the vicinity of the Apple Valley and Lucerne Valley DFAs are the Twentynine Palms Newberry Rodman-San Bernardino Connection and the Twentynine Palms Newberry Rodman-San Gabriel Connection (Penrod et al. 2012), incorrectly described above as "connects Grapevine Canyon Recreation Lands to the Granite Mountains in Lucerne Valley". These connections connect the San Bernardino and San Gabriel Mountains of the South Coast Ecoregion to the Newberry Rodman Mountains in the Mojave, not Grapevine Canyon to Granite Mountains, which is only a portion of those linkages. Then it says, "No DFAs are located in the habitat linkage between the Ord Mountains and the Granite Mountains" but the DRECP neglects to say that this linkage, which most closely resembles the San Bernardino-Granite Connection (Penrod et al. 2005) is entirely encompassed within the landscape level connection described in the first part of that sentence! Penrod et al. (2005) was a focal species based connectivity assessment and the Desert Linkage Network (Penrod et al. 2012) used improved methods to make the linkages robust to climate change (i.e., land facet analyses). As currently proposed, the Granite Mountain Corridor ACEC is not sufficiently wide to provide live-in and move-through habitat for the target species or support range shifts in response to climate change.

Disruption of landscape connections for species movements and range changes is one of the greatest stressors to ecosystems, especially under climate change. In order to achieve **Goal L1** - NO DFAs should be sited within the Desert linkage Network, desert tortoise linkages, bighorn

sheep intermountain habitat and Mohave ground squirrel linkages. All of these species-specific linkages and landscape linkages should automatically be included in the Reserve Design, either as ACEC, NLCS, Conservation Planning Areas, or SAAs. No Undesignated (i.e., BLM Unallocated) land within these linkages should be "disposed of" but should also be automatically included as ACEC, NLCS, SAAs, or Conservation Planning Areas in the Reserve Design.

Objective L1.1: Conserve Covered Species habitat, natural communities, and ecological processes of the Mojave and Sonoran deserts in each ecoregional subarea in the Plan Area in an interconnected DRECP reserve. COMMENT: Must include desert tortoise Ord-Rodman to Joshua Tree and Fremont Kramer Linkages.

Objective L1.2: Design landscape linkage corridors to be 3 miles wide where feasible, and at least 1.2 miles wide where a greater width is not feasible. COMMENT: Several landscape linkages designed by Penrod et al. 2012 are greater than 3 miles wide and viable. For instance, it is feasible and desirable to design a linkage more than 1.2 miles wide for the proposed Granite Mountain Wildlife Linkage ACEC with revisions to the Apple Valley and Lucerne Valley DFAs.

Objective L1.3: Protect and maintain the permeability of landscape connections between neighboring mountain ranges to allow passage of resident wildlife by protecting key movement corridors or reducing barriers to movement within intermountain connections, including:
o Chuckwalla-Little Chuckwalla-Palen connections
o Bristol-Marble-Ship-Old Woman connections
o Old Woman-Turtle-Whipple connections
o Bullion-Sheephole-Coxcomb connections
o Clark-Mesquite-Kingston connections
o Big Maria-Little Maria-McCoy connections
o Soda-Avawatz-Ord-Funeral connections
o Clark-Mesquite-Kingston-Nopah-Funeral connections
o Rosa-Vallecitos-Coyote connections
o Panamint-Argus connection
o Palo Verde-Mule-Little Chuckwalla connections
o Palo Verde-Mule-McCoy connections
o Chuckwalla-Eagle-Coxcomb connections
o Eagle-Granite-Palen-Little Maria connections
o Granite-Iron-Old Woman connections
o Big Maria-Little Maria-Turtle connections
o Northeast slope of the San Bernardino Mountains between Arrastre Creek and Furnace Canyon, including Arctic and Cushenbury canyons, Terrace and Jacoby springs, along Nelson Ridge. **COMMENT:** Why is this objective restricted to the list of "connections" above? The majority of the mountain ranges listed above are in the Eastern Mojave and Sonoran regions and therefore not consistent with creating a Plan-wide reserve design (Goal L1). These are not the landscape linkages identified in the Desert Linkage Network (Penrod et al. 2012), nor are they the desert tortoise linkages identified in Figure C-34. Where did this list come from? I did not see it referenced in the document.

Feature Landscape stressors and threats: Goal L3: Reduce, relative to existing conditions, adverse impacts from human activities to natural communities and Covered Species in the Plan Area.
Step-Down Biological Objective L3-A: Through the DRECP planning process, establish Development Focus Areas (DFAs) for Covered Activities in locations that would not disrupt or degrade the function of habitat linkages. COMMENT: Figure 1 clearly shows that DFAs would completely sever and disrupt and degrade the function of several linkages. Please see recommended revisions to the Reserve Design for the Pinto Lucerne Eastern Slopes below. I wish I had time to conduct this level of detailed review for the entire Desert Linkage Network!

H.2.3 Wildlife Linkages and Connectivity: Figures (H-1 & H-2) depict the wildlife linkages where Covered Activities will be configured to avoid and minimize adverse effects to wildlife connectivity and the function of the wildlife linkage. Figure H-2 Landscape-level Linkage CMA depicts the ENTIRE Desert Linkage Network and SCML Linkages that fall within the DRECP boundary and we wholeheartedly agree that Covered Activities should avoid and minimize impacts to these linkage. Figure H-2 is specifically referenced in the Section II.3.1.2.5.3, Landscape-Level Avoidance and Minimization CMAs, under the CMA **AM-LL-1**.

AM-LL-1: The siting of projects along the edges of the linkages identified in Appendix H (Figures H-1 and H-2) will be configured (1) to maximize the retention of microphyll woodlands and their constituent natural communities and inclusion of other physical and biological features conducive to species' dispersal, and (2) informed by existing available information on modeled Covered Species habitat and element occurrence data, mapped delineations of natural communities, and based on available empirical data collected under the MAMP or other sources, including radio telemetry, wildlife tracking sign, and road-kill information. Additionally, Covered Activities will be sited and designed to maintain the function of Covered Species connectivity and their associated habitats in the following linkage and connectivity areas:
o Within a 5-mile-wide linkage across Interstate 10 centered on Wiley's Well Road to connect the Mule and McCoy mountains.
o Within a 3-mile-wide linkage across Interstate 10 to connect the Chuckwalla and Palen mountains.
o Within a 1.5-mile-wide linkage across Interstate 10 to connect the Chuckwalla Mountains to the Chuckwalla Valley east of Desert Center.
o The confluence of Milpitas Wash and Colorado River floodplain within 2 miles of California State Route 78.
In addition to these specific landscape linkages identified above, the Riparian and Wetland Natural Communities and Covered Species CMAs will contribute to maintaining and promoting habitat connectivity and wildlife movement (see RIPWET under Section II.3.1.2.5.4). The Covered Species CMAs provide additional avoidance and minimization actions for important species-specific habitat linkages (see Section II.3.1.2.5.4).
The DFA configuration of the Preferred Alternative should avoid landscape linkages (Penrod et al. 2012) and species-specific linkages all together in order to minimize impacts to Covered Species under existing habitat conditions and provide ample landscape level connectivity in an uncertain climate. This CMA must be implemented throughout the Desert Linkage Network!

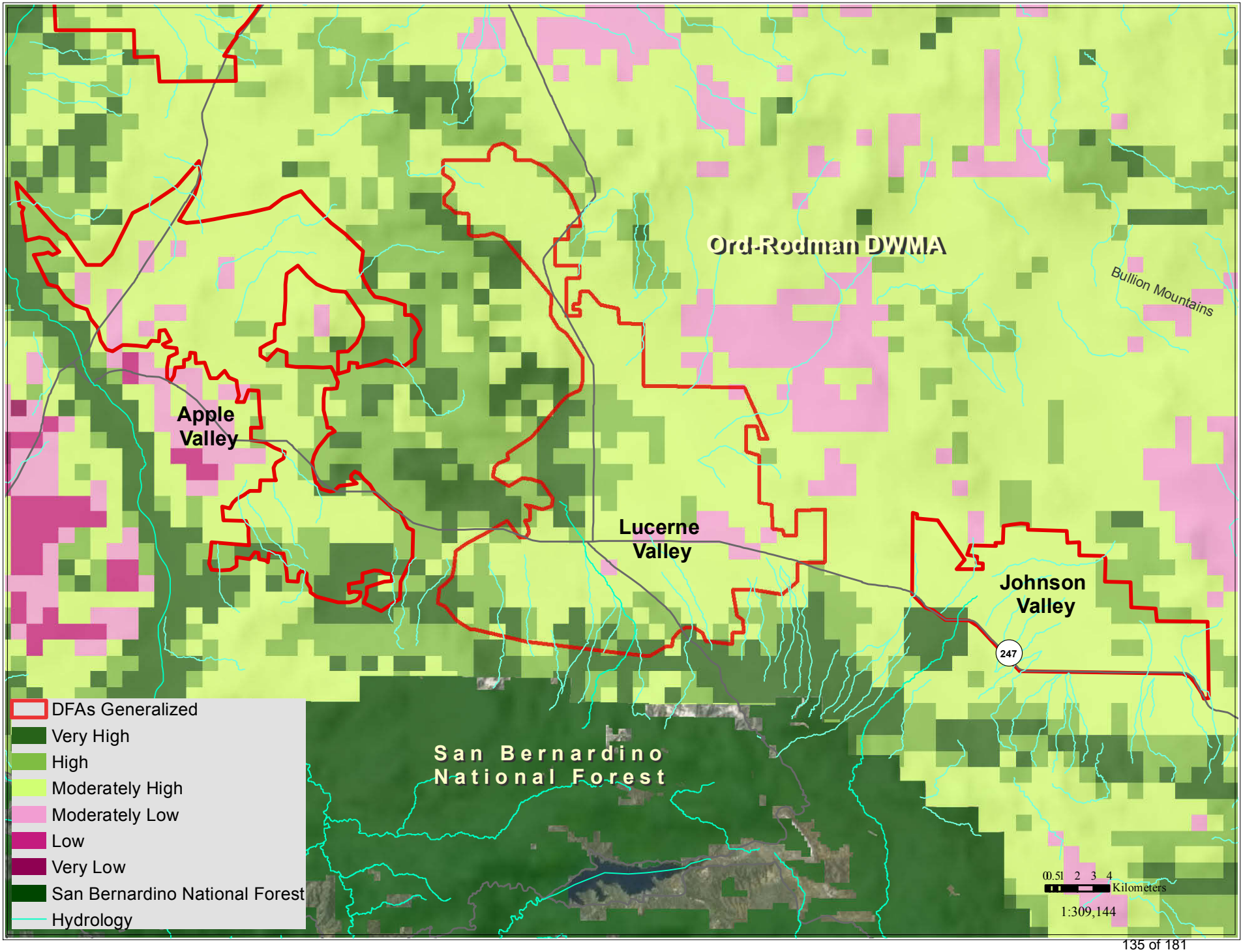
A Conservation Alternative for the Pinto Lucerne Valley and Eastern Slopes

Conservation Values are particularly high in the Pinto Lucerne Valley and Eastern Slopes Subarea along the Mojave River, through the linkage, and all along the slopes of the San Bernardino Mountains (Figure 2). The Conservation Values Model available on the Data Basin Gateway aggregated several biological themes including natural community diversity, rare species concentrations, concentrations of Covered Species modeled distributions, concentrations of Non-Covered Species modeled distributions, and relative quality of identified wildlife linkages. Virtually all of the proposed Apple Valley, Lucerne Valley and Johnson Valley DFAs scored Moderately High to Very High with very few pixels scoring Moderately Low and no pixels scoring Low or Very Low. Section (II.3, Page 347), describes the Pinto Lucerne Valley and Eastern Slopes Subarea as, "some of the most diverse and threatened habitats in the California desert".

The following section suggests refinements to the current designations in the Preferred Alternative for the Pinto Lucerne Valley and Eastern Slopes subarea and justification for these recommended improvements. As currently proposed the Reserve Design doesn't capture landscape linkages wide enough to support viable populations of the species they are intended to serve or the full diversity of land facets needed to make the linkages robust to climate change. Maintaining and restoring landscape level connectivity is essential to day-to-day movements of individuals seeking food and water, shelter or mates; dispersal of offspring to new home areas; seasonal migration; recolonization of unoccupied habitat after a local population goes extinct; and for species to shift their range in response to global climate change. Plant and animal distributions are predicted to shift (generally northwards or upwards in elevation in California) due to global warming (Field et al. 1999). Full shifts in vegetation communities are expected as a result of climate change (Notaro et al. 2012). The Pinto Lucerne Valley and Eastern Slopes Subarea "spans diverse landscapes of the south-central Mojave Desert and the San Bernardino Mountains, from 1,000 feet to over 6,000 feet in elevation". The northern slopes and foothills of the San Bernardino Mountains contain many springs and seeps, several riparian drainages, and the headwaters of the Mojave River. Riparian systems will be especially important to allow species to respond and adapt to climate change because they provide connectivity between habitats and across elevational zones (Seavy et al. 2009). Thus, linkages must be sufficiently wide to cover an ecologically meaningful range of elevations as well as a diversity of microhabitats that allow species to colonize new areas.

While the Mojave Riverbed itself is identified as a Conservation Planning Area for much of its length, virtually all of the uplands are proposed as either DFAs or Undesignated land that could be available for "disposal" The Mojave River flows from the South Coast Ecoregion through much of the Mojave Ecoregion. It is one of three major rivers in the desert and the only one that traverses from the West to the East Mojave, covering a distance of roughly 80 miles - it is a key wildlife movement corridor. The Mojave River is also essential habitat for several listed and sensitive species with portions of the river designated as critical habitat for southwestern willow flycatcher. According to the USFWS (1986), over 200 species of migratory birds have been recorded in the Mojave River, near the Mojave River Forks Dam Water Conservation Project. These hundreds of migratory bird species use the Mojave River, Deep Creek, mountain lakes, riparian drainages and seeps and springs throughout desert facing slopes of the San Bernardino

Figure 2. Coservation Values are High in the Pinto Lucerne Valley Eastern Slopes Ecoregion Subarea



and San Gabriel Ranges. No DFAs should be sited within the 500 year flood plain and all Undesignated areas along the Mojave River should be included in the Reserve Design to ensure wildlife have access to this essential resource, which will be even more indispensible with climate change.

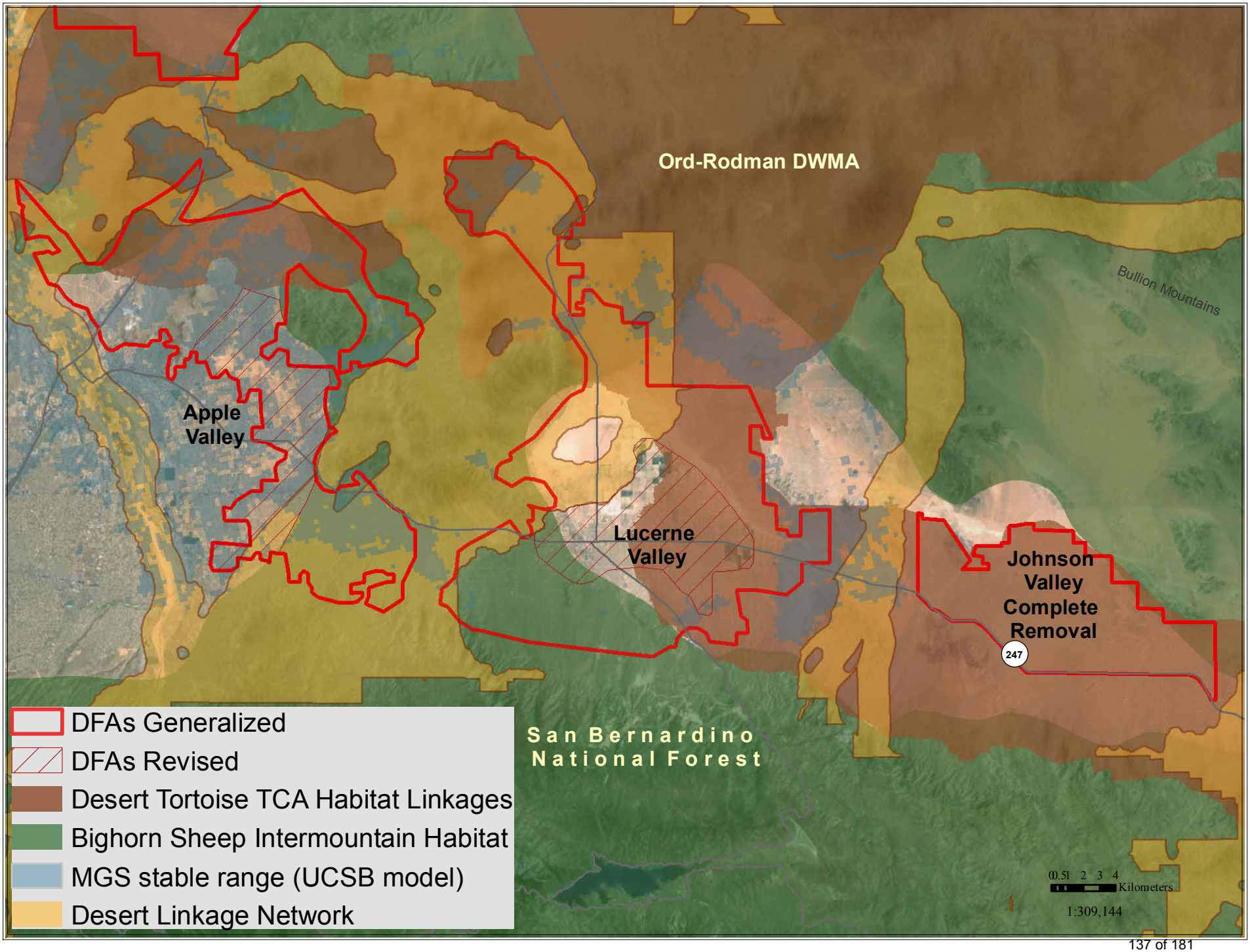
The hydrology of the northern slopes of the San Bernardino Mountains is not just an essential resource for the flora and fauna. It is also extremely important to recharging groundwater basins in Apple, Lucerne and Johnson Valleys. Massive renewable energy projects use enormous amounts of water both in construction and maintenance, which could further exacerbate already severely distressed overdraft conditions in these groundwater basins.

As currently proposed the Apple Valley, Lucerne Valley and Johnson Valley DFAs present significant conflicts with habitat and climate change connectivity for Reserve Drivers such as bighorn sheep, desert tortoise, Mojave fringe-toed lizard and the Desert Linkage Network, as well as several other Covered Species, in addition to 31of the 44 focal species addressed by Penrod et al. (2012). There is an approximately 7 mile wide Conservation Planning Area designated between the San Gabriel Mountains and Edwards Air Force Base (AFB), though Military lands are not specifically covered by the DRECP. The essential ecoregional connection between the south-central Mojave Desert and the San Bernardino Mountains (i.e., connectivity to areas outside the plan area) warrants the same consideration, especially since this linkage serves to connect vast areas with conservation designations (e.g., NLCS, ACEC and USFS). It is feasible and desirable to conserve functional landscape-level connectivity here.

Here we suggest refinements to the Apple Valley and Lucerne Valley DFAs and complete removal for the Johnson Valley DFA. We created our own Composite Map of Key Reserve Drivers, referred to but not provided in I.3.4.4.3 and Appendix D, D.3.6. The primary data used to create this composite map of Key Reserve Drivers include Desert Tortoise TCA and Linkages (Averill-Murray et al. 2013), Bighorn sheep mountain habitat and intermountain habitat (CDFW 2013), Mohave ground squirrel (Inman et al. 2013, UCSB 2013), and the Desert Linkage Network (Penrod et al. 2012), which were used to make proposed refinements to the Reserve Design (Figure 3). We queried the areas removed from the Apple Valley and Lucerne Valley DFAs and the Johnson Valley DFA using the Site Survey Composite for the Preferred Alternative (i.e., DRECP_Composite_Ecological _Basline_Preferred_Alternative_v5, GIS data downloaded from Data Basin) to identify other Covered Species that would benefit from the proposed changes to the Reserve Design (Table 4). In addition to providing essential habitat for these Reserve Drivers, several other Covered Species will benefit from these refinements including Bendire's thrasher, burrowing owl, golden eagle, Swainson's hawk, least Bell's vireo, southwestern willow flycatcher, yellow-billed cuckoo, tricolored blackbird, mountain plover, pallid bat, Townsend's big-eared bat, alkali mariposa lily, Little San Bernardino linanthus, Mojave monkeyflower, and Parish's daisy.

These refinements would benefit 18 of the Covered Species. According to the DRECP Composite Ecological Baseline, each pixel in the refinements to the Apple Valley DFA (573 pixels) benefit 4 to 11 Covered Species (MEAN 6.9 species), with a total species count of 3,959 in the 573 pixels. Each pixel in the refinements to the Lucerne Valley DFA (787 pixels) benefit 2 to 10 Covered Species (MEAN 6.45 species), with a total species count of 5,080 in the 787

Figure 3. Refinements to and Removal of DFAs in the Pinto Lucerne Valley and Eastern Slopes Subarea



pixels. Each pixel in the Johnson Valley DFA (428 pixels) benefit 4 to 7 Covered Species (MEAN 5.48 species), with a total species count of 2,346 in the 428 pixels.

Natural communities in the areas removed from the Apple and Lucerne Valley DFAs and the Johnson Valley DFA are extremely diverse and include but are not limited to, Californian montane conifer forest, Central and South Coastal Californian coastal sage scrub, Great Basin Pinyon /Juniper Woodland, Inter-Mountain Dry Shrubland, Intermontane deep or well-drained

Table 4. Summary of Benefits to Covered Species Using Site Survey Composite for the Preferred Alternative (i.e., DRECP Composite Ecological Basline Preferred Alternative v5, GIS data downloaded from Data Basin).

Covered Species	**Apple Valley (573 pixels)**	**Lucerne Valley (787 pixels)**	**Johnson Valley (428 pixels)**
Alkali mariposa lily	0	133	0
Bendire's thrasher	518	564	75
Bighorn sheep	194	139	0
Burrowing owl	559	774	428
desert tortoise	408	719	428
Golden eagle	361	484	353
Least Bell's vireo	80	50	7
Little San Bernardino linanthus	0	84	210
Mohave ground squirrel	253	159	0
Mojave monkeyflower	155	113	0
Mountain plover	7	0	0
Pallid bat	570	756	428
Parish's daisy	108	310	0
Southwestern willow flycatcher	4	7	0
Swainson's hawk	29	0	0
Townsend's big-eared bat	567	775	417
Tricolored blackbird	14	14	0
Yellow-billed cuckoo	3	0	0
Total Species Count in Pixels	**3959**	**5080**	**2346**
# of Covered Species per Pixel	**4 to 11**	**2 to 10**	**4 to 7**
Average # Covered Species per Pixel	**6.9**	**6.45**	**5.48**

soil scrub, Intermontane seral shrubland, California Annual and Perennial Grassland, Lower Bajada and Fan Mojavean /Sonoran desert scrub, Mojave and Great Basin upper bajada and toeslope, Mojavean semi-desert wash scrub, Shadscale/saltbush cool semi-desert scrub, North American Warm Desert Alkaline Scrub, Herb Playa and Wet Flat, Sonoran-Coloradan semi-desert wash woodland/scrub, Madrean Warm Semi-Desert Wash Woodland/Scrub, Mojavean semi-desert wash scrub, North American warm desert dunes and sand flats, North American Warm Desert Alkaline Scrub and Herb Playa and Wet Flat, and, Southwestern North American salt basin and high marsh. In addition, there are several unique plant assemblages in this area due to its location at the juncture of the Mojave and South Coast ecoregions. Here, oak woodlands

intermingle with Joshua tree and Pinyon-Juniper woodlands amid spectacular rocky outcrops. Ecotones are particularly high in biodiversity and contact zones for evolution.

The Twentynine Palms Newberry Rodman-San Gabriel Connection and the Twentynine Palms Newberry Rodman-San Bernardino Connection of the Desert Linkage Network (Penrod et al. 2012) overlap one another in the area of the proposed Apple Valley and Lucerne Valley DFAs. Figure 4 of the Desert Linkage Network in this region also includes the Focal Species Linkage Union (blue) to show the area of the linkage network that was delineated by the land facet analyses (orange). The Proposed Granite Mountain Wildlife Linkage ACEC was designed to connect SBNF with the Bendire's Thrasher ACEC, while the Northern Lucerne Wildlife Linkage is expected to connect the Bendire's Thrasher ACEC to Ord-Rodman DWMA. As proposed, the Granite Mountain Wildlife Linkage ACEC is reduced to about 1.2 miles wide for much of its length south of State Route 18 and more closely follows the linkage design for the San Bernardino-Granite Connection (Penrod et al. 2005), which did not include land facet analyses. Several land facets corridors were delineated between these ranges (see Figures 18 and 19 in Penrod et al. 2012), which are expected to support species movements during periods of climate instability. DFAs are proposed to either side of these proposed ACECs that would constrain the linkage for a distance of roughly 20 miles. Species are then expected to make a hard right to follow Stoddard Ridge around the arm of the DFA proposed in the Northern Lucerne Valley. Objective L1.2 is to "Design landscape linkage corridors to be 3 miles wide where feasible, and at least 1.2 miles wide where a greater width is not feasible". We believe that a greater width is feasible and desirable for the proposed Granite Mountain Wildlife Linkage ACEC. No DFAs should be sited within these areas.

The northern arm of the Lucerne Valley DFA bisects both the focal species and land facet linkage and should be reconfigured to avoid the Desert Linkage Network through this area. The FAA should be included as part of the Newberry Rodman ACEC and NLCS due to its high conservation value (e.g., landscape connectivity, bighorn sheep, intact desert tortoise habitat). In fact, 31 of the 44 focal species evaluated by the Desert Linkage Network are expected to be served by this linkage. The westernmost strand of the Desert Linkage Network that follows the Mojave River for a distance and then arcs to the east toward Newberry Rodman is the corridor with high interspersion of land facets which is expected support species movements during periods of climate instability. The northern part of the Apple Valley DFA bisects this part of the linkage between the Mojave River and the Silver Mountains area of a proposed ACEC and should be included in that ACEC and removed from the DFA.

Figure 5 depicts Desert Bighorn Sheep - Intermountain & Unfiltered Core Habitat (California Department of Fish and Wildlife, April 2013 Draft, A Conservation Plan for Desert Bighorn Sheep in California) in relation to the Preferred Alternative in this subarea. The Desert Bighorn Sheep Mountain Habitat identifies historic, current, and potential core habitat, while the Intermountain Habitat represents the intermountain, lower slope, valley bottom habitat used by desert bighorn sheep to move between mountain habitat. CDFW, also the lead agency on the NCCP, mapped an intermountain connection between San Bernardino National Forest (SBNF) and Ord-Rodman that has a minimum width of roughly 7.8 miles. Bighorn sheep mountain habitat and intermountain habitat largely overlap with the Desert Linkage Network. The upper arm of the Lucerne Valley DFA disrupts intermountain bighorn habitat and should be

Figure 4. Desert Linkage Network Conflicts in the Pinto Lucerne Valley Eastern Slopes Ecoregion Subarea

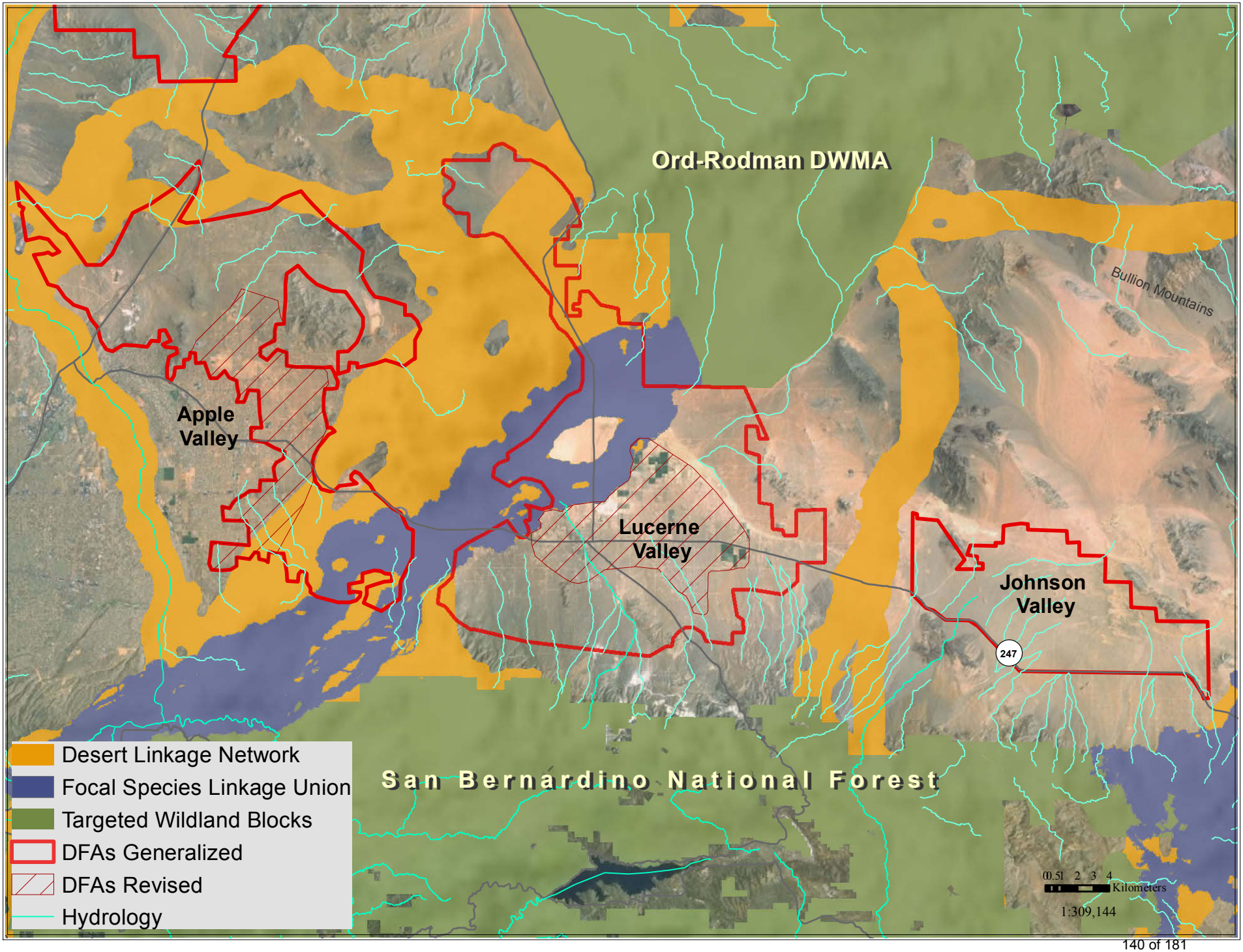
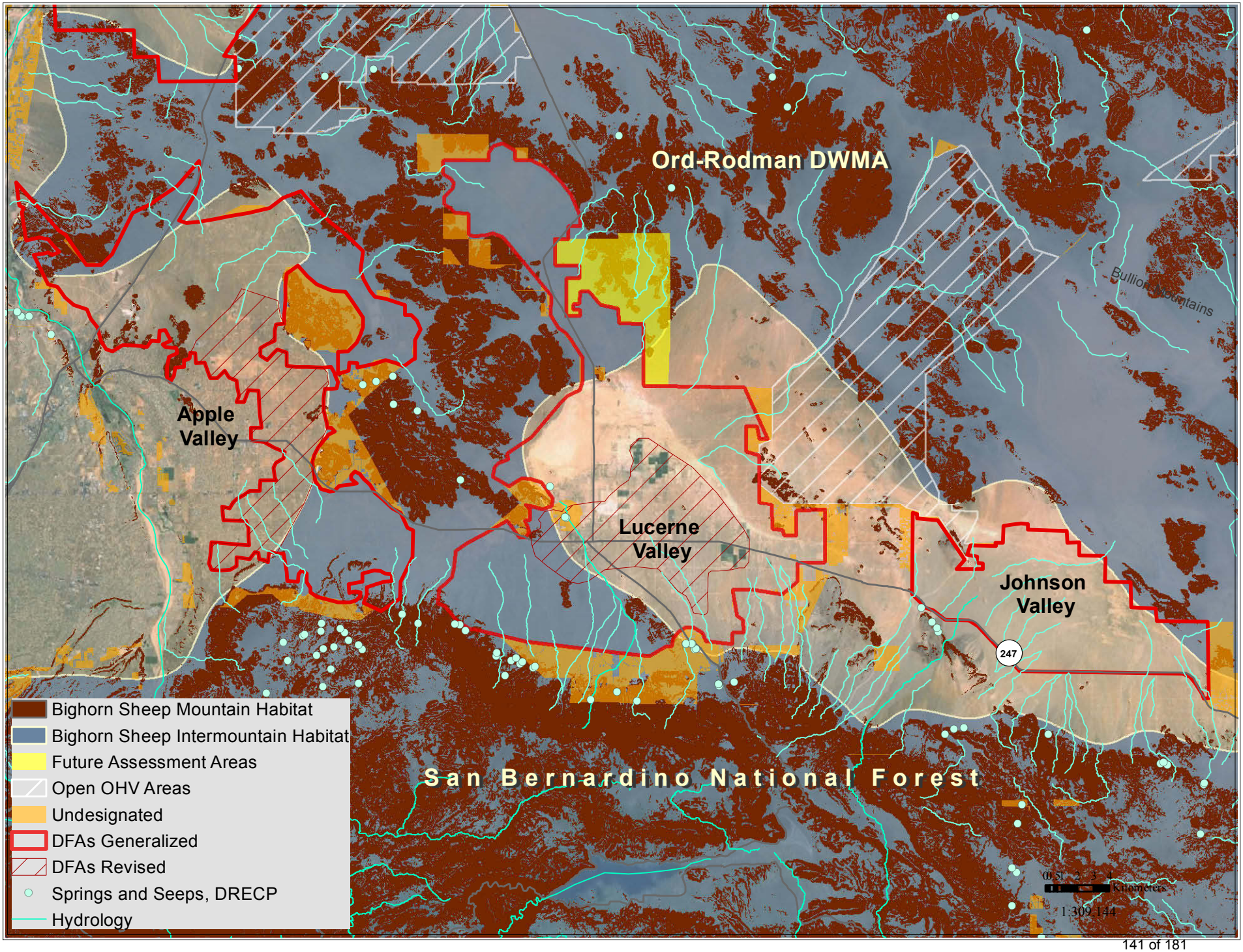


Figure 5. Bighorn Sheep Conflicts in the Pinto Lucerne Valley Eastern Slopes Ecoregion Subarea



reconfigured. Further the FAA includes bighorn sheep mountain habitat in close proximity to mountain habitat in the Granite Mountain Linkage and should be included in the Newberry Rodman ACEC and NLCS. Finally, several areas of bighorn sheep mountain habitat are identified as Undesignated and available for "disposal". Bighorn mountain habitat along the perimeter of the proposed Granite Mountain and Northern Lucerne Wildlife Linkage ACECs should be included in the Reserve Design. Further, Undesignated land on the Ridgeline and slopes of the San Bernardino Mountains between the Juniper Flats NLCS and the Carbonate Endemic Plants NLCS (roughly 15 additional miles is the Grapevine Canyon Recreation Area also known as Juniper Flats by the BLM) should also be included in the Reserve Design, consistent with Step-Down Biological Objective DBSH-B and because there are many springs, seeps, significant riparian canyons, alluvial fans (i.e. rare piedmont fans), and washes in this area essential for bighorn sheep and numerous other species. This area is currently designated as Undesignated in the Preferred Alternative.

This land known as the Juniper Flats subregion by the BLM encompasses 101,000 acres on the northern slopes of the San Bernardino Mountains and stretches from the Mojave River to the Cushenbury Grade. The area is continuous with the San Bernardino National Forest, which encompasses over 600,000 acres and boasts over 600 significant cultural sites. There are several unusual and unique plant assemblages here, with oak woodlands intermixed with pinyon-juniper and Joshua trees and spectacular rock outcroppings. The area is extremely close to the Pacific Crest National Scenic Trail and Deep Creek, which has been nominated as a National Wild and Scenic river as part of the Feinstein Bill. The Juniper Flats area has been submitted to the BLM for consideration for NLCS designation and over 25 NGO's and individuals have endorsed this effort. SC Wildlands strongly supports an NLCS designation for this remarkable area.

Goal DBSH1: Conserve the desert bighorn sheep Sonoran–Mojave desert metapopulation) across the DRECP area within well-distributed habitat areas in mountain ranges and intermountain linkages. Emphasize conservation in areas where herds are most likely to be adaptive and resilient in response to the effects of changes within their metapopulations, including, range shifts, contractions, expansions, local extirpation, and recolonization, as well as environmental changes in climate, temperature, and precipitation. **Comment:** We expect that the Twentynine Palms Newberry Rodman-San Bernardino Connection will be especially important to the Cushenberry Herd of bighorn sheep in a warming climate for access to water resources (e.g., seeps, springs, riparian habitats).

Step-Down Biological Objective DBSH-B: Protect, maintain, and manage for the duration of the NCCP on BLM LUPA conservation designation lands and prioritize for conservation on non-BLM lands substantial representative desert bighorn sheep habitat in the following areas:
o Newberry, Ord, and Rodman Mountains
o North San Bernardino Mountains
o El Paso Mountains
o **Corridors** between the North San Bernardino Mountains and Newberry Mountains
o Corridors between the San Gorgonio Wilderness Area and the western extremity of the Little San Bernardino Mountains
o Portions of the valley habitats between the Palen-McCoy Mountains, Chuckwalla Valley between the Eagle Mountains and the Chuckwalla Mountains

o Portions of the valley habitats between the Little Chuckwalla Mountains, Palo Verde Mountains, McCoy Mountains, Mule Mountains
Comment: The Granite Mountains Wildlife Linkage ACEC as currently proposed is a "corridor" to the south of SR-18 but with our proposed modifications to the DFAs it will be a landscape-level linkage.

Conservation and Management Actions for bighorn sheep are pretty slim and the DRECP says, "Within DFAs on BLM-administered lands Desert Bighorn Sheep CMAs would be implemented to the extent feasible and allowable under existing permits, leases, and allotment plans". Why only to "the extent feasible" rather than to the maximum extent possible? Does this mean CMAs would not be implemented on lands not administered by BLM within the DFAs?
AM-DFA-ICS-34: Access to, and use of, designated water sources will not be affected by Covered Activities in designated and new utility corridors.
AM-DFA-ICS-35: Transmission projects and new utility corridors will minimize effects on access to, and use of, designated water sources.

The proposed Granite Mountain Wildlife Linkage ACEC is described in Appendix L. The Relevance and Importance Criteria states, "the area is critical for bighorn sheep, golden eagles, desert tortoise and prairie falcons and several other species. Additionally, numerous rare and sensitive plants have major populations here, making the area regionally important". Goals: "Protect biological values including habitat quality, populations of sensitive species, and landscape connectivity while providing for compatible public uses". One of the Objectives is to "protect and enhance sensitive wildlife habitat" with the following species listed: desert tortoise, LeConte's thrasher, San Diego pocket mouse, prairie falcon, golden eagle, and Mohave ground squirrel. All species listed in Table 4 should be included here (e.g., least Bell's vireo, southwestern willow flycatcher). In addition, a number of focal species selected for the Desert Linkage Network are expected to be served by this linkage and should be included in this list: puma, badger, kit fox, bighorn sheep, mule deer, little pocket mouse, southern grasshopper mouse, pallid bat, burrowing owl, loggerhead shrike, Bendire's thrasher, crissal thrasher, cactus wren, greater roadrunner, chuckwalla, desert night lizard, desert spiny lizard, Great Basin collared lizard, rosy boa, speckled rattlesnake, Mojave rattlesnake, Bernardino dotted blue, desert green hairstreak, desert metalmark, and yucca moth. These would be good candidate species for monitoring wildlife movement and habitat linkage function for the MAMP's Landscape and Ecological Processes Effectiveness Monitoring. Another Objective is to "protect populations of sensitive plants"; the following species should be added to the 4 existing plant species currently on the list: *Canbya candida*, *Sidalcea neomexicana*, *Plagiobothrys parishii*, *Phacelia parishii*, *Puccinellia parishii*, *Mimulus mohavensis*, *Leymus salinus* ssp. *mojavensis, Eriophyllum mohavense*, and *Calochortus striatus.* In addition, two focal species, *Yucca brevifolia and Yucca* schidigera, from Penrod et al. (2012) should be included.

One of the primary goals for the Desert Tortoise Linkages (Goal DETO2) is to "Maintain functional linkages between Tortoise Conservation Areas to provide for long-term genetic exchange, demographic stability, and population viability within Tortoise Conservation Areas. Emphasize inclusion of high value contiguous habitats pursuant to Nussear et al. (2001) and avoidance of disturbance in habitat with high desert tortoise habitat potential (see Figure C-35)".

It is Nussear et al. 2009, not 2001. Nussear et al. (2009) identifies much of the Apple Valley, Lucerne Valley and Johnson Valley DFAs as highly suitable habitat for tortoise (Figure 6).

There are several areas where the Lucerne Valley and Johnson Valley DFAs conflict with two desert tortoise linkages in the Western Mojave Recovery Unit, Fremont-Kramer to Ord-Rodman Linkage and the Ord-Rodman to Joshua Tree linkage (Figure 7). The upper arm of the Lucerne Valley DFA coincides with intact desert tortoise habitat in the Fremont Kramer to Ord-Rodman Linkage and the FAA that is sandwiched between this DFA and the Ord-Rodman TCA is made up almost entirely of intact desert tortoise. This area of the Lucerne Valley DFA and the FAA is also in conflict with the Desert Linkage Network, Bighorn sheep intermountain habitat, and other Covered Species (e.g., Bendire's thrasher, burrowing owl, golden eagle). In addition, the Lucerne Valley DFA as currently proposed completely severs the northern segment of the Ord-Rodman to Joshua Tree Linkage and would severely compromise the function of this linkage (See AM-DFA-ICS-6 Comment). The great majority of the Johnson Valley DFA is also intact desert tortoise habitat that falls within the Ord-Rodman to Joshua Tree Linkage. These DFAs must be reconfigured to AVOID these Desert Tortoise Linkages.

In addition, the southern segment of the Ord-Rodman to Joshua Tree Linkage to the southeast of the Johnson Valley DFA is also identified as "Fragmented Desert Tortoise Habitat" (Figures C-35 and C-36) and much of it is delineated as "Undesignated" land, which would be available for "disposal". While there are ACEC and NLCS lands proposed on the western fringe of the desert tortoise linkage, these proposed designations do not capture the most permeable route for the tortoise. While the raster data for the least-cost corridor analyses was not available on Data Basin as part of the Desert Tortoise TCA and Linkages data, I know this analysis well enough to know how it looks when converted to a shapefile. BLM has checkerboard ownership in this segment of the linkage and several of the adjacent parcels are NOT developed that would allow for the design and implementation of a "landscape linkage corridor…at least 1.2 miles wide" (Objective L1.2). As such, this segment of the linkage should be identified as a Conservation Planning Area. All desert tortoise linkages should be included in the Reserve Design in order to achieve Goal DETO2 (Desert Tortoise Linkages)**, "**Maintain functional linkages between Tortoise Conservation Areas to provide for long-term genetic exchange, demographic stability, and population viability within Tortoise Conservation Areas". The Western Mojave Recovery Unit and the associated linkages may be especially important to allow the tortoise to adapt to climate change, as indicated in Section III.7.4, "According to climate change models, conditions currently present in parts of the Colorado/Sonoran Desert are expected to expand to other parts of the Plan Area (Allen 2012), with an associated shift in vegetation (Notaro et al. 2012).

AM-DFA-ICS-5 Comment: If "Covered Activities, except for transmission projects in existing transmission corridors, will avoid the desert tortoise conservation areas (TCAs) and the desert tortoise linkages identified in Appendix H", why are ANY DFAs sited in TCAs and linkages? Further, why are any areas of the tortoise linkages "Undesignated" and therefore "available for disposal"? As one of the Reserve Drivers, all desert tortoise TCAs and linkages in ALL Recovery Units should be included in the Reserve Design!

AM-DFA-ICS-6 Comment (1): A population viability analysis (PVA) should have been conducted Plan-Wide for desert tortoise as part of the DRECP process. This information should

Figure 6. High Value Desert Tortoise Habitat in the Pinto Lucerne Valley Eastern Slopes (Nussear et al. 2009)

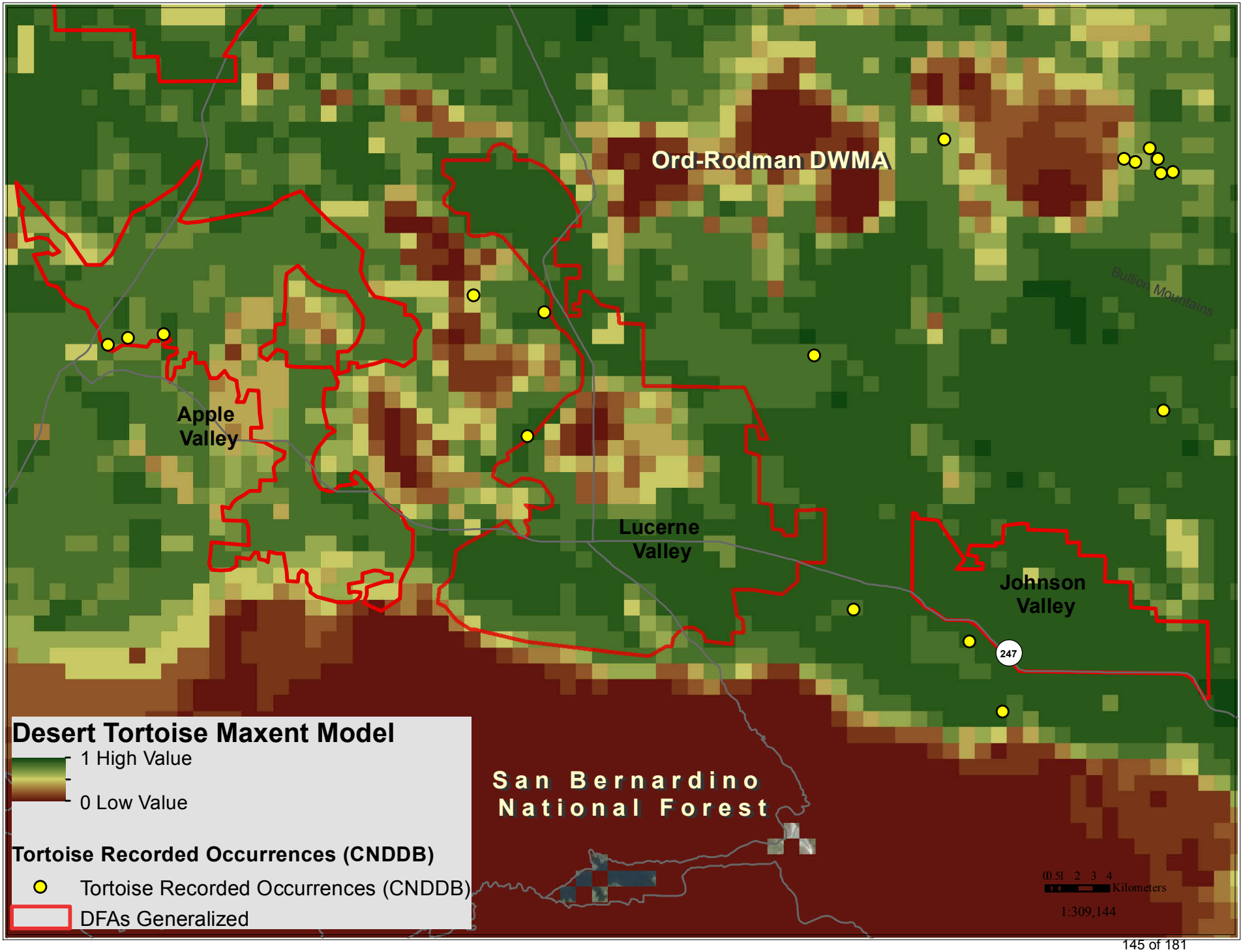
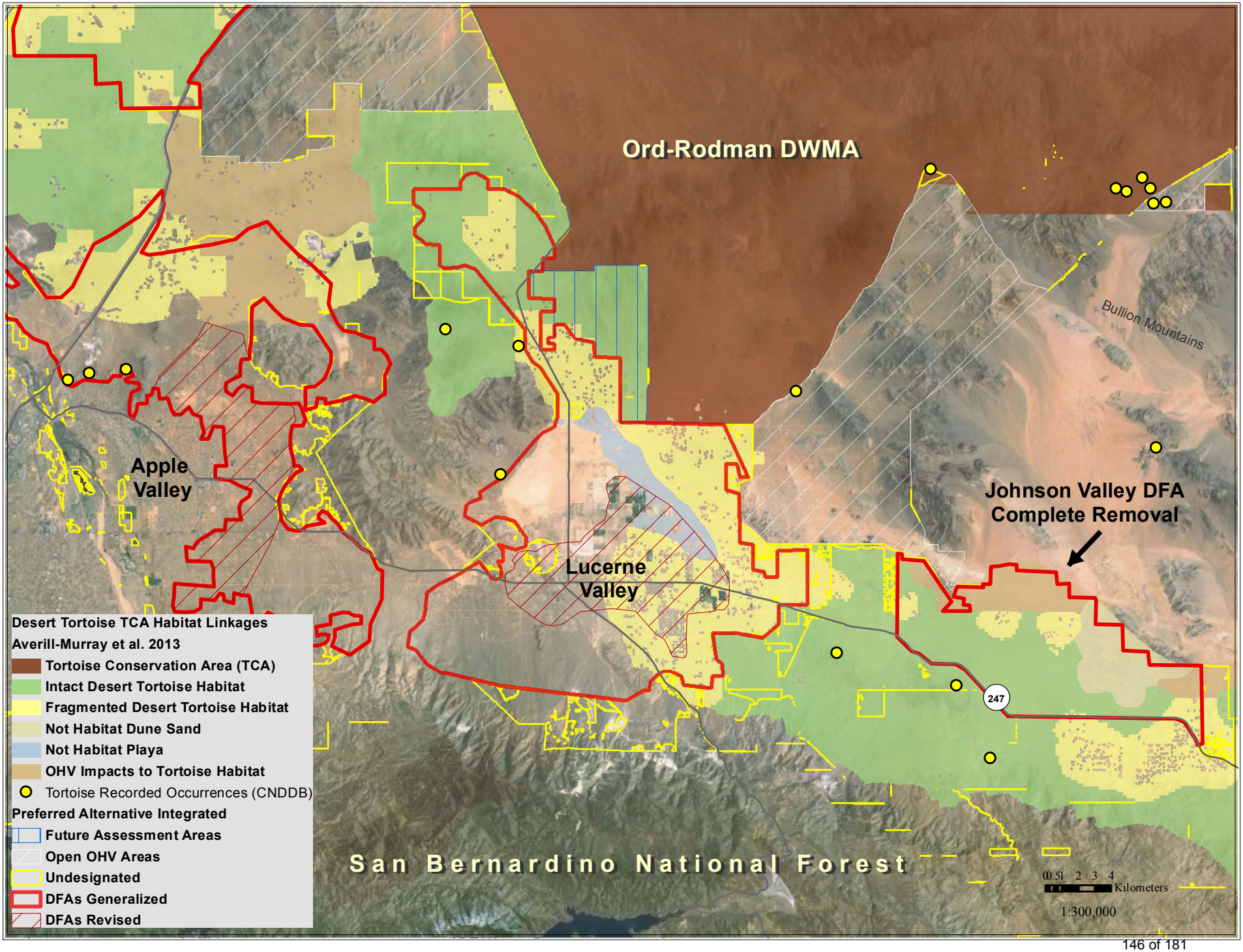


Figure 7. Desert Tortoise TCA Linkage Conflicts in the Pinto Lucerne Valley Eastern Slopes



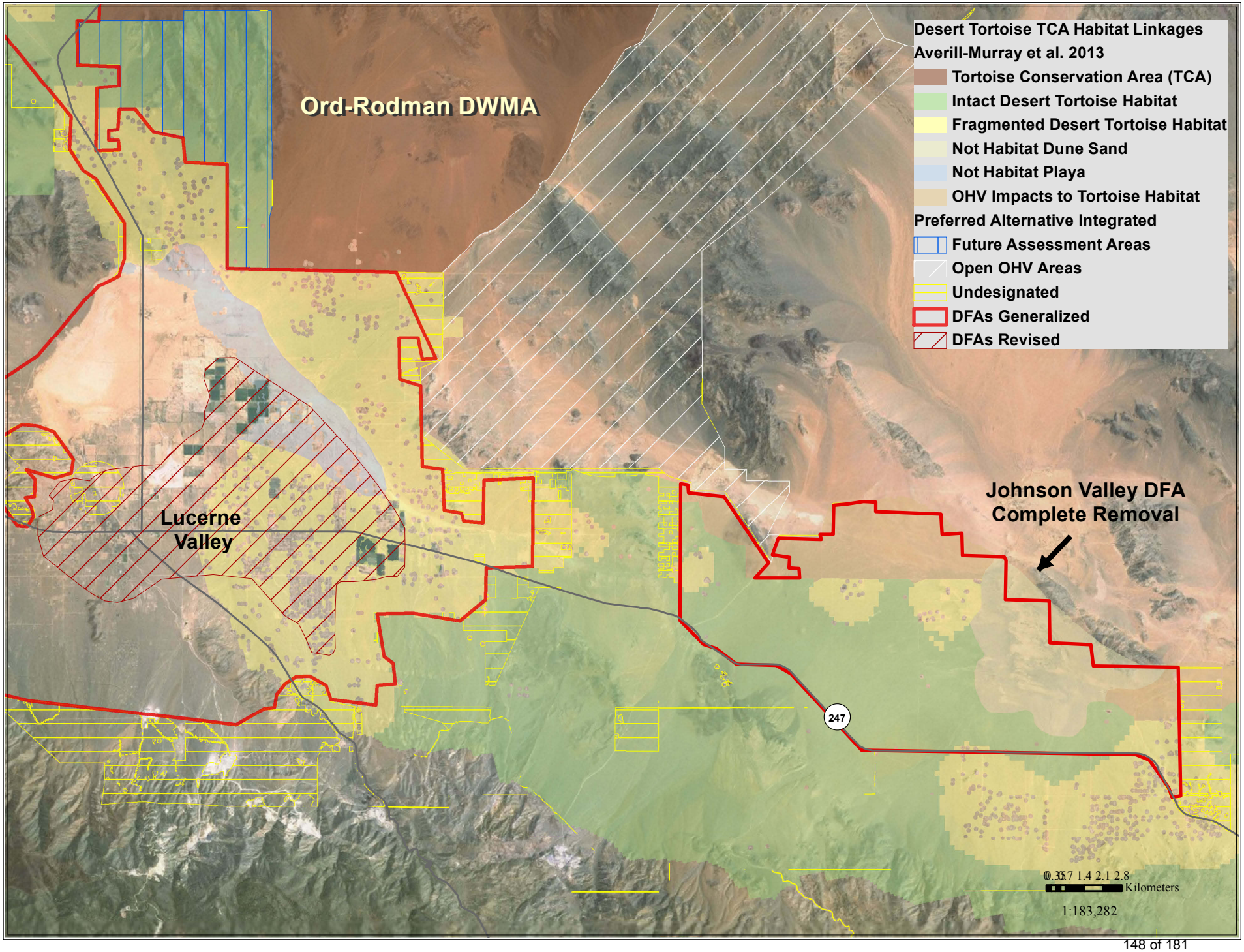
have been presented in Vol. III to assess existing recovery efforts under baseline conditions and in Vol. IV to compare the potential impacts of habitat loss proposed under each Alternative. AM-DFA-IC-6 refers to "the maintenance of long term viable desert tortoise populations within the affected linkage". While each of the desert tortoise linkages identified in Figure H-7 provide live-in and move-through habitat, these linkage are intended to provide connectivity between the TCAs to maintain the viability of the entire population. As stated in Section III.7.6.1.1, " Linkage habitat are important areas identified by Recovery Implementation Teams, such as important genetic linkages identified by Hagerty et al. 2010 (cited in USFWS 2011a) that are important to maintaining the species' distribution throughout its range". A PVA for a "linkage population" doesn't make sense.

AM-DFA-ICS-6 Comment (2): "Covered Activities that would compromise the viability of a linkage population or the function of the linkage, as determined by the DRECP Coordination Group, are prohibited and would require reconfiguration or re-siting".

AM-DFA-ICS-7: Covered Activities will be sited in lower quality desert tortoise habitat in desert tortoise linkages and the Ord-Rodman TCA, identified in Appendix H.
COMMENT: Identified where? Figure H-6 Desert Tortoise Survey Areas? Figure H-7? Neither of these maps depict "lower quality desert tortoise habitat". If Figure H-6, is the "lower quality desert tortoise habitat in the "No Survey Areas" identified in the legend, or in the "No Survey Areas" and "Clearance Survey Only Areas". If so, that would imply that the "Protocol Survey Areas" are higher quality desert tortoise habitat, which would reinforce comments made above for AM-DFA-ICS-5 and AM-DFA-ICS-6. Figure H-7, Desert Tortoise Conservation Areas, identifies the majority of the Apple, Lucerne, Johnson Valley DFAs as Protocol Survey Areas with some smaller areas identified as Clearance Survey Areas.

The Lucerne Valley DFA as currently proposed completely severs the northern segment of the Ord-Rodman to Joshua Tree Linkage (Figure 8) and would severely compromise the function of this linkage (AM-DFA-ICS-6). The analyses conducted by USFWS (Averill-Murray et al. 2013) indicate that this area is relatively permeable to tortoise movement and this entire area is identified as highly suitable in the desert tortoise Maxent model (Nussear et al.2009). This area of the linkage is identified as Fragmented Desert Tortoise Habitat in Attachment B to Appendix D but an evaluation of aerial imagery in this area reveals that existing rural development here is relatively sparse and the majority of residential properties in this area are unfenced. This area of the linkage should not be written off, especially since one of the overarching Biological Goals is to, "Preserve, restore, and enhance natural communities and ecosystems including those that support Covered Species within the Plan Area". The distance between the Ord-Rodman TCA and the Intact Desert Tortoise Habitat in the Old Woman Springs Wildlife Linkage ACEC is roughly 7 miles, fully within the movement capability of an individual tortoise. Sazaki et al. (1995) estimated dispersal distance for pre-breeding male tortoises to be between 6.21-9.32 miles. This DFA must be reconfigured to completely avoid this linkage. Further, the playa habitat to the west of the tortoise linkage, although not tortoise habitat, could buffer the tortoise linkage from Covered Activities in the remaining DFA, while also providing habitat for other Covered Species (e.g., burrowing owl, pallid bat, Townsend's big-eared bat) .

Figure 8. Desert Tortoise Ord-Rodman to Joshua Tree Linkage Conflicts



The Johnson Valley DFA as currently proposed (Figures 7 and 8) would severely compromise the function of the Or-Rodman to Joshua Tree linkage. This proposed DFA is roughly 27,258 acres, much of it Intact Desert Tortoise Habitat as identified in Attachment B to Appendix D and Figures C-35 and C-36. The area of intact habitat in the linkage currently ranges in width from roughly 5 to 8 miles wide. The proposed Johnson Valley DFA would reduce the width of the linkage to about 3 miles wide in this stretch of the linkage. The average home range size for desert tortoise in the Western Mojave Recovery Unit is 125 acres (USFWS 1994, Boarman 2002). Would this significant reduction of intact habitat allow for "the maintenance of long-term viable desert tortoise populations within the affected linkage (AM-DFA-ICS-6)"? This entire DFA is identified as highly suitable in the desert tortoise Maxent model (Nussear et al.2009) and the great majority of it is BLM land. This linkage must not be written off, especially since one of the overarching Biological Goals is to, "Preserve, restore, and enhance natural communities and ecosystems including those that support Covered Species within the Plan Area". We recommend complete removal of this DFA to avoid this linkage in order to "maintain functional linkages between Tortoise Conservation Areas to provide for long-term genetic exchange, demographic stability, and population viability within Tortoise Conservation Areas" and meet the intent of Goal DETO2 (Desert Tortoise Linkages).

Objective DETO2.1a (Desert Tortoise Linkages): Protect, manage and acquire desert tortoise habitat within the following linkages (see Figure C-34) with special emphasis placed on areas of high habitat potential and areas identified as integral to the establishment and protection of a viable linkage network (see Figure C-36). Ensure the long-term connectivity of Tortoise Conservation Areas by maintaining desert tortoise habitat that is of sufficient size and contiguity for maintenance of viable populations within each linkage.
o Ord-Rodman to Superior-Cronese to Mojave National Preserve
o Superior-Cronese to Mojave National Preserve to Shadow Valley to Death Valley National Park Linkage
o Joshua Tree National Park and Pinto Mountains Desert Wildlife Management Area (DWMA) to Chemehuevi Linkage
o Death Valley National Park to Nevada Test Site

DETO2.1a COMMENT: Figure C-34 depicts 9 different desert tortoise linkages yet only 4 are listed here, all of which occur in the Eastern Mojave Recovery Unit and the Colorado Desert Recovery Unit. Why are none of the linkages associated with the Western Mojave Recovery Unit included here? For example, the Ord-Rodman to Joshua Tree Linkage includes a contiguous, fairly wide strand that is either intact desert tortoise habitat or fragmented tortoise habitat with High Habitat Potential (C-36). As a "Reserve Driver" Covered Species and Non-Covered but Addressed Species associated with the Western Mojave are reliant and at the mercy of the agencies to create a VIABLE PLAN-WIDE Linkage Network for ALL native species and ecological process of interest in the DRECP Region.

Objective DETO2.1b (Desert Tortoise Linkages): Protect, maintain, and acquire all remaining desert tortoise habitat within linkages already severely compromised, specifically the following (see Figure C-34):
o Ivanpah Valley Linkage
o Chemehuevi to Chuckwalla Linkage

o Pinto Wash Linkage

DETO2.1b COMMENT: Why is the Ord-Rodman to Joshua Tree Linkage not included here? Or, the Fremont Kramer to Ord-Rodman Linkage? This objective should read: Protect, maintain and restore all remaining desert tortoise habitat within linkages already severely compromised, specifically the following (see Figure C-34 through C-36):
o Ivanpah Valley Linkage
o Chemehuevi to Chuckwalla Linkage
o Pinto Wash Linkage
*ADD Ord-Rodman to Joshua Tree Linkage
*ADD Fremont Kramer to Ord-Rodman Linkage

Objective DETO2.1c (Desert Tortoise Linkages): Protect intact habitat (see Figure C-35) within the following linkages to enhance the population viability of the Ord-Rodman Tortoise Conservation Area.
o Ord-Rodman to Joshua Tree Linkage
o Fremont Kramer to Ord-Rodman Linkage

DETO2.1c COMMENT: The DRECP refers the reader to Figure C-35 Desert Tortoise Biological Goals and Objectives but the LEGEND on this map refers to Objective DETO2.1d in relation to the Ord-Rodman to Joshua Tree Linkage and the Fremont Kramer to Ord-Rodman Linkage but DETO2.1d doesn't exist under Goal DETO2 (Desert Tortoise Linkages). However, Figure C-36 Desert Tortoise Biological Goals and Objectives and Habitat Potential does identify DETO2.1c for these two desert tortoise linkages. There is no explanation for the legend in Figure C-36 but one must assume that the High and Low following the BGOs relate to High Habitat Potential and Low Habitat Potential. The "Fragmented Habitat" in both of these linkages identified in Figure C-35 is also identified as having High Habitat Potential in Figure C-36. Protecting only "intact habitat" in the Ord-Rodman to Joshua Tree Linkage will do nothing to enhance the population viability of the Ord-Rodman Tortoise Conservation Area if ALL of the habitat within the linkage between the TCA and the intact habitat is entirely within a DFA! Shouldn't the tortoise linkages enhance the population viability of all of the TCAs (e.g., Joshua Tree, Fremont Kramer)?

Step-Down Biological Objective DETO-B: Protect, maintain, and manage for the duration of the NCCP on BLM LUPA conservation designation lands and prioritize for conservation on non-BLM lands substantial representative areas of desert tortoise habitat in the following areas:
O Desert Tortoise Research Natural Area
O Fremont-Kramer Desert Wildlife Management Area and Critical Habitat Unit
O Ord-Rodman Desert Wildlife Management Area and Critical Habitat Unit
o Portions of the Superior-Cronese Desert Wildlife Management Area and Critical Habitat Unit
o Portions of the Chuckwalla Desert Wildlife Management Area and Critical Habitat Unit
o Portions of intact desert tortoise habitat in the Colorado Desert
o Fremont Kramer to Ord-Rodman Linkage
o Chemehuevi to Chuckwalla Linkage
o Portions of the Ord-Rodman to Joshua Tree Linkage – WHY only portions?

Step-Down Biological Objective DETO-C: Establish long-term conservation to protect, manage, and enhance habitat value for 266,000 acres of desert tortoise habitat that contributes to the DRECP NCCP reserve design in and around the following areas: Desert Tortoise Research Natural Area, Fremont-Kramer Desert Wildlife Management Area and Critical Habitat Unit, Ord-Rodman to Joshua Tree Linkage, Fremont Kramer to Ord-Rodman Linkage, Pinto Wash Linkage, and Chemehuevi to Chuckwalla Linkage. COMMENT: FAA just outside of Ord-Rodman ACEC/NLCS is intact desert tortoise habitat, mountain and intermountain habitat for bighorn sheep, part of land facet linkages and habitat for numerous focal species in the Desert linkage Network, and other Covered Species (e.g., golden eagle, burrowing owl). In the Overview of the Preferred Alternative II.3.1.1., it says "The current known value of these areas for ecological conservation is moderate to low". The current known value of this FAA for ecological conservation is very high.

Step-Down Biological Objective DETO-D: Maintain and manage for resource values on BLM LUPA conservation designation lands habitat for desert tortoise in the following areas:
o Remainder of the Ord-Rodman to Joshua Tree Linkage
o Fremont Kramer to Ord-Rodman Linkage

Figure 9 shows areas of the Apple and Lucerne Valley DFAs that conflict with the Mohave ground squirrel. While the Pinto Lucerne Valley and Eastern Slopes Subarea is outside of the Mohave Ground Squirrel Conservation Area, there are historical recorded occurrences in this subarea and specifically in the Apple Valley and Lucerne Valley DFAs. This subarea lies at the southernmost extent of this species distributional range (Inman et al. 2013) and several areas in this subregion are expected to remain relatively stable (Davis et al. in press) under an uncertain climate.

We trust that the above discussion of Reserve Drivers provides sufficient evidence and justification for modification to the Reserve Design in the Pinto Lucerne Valley and East Slopes Ecoregion Subarea. We have also included a composite figure for the other species listed in Table 4 that are also expected to benefit from these modifications to the Apple and Lucerne Valley DFAs and the removal of the Johnson Valley DFA (Figures 10).

Summary: Under the current pace of development, natural resource agencies need to make near-term decisions in the face of existing land use pressures as well as long-term change. The one thing that is certain about climate change is that it is highly uncertain. Penrod et al. (2012) did not design corridors using complex models of future climate and biotic responses to climate change. Such an approach uses 4 models, with outputs of each model used as input to the next model. Specifically modeled future emissions of CO2 (1st model) drive global circulation models (2nd) which are then downscaled using regional models (3rd) to predict future climate. Then climate envelope models (4th) are used to produce maps of the expected future distribution of species. We avoided this approach for two reasons: (1) Each of the 4 models involves too much uncertainty, which is compounded from model to model and from one predicted decade to the next. In 1999 the IPCC developed 7 major scenarios of possible CO2 emissions during 2000-2011. The total emissions over the century vary by a factor of 6 among scenarios. *Actual emissions during 2000-2010 were higher than the most pessimistic scenario*. For a single emission scenario, different air-ocean global circulation models produce markedly different climate projections (Raper & Giorgi 2005). Finally climate envelope models may perform no

Figure 9. Mohave Ground Squirrel Conflicts in the Pinto Lucerne Valley Eastern Slopes

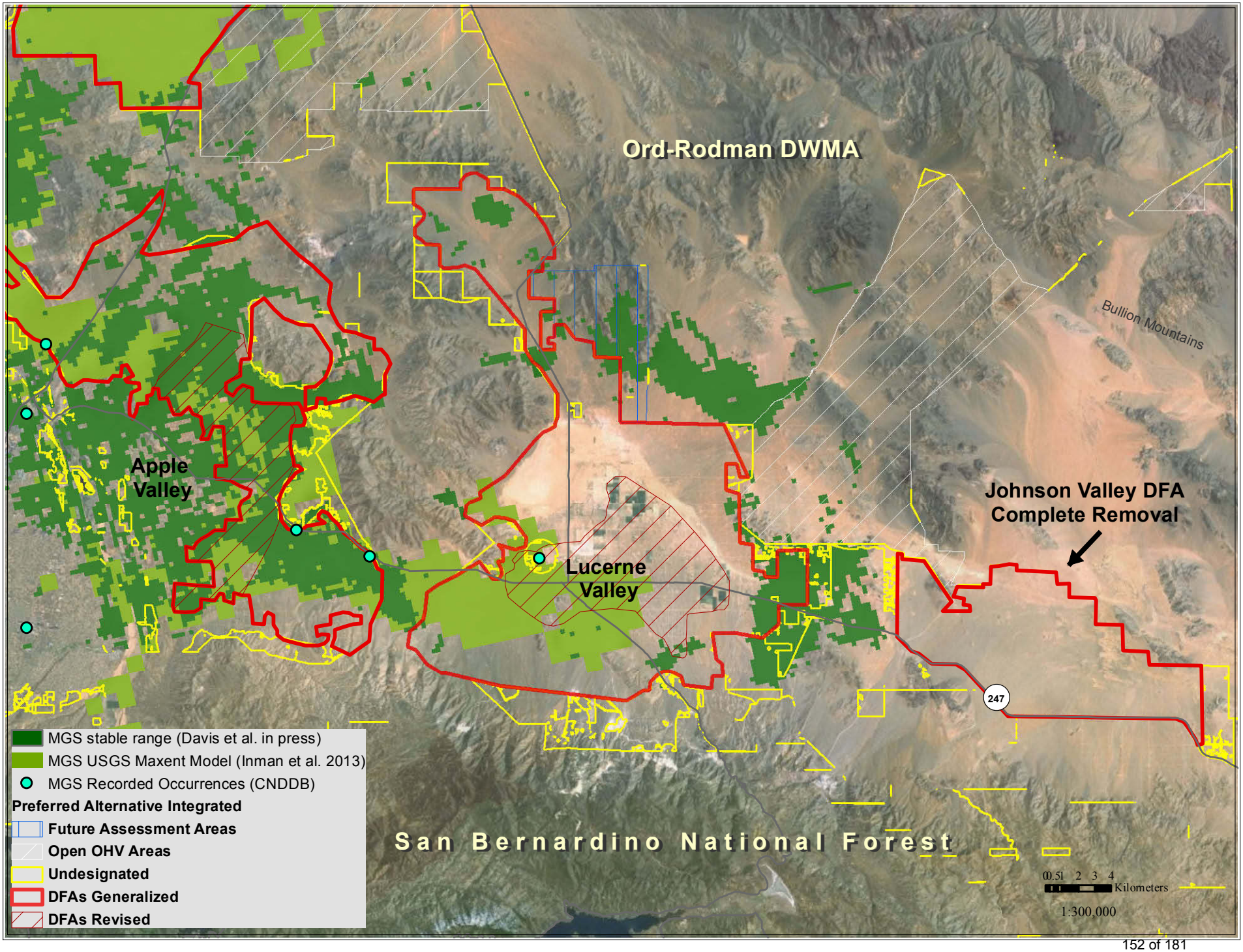
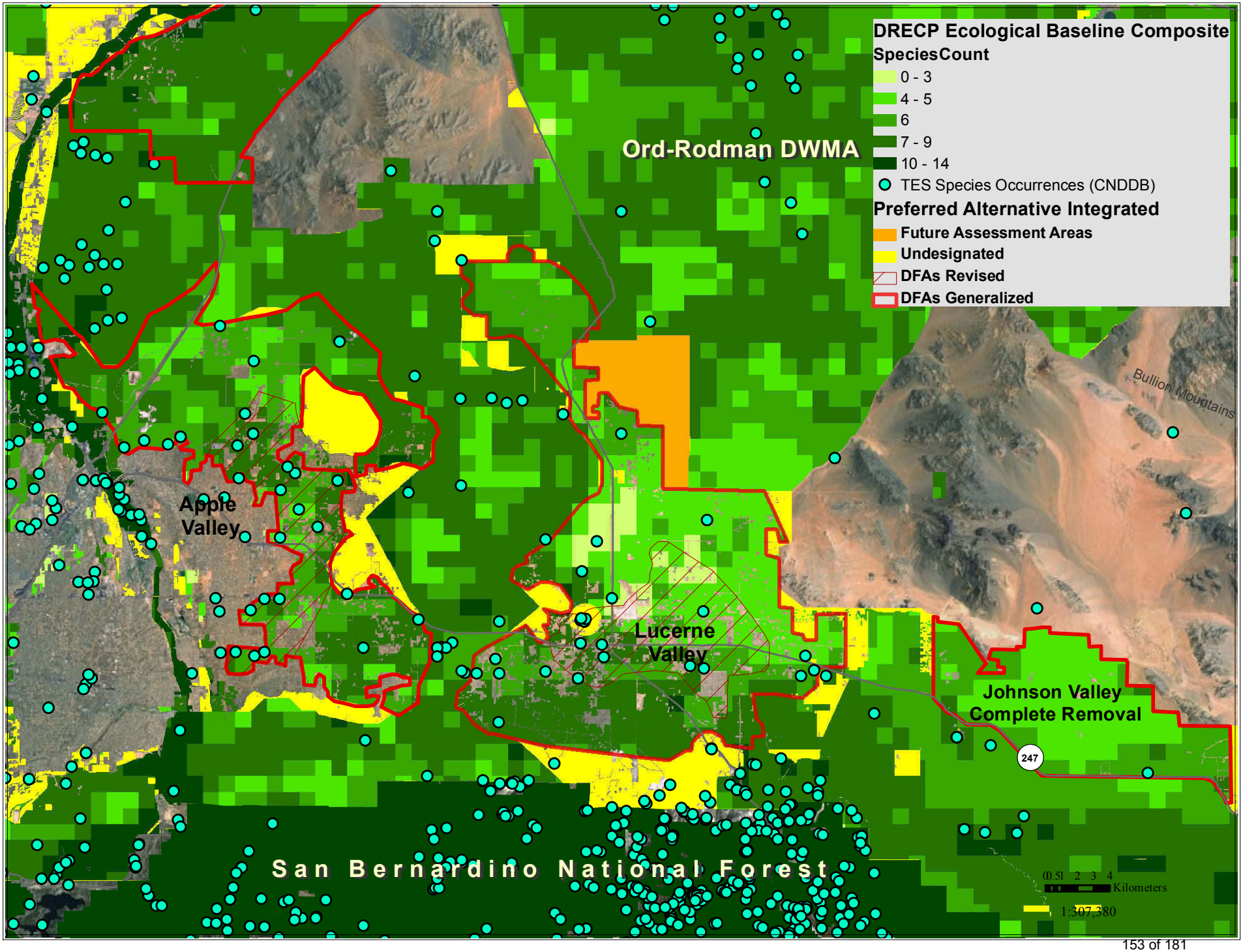


Figure 10. Covered Species Count in the Pinto Lucerne Valley Eastern Slopes



better than chance (Beale et al. 2008). Because these sophisticated models have not simulated the large shifts during the last 100,000 years of glacial oscillations, Overpeck et al. (2005:99) conclude the "lesson for conservationists is not to put too much faith in simulations of future regional climate change" in designing robust conservation strategies. (2) These models produce outputs at a spatial resolution too coarse to support decision making in the California desert. The downscaled climate projections have minimum cells sizes measured in square kilometers. Penrod et al. (2012) used an alternative "land facets" approach to design climate-robust linkages that maximize continuity of the enduring features (topographic elements such as sunny lowland flats, or steep north-facing slopes) that will interact with future climate to support future biotic communities. Enduring features reflect the stable state factors, namely topography, geology, and time. The uncertainties of the land facets approach are almost certainly less than the 6-fold uncertainty in emission scenarios multiplied by the uncertainty in general circulation models multiplied by the uncertainty in regional downscaling multiplied by the uncertainty in climate envelope models.

The Desert Linkage Network (Penrod et al. 2012) was designed to accommodate species movements, range shifts, and continued ecological functions during climate change. The Plan Wide Preferred Alternative includes 2,024,000 acres of DFAs and transmission corridors but says only about 177,000 acres will actually be impacted. If 177,000 acres is all that is truly needed to meet renewable energy goals, then ***ALL*** areas of the Desert Linkage Network (Penrod et al. 2012), Desert Tortoise TCA and Linkages (Averill-Murray et al. 2013), Bighorn sheep mountain habitat and intermountain habitat (CDFW 2013), and Mohave ground squirrel important habitat (Inman et al. 2013, UCSB 2013) should be included in the Reserve Design. Strategically conserving and restoring functional connections between large wildlands is an effective countermeasure to the adverse affects of habitat loss and fragmentation, and it is an essential mitigation measure for climate change.

In Volume 1 Chapter 1.2, Legal Framework, the DRECP says, "*To approve the DRECP as an NCCP, CDFW must find, based upon <u>substantial evidence in the record</u>, that the NCCP:*

4. Develops reserve systems and conservation measures in the Plan Area that provide for, as needed for the conservation of species, all of the following: (a) conserving, restoring, and managing representative natural and seminatural landscapes to maintain the ecological integrity of large habitat blocks, ecosystem function, and biological diversity; (b) establishing one or more reserves or other measures that provide equivalent conservation of Covered Species within the Plan Area and linkages between them and adjacent habitat areas outside of the Plan Area; (c) protecting and maintaining habitat areas large enough to support sustainable populations of Covered Species; (d) incorporating a range of environmental gradients (such as slope, elevation, and aspect) and high habitat diversity to provide for shifting species distributions due to changed circumstances; and (e) sustaining the effective movement and interchange of organisms between habitat areas in a manner that maintains the ecological integrity of the habitat areas within the Plan Area".

CDFW cannot approve the DRECP as an NCCP because there is NOT substantial evidence in the record that "ALL" of the above conditions have been met.

Thank you for the opportunity to provide comments on the DRAFT EIR/EIS for the DRECP. SC Wildlands is available to consult with the natural resource agencies to ensure that connectivity is adequately and accurately addressed in the DRECP.

Respectfully Submitted,
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Vickie Paulsen
September 7, 2016, 6:51 AM

What do you like about Goal 5 on Siting and its related objective and policies?

Encouraging new subdivisions to set aside land for RE. Unfortunately, Newberry Springs is too spread out to benefit from this in most areas, but it's a good idea.

Is there anything you would change or add about Goal 5 on Siting and its related objective and policies?

The "fallow" agricultural land. In Newberry Springs, our fallow hay fields are everywhere and should not be considered for this. Also, as happened with the one big site that was badly done here, on un-used land, any large site with big solar panels has a huge impact on the quality of life for all of us.

EXHIBIT C

Recommended Findings

FINDINGS: General Plan Amendment

1. **The proposed amendment to add a Renewable Energy and Conservation Element (REC Element) into the General Plan is internally consistent with all other provisions of the General Plan:**

   The Renewable Energy and Conservation Element most closely correlates with the Conservation Element, which recognizes the importance of protecting our natural environment. Renewable energy is recognized as a means to protect air quality. The Greenhouse Gas Reduction Plan, adopted in 2011 and updated in 2015, focused heavily on the promotion of energy conservation and the development of renewable energy as a means to reduce greenhouse gas.

   Conservation Element Goals and Policies

   Goal CO 4 - The County will ensure good air quality for its residents, businesses, and visitors to reduce impacts on human health and the economy.

   CO 4.12 - Provide incentives to promote siting or use of clean air technologies (e.g., fuel cell technologies, renewable energy sources, UV coatings, and hydrogen fuel).

   CO 4.13 - Reduce Greenhouse Gas (GHG) emissions within the County boundaries.

   Goal CO 8 - The County will minimize energy consumption and promote safe energy extraction, uses, and systems to benefit local regional and global environmental goals.

   CO 8.1 - Maximize the beneficial effects and minimize the adverse effects associated with the siting of major energy facilities. The County will site energy facilities equitably in order to minimize net energy use and consumption of natural resources, and avoid inappropriately burdening certain communities. Energy planning should conserve energy and reduce peak load demands, reduce natural resource consumption, minimize environmental impacts, and treat local communities fairly in providing energy-efficiency programs and locating energy facilities.

   CO 8.2 - Conserve energy and minimize peak load demands through the efficient production, distribution and use of energy.

   CO 8.3 - Assist in efforts to develop alternative energy technologies that have minimum adverse effect on the environment, and explore and promote newer opportunities for the use of alternative energy sources.

   CO 8.5 - There are unique climatic and geographic opportunities for energy conservation and small scale alternative energy systems within each of the County's three geographic regions …

   CO 8.6 - Fossil fuels combustion contributes to poor air quality. Therefore, alternative energy production and conservation will be required, as follows:

a. New developments will be encouraged to incorporate the most energy-efficient technologies that reduce energy waste by weatherization, insulation, efficient appliances, solar energy systems, reduced energy demand, efficient space cooling and heating, water heating, and electricity generation.

Goal CO 10 - The General Plan will anticipate and accommodate future electric facility planning and will enable information-sharing to improve electric load forecasting.

CO 10.1 - Electric infrastructure is essential to serve growth and development in the County. Effective planning for electrical infrastructure requires collaboration between the major utilities and the County.

Many of the policies in the REC Element also reinforce the Conservation Element's protection of the natural environment:

Goal CO 1 - The County will maintain to the greatest extent possible natural resources that contribute to the quality of life within the County.

Goal CO 2 - The County will maintain and enhance biological diversity and healthy ecosystems throughout the County.

Goal CO 3 - The County will preserve and promote its historic and prehistoric cultural heritage.

Goal CO 5 - The County will protect and preserve water resources for the maintenance, enhancement, and restoration of environmental resources.

Goal CO 6 - The County will balance the productivity and conservation of soil resources.

2. The proposed amendment would not be detrimental to the public interest, health, safety, convenience, or welfare of the County, but in fact protects the environment by encouraging the reduction of greenhouse gas emissions.

EXHIBIT D

Addendum to the Program Environmental Impact Report for the San Bernardino County General Plan Update (2007), including the Supplemental Environmental Impact Report for the Greenhouse Gas Reduction Plan (2011)

COUNTY OF SAN BERNARDINO

RENEWABLE ENERGY & CONSERVATION ELEMENT
GENERAL PLAN AMENDMENT

CEQA ADDENDUM

PROGRAM ENVIRONMENTAL IMPACT REPORT
GENERAL PLAN AND DEVELOPMENT CODE

SUPPLEMENTAL ENVIRONMENTAL IMPACT REPORT
GENERAL PLAN AMENDMENT AND
GREENHOUSE GAS REDUCTION PLAN

STATE CLEARINGHOUSE NO. 2005101038

Prepared by:
COUNTY OF SAN BERNARDINO
LAND USE SERVICES DEPARTMENT
385 N. ARROWHEAD AVENUE, FIRST FLOOR
SAN BERNARDINO, CA 92415

SEPTEMBER 2016

CEQA Addendum for a General Plan Amendment and Development Code Update
to add a
Renewable Energy & Conservation Element

PROJECT DESCRIPTION:

In conformance with the California Environmental Quality Act ("**CEQA**"), this Addendum to the Program Environmental Impact Report for the San Bernardino County General Plan Update ("**Program EIR**") has been prepared to describe the impacts expected to occur as a result of the addition of a new Renewable Energy & Conservation Element ("**REC Element**") to the 2007 General Plan, as Amended ("**General Plan**"). Considering the broad scope of the General Plan, an Environmental Impact Report ("**Program EIR**") was prepared and certified in conjunction with the General Plan. A Supplement to the General Plan EIR was certified with the adoption of the County's Greenhouse Gas Reduction Plan ("**GHG Plan**") by the Board of Supervisors ("**Board**") in 2011 ("**GHG Plan SEIR**") . The GHG Plan SEIR was utilized (as opposed to a stand-alone EIR) to evaluate whether the GHG Plan would result in new significant environmental effects not previously addressed in the General Plan EIR, or whether the GHG Plan would result in a substantial increase in the severity of previously identified significant environmental effects.
The GHG Plan SEIR and the Program EIR collectively comprise the foundational documents to which this document is addended, and are referred to herein as the "**General Plan EIR**".

Since the GHG Plan was adopted, the County of San Bernardino ("**County**") has processed numerous solar energy generation projects. This activity has caused the County to reconsider its legislative framework for the evaluation of these projects, culminating in the adoption by the Board on December 17, 2013, of additional criteria to be met before these projects can be approved.[1] These legislative adjustments were seen as temporary and in anticipation of the adoption of the REC Element.

The REC Element presents a vision for the future of renewable energy in the County, provides goals and policies to encourage renewable energy development that will meet the vision, and incorporates recommended actions and approaches for its implementation. Recommended actions include administrative procedures and processes, incentives, design standards, and collaboration with other agencies and utilities.

In addition to the REC Element, the Addendum evaluates associated changes to the County Development Code, as Amended ("**Development Code**"). Changes to the Development Code are required in order to implement the policies in the REC Element. Development Code amendments work in tandem to codify the rules and strategies associated with and guided by the vision, goals, policies and objectives identified in the REC Element. Both the General Plan and the Development Code amendments are referred to herein as the "**Proposed Project**".

The nature of the Proposed Project is to guide and direct the development of renewable energy generation facilities within the County by adding the REC Element to the County's General Plan. The REC Element is a programmatic planning document, created to guide and direct the development and operation of renewable energy generation facilities within the County. The REC Element does not approve or authorize any particular development or project that will alter the environment. Rather, it

[1] See Chapter 84.29 of the County Development Code

outlines the need for, and commits the County to, plans and programs to advance the goals and policies of the REC Element.

Although the General Plan is solely a policy document and, in and of itself, does not authorize future construction without subsequent environmental review, it none the less "paves the way" for future development to occur. As such, its policies have "potential for a direct physical change or a reasonably foreseeable indirect physical change in the environment" and thus it can be defined as a "project" under CEQA. Adoption of the REC Element will not directly cause any new construction, nor would it directly impose other changes that would create significant environmental impacts. All new development proposals will also be evaluated under CEQA at the time of application and processing through County's routine planning and building permitting process and will also comply with existing policies and requirements in the County's General Plan and Development Code.

Purpose and Scope of the Addendum

This Addendum addresses the environmental effects of the Proposed Project in light of previous environmental review in the General Plan EIR (CEQA Guidelines Sections 15162 and 15163). Section 15164(b) allows the preparation of an addendum to a previously certified EIR "if only minor technical changes or additions are necessary or none of the conditions described in Section 15162 calling for the preparation of a subsequent EIR or negative declaration have occurred."

Under CEQA Guidelines § 15162(a)(1), a further EIR may be required if proposed changes to the project will require "major revisions" to the previous EIR or a negative declaration because of "new significant environmental effects or a substantial increase in the severity of previously identified significant effects."

Thus, a proposed change in a project will require preparation of a subsequent or supplemental EIR if four conditions are all found to exist:

(1) The change in the project is substantial;

(2) The change involves new or more severe significant environmental impacts;

(3) The change will require major revisions to the previous EIR or negative declaration based on the new or more severe impacts; and

(4) The new or more severe impacts were not considered in the previous EIR or negative declaration.

Inclusion of the REC Element into the General Plan, as reviewed by this Addendum, would not represent a substantial change to the General Plan, nor would it require major revisions to the General Plan EIR. As discussed in more detail herein, none of the conditions outlined in Guidelines Section 15162 requiring preparation of a subsequent or supplemental EIR apply to the Proposed Project. Specifically, the Proposed Project will not cause a substantial changes in the General Plan and GHG Plan, as analyzed in the General Plan EIR, nor will the Proposed Project involve new or more severe significant environmental impacts, thereby requiring major revisions to the General Plan EIR, as any impacts from the Proposed Project were considered in the General Plan EIR.

In conformance with Guidelines Section 15121, the General Plan EIR, along with this Addendum, are intended to serve as the documents that will generally inform the decision-makers and the public of the environmental effects of the proposed project and the mitigation measures that may be used to lessen the effects. CEQA requires the decision-making body (the Lead Agency) taking action on the Proposed Project (in this case the County of San Bernardino) to consider the Addendum along with the General Plan EIR prior to making a decision on the Proposed Project.

Relationship of the Addendum to Previous CEQA Documents

The Program EIR was certified with the adoption of the General Plan Update in 2007 and the GHG Plan SEIR was certified with the adoption of the GHG Plan in 2011, as set forth above, collectively, the "**General Plan EIR**" No legal actions were filed challenging these previous CEQA documents, and thus they are presumed valid.

By utilizing provisions of the CEQA Guidelines ("**Guidelines**") authorizing the incorporation of previous documents [See Guidelines Sections 15148 (Citation) and 15150 (Incorporation by Reference)] in preparing this Addendum, the County has been able to make maximum feasible and appropriate use of previous analyses and technical information. As a result, following key documents are incorporated herein by reference:

- San Bernardino County General Plan Update Program EIR, 2007 (State Clearinghouse No. 2005101038)
- Facts, Findings, and Statement of Overriding Considerations Regarding the Environmental Effects from Implementation of the San Bernardino County General Plan Update, 2007
- San Bernardino County General Plan Amendment and Greenhouse Gas Reduction Plan Supplemental EIR, 2011 (State Clearinghouse No. 2005101038)
- Facts, Findings and Statement of Overriding Considerations Regarding the Environmental Effects from Implementation of the San Bernardino County Greenhouse Gas Reduction Plan and Associated General Plan And Development Code Amendments, November 2011

  Germane to the analysis in the GHG Plan SEIR were the following greenhouse gas ("**GHG**") related documents:

  - Functional Equivalent Document for Renewable Electricity Standard (California Air Resources Board 2010f) • Functional Equivalent Document for Climate Change Scoping Plan (California Air Resources Board 2008, SCH# 2008102060)
  - Functional Equivalent Document for California Cap on GHG Emissions and Market-Based Compliance Mechanisms (California Air Resources Board 2010d, SCH# 2010102056)

CEQA review of the REC Element in this Addendum must be approached, not independently, but in light of the entire General Plan and the General Plan EIR. By utilizing provisions of the CEQA Guidelines, the County, in preparing this Addendum, has been able to make maximum feasible and appropriate use of the technical information in these previous documents. Accordingly, the Addendum need contain only the information necessary to respond to the project changes, changed circumstances, or new information that triggered the need for additional environmental review (CEQA Guidelines Section 15163).

Relationship of the REC Element to the General Plan and Development Code

The General Plan takes immediate concerns into consideration, but focuses primarily on the future to project conditions and needs as a basis for determining objectives. It also establishes long-term policies for day-to-day decision-making based upon those objectives. Currently, the County's General Plan consists of eight Elements (or areas of focus): Land Use, Circulation and Infrastructure, Housing, Conservation, Open Space, Noise, Safety, Economic Development. The REC Element will join the General Plan, as its ninth Element. Within each Element are the vision, goals, policies, and objectives that direct implementation within its identified purpose. All of the Elements work together, forming a comprehensive set of planning policies. The General Plan also encompasses a series of

linked documents, e.g. associated Land Use Zoning District maps; Hazard, Circulation, and Resource Overlay maps, and an Alternate Housing Map. Also included are 13 individual Community Plans, the GHG Plan, and multiple supporting documents and reports. Policies in the General Plan then guide the rules and strategies that become codified in the County's Development Code.

The REC Element will identify the goals and policies that guide the siting, design, construction, maintenance, and decommissioning of renewable energy generation facilities, and recommend various measures with which such goals and policies may be attained. The vision, goals, policies, and programs described in the REC Element, and the associated rules and implementation strategies codified in the proposed Development Code amendments maintain consistency with the existing General Plan's vision, goals, policies, programs, and their implementing ordinances.

In 2011, the Conservation Element of the General Plan was amended and an Energy section (Section 7) included to guide policies related to multiple forms of energy production, including electricity infrastructures and renewable energy. Several goals and policies directly related to renewable energy will be removed from the Conservation Element and replaced by the proposed REC Element.

Summary of REC Element Focus and Policies

The REC Element has been prepared to augment existing General Plan policies related to renewable energy, consistent with a "Renewable Energy and Conservation Element Framework: Purpose, Values and Standards" of guiding principles for renewable energy policies ("**Framework**"). The Framework was adopted by the Board of Supervisors in March 2015. The Framework and the resulting REC Element policies tend toward restricting the siting of large scale renewable energy projects and toward encouraging increased production of on-site, smaller scale community oriented systems with the purpose of reducing environmental impacts.

The REC Element proposes a standards-based approach to identify where new renewable energy projects should be sited. A standards-based approach starts with meeting a need, and then follows by identifying appropriate and inappropriate site conditions. This approach enables protection of environmentally sensitive areas while allowing projects to locate where they are most beneficial and financially viable. Knowing the end-use enables project design to meet functionality rather than maximum capacity that transports the beneficial use elsewhere. The standards-based method also enables advancements in technology to occur without requiring continual reassessments. Developers will be required to demonstrate they meet standard County protocol in order to receive development permits.

The REC Element will encourage the construction of community-oriented renewable energy projects to ensure the benefits of a project offset its costs to the community. Project siting and design is anticipated to consist primarily of small solar photovoltaic (PV) of 6 acres or less and onsite or adjacent to already developed properties. Such small scale projects can more easily avoid environmental concerns that have made implementation of renewable energy in the County controversial.

REC Element policies are designed to direct utility-oriented projects toward degraded lands that are not of substantial value for other developed uses. In addition, the County has identified five Bureau of Land Management ("**BLM**") Desert Renewable Energy Conservation Plan "Development Focus Areas" where suitable land may be available that is separated from protected conservation lands and valuable wildlife habitat.

The REC Element builds on the Countywide Vision and General Plan with a set of policies designed to promote renewable energy development in a responsible manner, consistent with the protections

identified in the Environment and Quality of Life elements of the Countywide Vision and the County's existing General Plan Conservation Element. The County has long been a proponent of responsible conservation of its many and varied natural resources. The County has incorporated into the REC Element strong language in this regard, and will continue to uphold these values while at the same time encouraging renewable energy development that is appropriately sited, designed, constructed, and maintained.

APPROACH TO ANALYSIS OF ENVIRONMENTAL FACTORS:

Passage in 2006 of the Global Warming Solutions Act (AB 32) was a major turning point in California's history. By legislating GHG emission reductions, AB 32 set the stage for transitioning to a sustainable, low-carbon future. Implementation of the County's REC Element is intricately connected to the GHG Plan component of the General Plan as it, in effect, encourages and enables, through its policies and performance measures, implementation of mitigation measures to reduce greenhouse gas emissions.

The degree to which the REC Element may quantifiably affect the type, amount, and geographic distribution of future renewable energy projects cannot be known – and attempts to evaluate actual physical effects to the environment must, by nature, be an exercise in conjecture. With nearly two million unincorporated privately-held acres under County jurisdiction, it is far too speculative to translate the vision and processes into a quantifiable renewable energy project development future or any form of "build out scenario". With the General Plan EIR as its foundation, the review and analysis herein is based on general statements of unquantified impacts. Nonetheless, unquantified statements of impact maintain a place of value in identifying qualitative environmental impacts, alternatives, and mitigation measures.

That said however, the GHG Plan SEIR embraced and evaluated multiple renewable energy and conservation scenarios that, as applied to new and existing development, resulted in a level of quantified impacts used as a base for its impact analysis. These impacts also apply directly to the REC Element, as many of its greenhouse gas reduction policies are directly tied to implementation of policies in the REC Element. In a sense, the REC Element can be considered as a policy document that will enable implementation of many of the implementation measures outlined in the GHG Plan. Achieving this vision and implementing these goals will consequently result in projects that beneficially affecting the regions source of energy and contribute to its reduction in fossil fuel dependency. Implementation of the REC Element's performance standards will also enhance existing protections for the County's natural resources, valued landscapes, and built environments.

The certified Program EIR prepared for the 2007 General Plan Update evaluated potentially significant effects for the following 16 environmental areas of potential concern: 1) aesthetics; 2) agricultural resources; 3) air quality; 4) biological resources; 5) cultural and paleontological resources; 6) geology and soils; 7) hazards and hazardous materials; 8) hydrology, flood hazards and water quality; 9) land use and planning; 10) mineral resources; 11) noise; 12) population and housing; 13) public services; 14) recreation; 15) transportation/traffic; and 16) utilities and service systems. Of these 16 categories, the Board adopted findings concurring with the conclusions in the Program EIR that six of them remained incapable of being mitigated to a less-than-significant level: 1) aesthetics, 2) agricultural resources, 3) air quality, 4) biological resources, 5) hazards and hazardous materials and 6) transportation/traffic. (See Table 1, Summary of Environmental Impacts by CEQA Document.)

The certified GHG Plan SEIR evaluated 10 relevant environmental categories: 1) aesthetics, 2) agricultural and forestry resources, 3) air quality, 4) biological resources, 5) cultural resources, 6)

hazards & hazardous materials, 7) hydrology/water quality, 8) noise, 9) public services, and 10) utilities/service systems. Mandatory Findings of Significance were also evaluated. Of these 10, only three were found to cause new or substantially more severe significant impacts beyond those considered in the Program EIR: 1) aesthetics, 2) agricultural and forestry resources, and 3) biological resources. For these three topics it was determined that impacts would remain significant and unavoidable, even with implementation of mitigation measures.

The Board of Supervisors adopted a Statement of Overriding Considerations that determined the benefits of the project outweighed their significance for both the Program EIR and the GHG Plan SEIR for those areas in which environmental impacts remained significant and unavoidable even with implementation of mitigation measures.

As the Addendum is related to impacts from GHG reduction measures, those categories applicable to the GHG Plan SEIR will also be evaluated in the Addendum. One addition to these categories will include Cultural Resources. Requirements for Cultural Resource consultation have been implemented and will be added to the evaluation. **The analysis covering the Proposed Project resulted in the summary of conclusions shown in Table 1, below. As shown, the Addendum reveals no significant changes would occur beyond what was previously determined** and analyzed in the General Plan EIR, nor will the Proposed Project involve new or more severe significant environmental impacts, thereby requiring major revisions to the General Plan EIR, as any impacts from the Proposed Project were considered in the General Plan EIR.

Table 1

SUMMARY OF ENVIRONMENTAL IMPACTS BY CEQA DOCUMENT

	Program EIR	GHG Plan SEIR	Addendum
Aesthetics	SOC	SOC	No change
Agriculture and Forestry Resources	SOC	SOC	No change
Air Quality	SOC	Less Than	No change
Biological Resources	SOC	SOC	No change
Cultural Resources	Less Than	Less Than	No change
Geology and Soils	Less Than	---	---
Greenhouse Gas Emissions	Less Than	---	---
Hazards and Hazardous Materials	SOC	Less Than	No change
Hydrology/Water Quality	Less Than	Less Than	No change
Land Use and Planning	Less Than	---	---
Mineral Resources	Less Than	---	No change
Noise	Less Than	Less Than	---
Population and Housing	Less Than	---	---
Public Services	Less Than	Less Than	No change
Recreation	Less Than	---	---
Tansportation/Traffic	SOC	---	---
Utilities and Service Systems	Less Than	Less Than	---
Mandatory Findings of Significance	**YES**	**YES**	**NO CHANGE**

SOC: A State of Overriding Considerations was adopted for an impact not able to be fully mitigated
Less Than: A Less Than Significant determination was made.
- - - Considered and not found to be relevant to the analysis

Eight topics were considered but eliminated found not to be relevant to the Proposed Project evaluated in the Addendum for the: 1) geology and soils, 2) greenhouse gas emissions, 3) land use and planning, 4) noise, 5) population and housing, 6) recreation, 7) transportation and traffic, and 8) utilities and service systems.

CEQA ANALYSIS:

The section numbers and letters, with corresponding analysis below, relate to the categories and relevant questions only found in the CEQA Guidelines Appendix G-Environmental Checklist.

1) AESTHETICS AND VISUAL RESOURCES

a, b, c) Scenic Vista, Scenic Resources, and Routes or Existing Scenic Character

The County contains vast undeveloped tracts of land that offer significant scenic vistas. There are numerous designated federal, state and local open space and recreational areas throughout the County that offer scenic vistas and views.

Primary scenic concerns of County residents include the preservation of views within the desert communities and limits development on ridge tops within the mountain communities. Given that wind generators are often located along hillsides and ridgelines (in order to take advantage of wind conditions) creating objectionable intrusions on the landscape and that the County does not have land use jurisdiction on federal and state lands for many large scale energy developments, there are no feasible mitigation measures to mitigate this impact.

The Program EIR determined that implementation of the General Plan would result in significant and unavoidable impacts to scenic vistas, scenic resources, and the existing scenic character of the county (Program EIR Impacts AES-1 and 2) and the GHG Plan SEIR determined that it would result in a substantial increase in the severity of this impact, a significant and unavoidable impact (GHG SEIR Impact 3.1.1). Programmatic mitigation will be imposed on individual projects as they are evaluated in the future through the County development review process, however, it is not likely that the impacts will be mitigated to a less than significant level. **The impact to aesthetics and visual resources was overridden and outweighed by project benefits set forth in the Statement of Overriding Considerations for the GHG Reduction Plan.**

REC Element policies and Development Code performance measures will ensure that implementation of the Proposed Project would not result in an increased severity of aesthetic and visual impacts beyond what were previously identified.

All future projects would be subject to applicable state regulations and requirements, as well as subject to further CEQA analysis. Project siting and design characteristics will dictate the level of this review.

NO NEW OR SUBSTANTIALLY MORE SEVERE SIGNIFICANT IMPACTS WOULD OCCUR AS A RESULT OF THE NEW POLICIES IN THE REC ELEMENT.

d) New Source of Substantial Light or Glare

New renewable energy projects, in response to the growth anticipated during the planning horizon of the General Plan, will incrementally increase ambient light and glare and continued intrusion on natural, scenic viewsheds. However, REC Element policies and performance standards will not increase the severity of the impacts anticipated in the GHG Plan SEIR. This is due to the stated goal of promoting small scale community oriented renewable energy projects near populated areas, and directing larger utility-oriented projects to outlying degraded land areas.

The Program EIR determined that implementation of the General Plan would result in significant and unavoidable impacts associated in glare and nighttime lighting (Program EIR Impact AES-3 and GHG Plan SEIR Impact 3.1.2)**. REC Element policies and Development Code performance measures will ensure that implementation of the Proposed Project would not result in an increased severity of light or glare impacts beyond what were previously identified.**

All future projects would be subject to applicable state regulations and requirements, as well as subject to further CEQA analysis. Project siting and design characteristics will dictate the level of this review.

NO NEW OR SUBSTANTIALLY MORE SEVERE SIGNIFICANT IMPACTS WOULD OCCUR AS A RESULT OF THE NEW POLICIES IN THE REC ELEMENT.

2) AGRICULTURAL AND FORESTRY RESOURCES

a, b, e) Agricultural Resources

Agricultural has historically been an important part of San Bernardino County's economy. The Valley region was once dominated by citrus groves, vineyards, dairy farms and the related industries. Much of the agricultural industry has left the region due to increases in traffic congestion. Strict air and water regulations have caused many dairy owners and other agricultural businesses to relocate out of the state. Areas in the eastern portion of the valley still maintain fruit orchards and nursery and vegetable production. Continued urban expansion is resulting in the conversion of agricultural uses. Economic pressures favor developing the land for other uses such as shopping centers, industrial logistics, and master planned communities.

Agriculture within the Mountain Region has is limited to the Oak Glen area which maintains a thriving economy which is centered on apple orchards. In the Desert Region, agricultural development is limited primarily to areas bordering the Mojave River as far north as Newberry Springs, though, due to the adjudication of the Mojave River watershed, it is a limited resource.

New renewable energy generating facilities and supporting facilities such as transmission lines that would convert or cross agricultural lands could occur as a result of the Proposed Project. However, proposed policies in the REC Element will limit new utility-oriented projects to degraded lands only, thus significant agricultural impacts are not anticipated beyond that identified in the precious CEQA documents.

The Program EIR determined that implementation of the General Plan would result in significant and unavoidable impacts to agricultural uses in the County due to urban

expansion and economic considerations (Program EIR Impacts AG-1 and 2). Renewable energy generating facilities are an allowed use in the Agriculture Zone and could result in increased severity of agricultural use impacts beyond what was considered in the Program EIR. The GHG Plan SEIR determined its policies to promote renewable energy would result in an increase in the severity of this impact and identified it as a substantial increase that would result in a significant and unavoidable impact. **Mitigation was incorporated into the GHG Plan SEIR, but did not mitigate the impacts to a less than significant level. A Statement of Overriding Considerations was adopted by the Board of Supervisors for impacts to agricultural resources for the GHG Reduction Plan.**

REC Element policies and Development Code performance measures will ensure that implementation of the Proposed Project would not result in an increased severity of agricultural impacts beyond what were previously identified.

All future projects would be subject to applicable state regulations and requirements, as well as subject to further CEQA analysis. Project siting and design characteristics will dictate the level of this review.

NO NEW OR SUBSTANTIALLY MORE SEVERE SIGNIFICANT IMPACTS WOULD OCCUR AS A RESULT OF THE NEW POLICIES IN THE REC ELEMENT.

3) AIR QUALITY

a - e) Air Quality and Pollutants

Air quality within a region is impacted by the amount of air pollution generated from stationary, mobile, area, and natural sources located within that region. California is divided geographically into 15 air basins in order to manage the State's air resources on a regional basis. San Bernardino County is located in two air basins, the South Coast Air Basin ("**SCAB**") and the Mojave Desert Air Basin ("**MDAB**").

The topography and climate of Southern California combine to make the SCAB an area with a high potential for air pollution. During the summer months, a warm air mass frequently descends over the cool, moist marine layer produced by the interaction between the ocean's surface and the lowest layer of the atmosphere. The warm upper layer forms a cap over the cool marine layer and inhibits the pollutants in the marine layer from dispersing upward. Light winds during the summer further limit ventilation. Sunlight triggers photochemical reactions which produce ozone, and this region experiences more days of sunlight than many other major urban areas in the nation. The cool moist coastal air from the SCAB is blocked by the San Gabriel and San Bernardino mountain ranges. Poor air quality conditions also exist in the MDAB. The area is characterized by hot, dry summers and mild winters with annual rainfall averaging two to five inches per year. Prevailing winds are a major contributor to poor air quality in the Desert Region.

The Program EIR determined that implementation of the General Plan would result in significant and unavoidable impacts to air quality (Program EIR Impacts AQ-1, 2, and 3). The purpose of the GHG Plan is to reduce GHG emissions within the County, and the GHG SEIR determined that implementation of the GHG Plan would not result in an

increased severity of previously identified Program EIR air quality impacts. In addition, implementation of these General Plan and Development Code provisions would ensure that construction air pollutant emissions are adequately addressed. Thus, the GHG Plan also would not result in a substantial increase in the severity of this impact, which was previously identified in the Program EIR as a significant and unavoidable impact.

Implementation of REC Element policy provisions and the continued implementation of the County Development Code, as amended, would generally ensure that implementation of the Proposed Project would not result in increased severity of these impacts. **As a result, the Proposed Project would not result in a new significant or substantially more severe impact related to air quality.**

REC Element policies and Development Code performance measures will ensure that implementation of the Proposed Project would not result in an increased severity of air quality impacts beyond what were previously identified.

All future projects would be subject to applicable state regulations and requirements, as well as subject to further CEQA analysis. Project siting and design characteristics will dictate the level of this review.

NO NEW OR SUBSTANTIALLY MORE SEVERE SIGNIFICANT IMPACTS WOULD OCCUR AS A RESULT OF THE NEW POLICIES IN THE REC ELEMENT.

4) BIOLOGICAL RESOURCES

a - d) Natural Habitat Areas/Sensitive Species/Wildlife Corridors

The County has been divided into three sub-regions for planning purposes: the Valley Region, the Mountain Region and the Desert Region. The Valley Region is urbanized with few existing natural open space areas. The predominant vegetation communities within the undeveloped areas of the Valley are chaparral, coastal sage scrub, deciduous woodlands and grasslands. The most sensitive vegetation types found within the Valley area are wetlands, including riparian woodland, riparian scrub and freshwater marsh. All riparian areas in the County are within federal and state protected areas.

The dominant aquatic feature within the Valley Region is the Santa Ana River Watershed. Key riverine resources include Day Creek, Etiwanda Creek and Sevaine Creek. Other areas are important biologically because they support flora or fauna that are limited in their distribution or require or tolerate unusual conditions that occur there.

The vegetation communities in the Mountain Region include scrubs, woodlands, wetlands and the relic pavement plains. The County coordinates with federal and state management plans as most of the Mountain Region is under the jurisdiction of federal or state agencies. The California Department of Fish and Wildlife ("**CDFW**") recognizes 14 Areas of Special Biological Importance ("**ASBIs**") within this region, including key areas that support herds of both resident and seasonally migratory mule deer. CDFW also recognizes principal wintering areas for waterfowl migrating along the Pacific Flyway.

The Desert Region encompasses approximately 93 percent of the County land area, and includes a great diversity of biological resources in one of the most fragile ecosystems in the United States. Most of the Desert Region is made up of land managed by the BLM

and other federal agencies. These federal lands support various important biological resources, including areas of deer, bighorn sheep, and desert tortoise habitat. The Desert Region also supports a high number of sensitive plant species.

In general, the GHG reduction measures envisioned as part of the GHG Plan and the REC Element involve expansion of existing facilities in urbanized or already developed areas, and/or within existing rights-of-way, rather than extension of infrastructure into undeveloped portions of the County. New policies are to allow utility-oriented projects on degraded lands only. Therefore, most contemplated improvements would not be expected to adversely affect important biological habitats.

The GHG Plan determined that implementation of new renewable energy projects could involve installation of wind generators and other renewable energy facilities that have the potential to impact sensitive and special-status species in unique ways compared with other development not anticipated or evaluated in the Program EIR. Wildlife may be potentially affected by electrocution from transmission lines; noise; presence of, or collision with, turbines, meteorological towers, and transmission lines, maintenance activities; special-status avian and bat strikes from wind-generating facilities; exposure to contaminants; and increased potential for fire hazards.

In some instances, turbines, transmission lines, and other facility structures may interfere with behavioral activities, including migratory movements, and may provide additional perch sites for raptors, thereby increasing predatory levels on other wildlife (i.e., predation of juvenile desert tortoises by ravens). Additionally, with the development of wind power generating facilities, there is a potential for impacts to special-status birds, raptors, and bats due to collision with wind turbines and barotraumas (in bats).

The Program EIR found that, despite the imposition of certain mitigation measures, impacts to some sensitive and special-status species and their associated habitat and migratory corridors resulting from implementation of the General Plan could not be fully mitigated to a level below significance (Program EIR Impacts BIO-1, 2, 3, 8, 9, 13, 14, and 16). Implementation of General Plan policy provisions and the continued implementation of the County Development Code would generally ensure that implementation of the proposed project does not result in an increased severity of these impacts. The GHG Plan SEIR determined that new renewable energy generating facilities could result in increased severity of biological resource impacts than was considered in the Program EIR.

Mitigation was incorporated into the GHG Plan SEIR, but did not mitigate the impacts to a less than significant level. A Statement of Overriding Considerations was adopted by the Board of Supervisors for impacts to agricultural resources for the GHG Reduction Plan.

REC Element policies and Development Code performance measures will ensure that implementation of the Proposed Project would not result in an increased severity of biological resource impacts beyond what were previously identified.

All future projects would be subject to applicable state regulations and requirements, as well as subject to further CEQA analysis. Project siting and design characteristics will dictate the level of this review.

NO NEW OR SUBSTANTIALLY MORE SEVERE SIGNIFICANT IMPACTS WOULD OCCUR AS A RESULT OF THE NEW POLICIES IN THE REC ELEMENT.

5) CULTURAL RESOURCES

a, b) Historic and Archaeological Resources

Cultural and archaeological resources are physical objects, buildings and structures, locations, living biological resources, or landscapes with unique cultural or historical significance. In the County, these resources include items left by settlers from Europe and elsewhere, dated between 1770 and 1950, as well as Native American tools, artwork, other possessions or artifacts, structures, and sacred locations. The San Bernardino County Archaeological Information Center recognizes over 12,000 historic sites from Native American periods (pre-1770), the Mission period of Spanish occupation (1770 to 1820), the Mexican period (1820 to 1848), and the American period (1848 to 1950).[2] A large number of state and federally listed historic resources are located in the unincorporated parts of the County, including Native American petroglyph sites, ghost towns, World War II military training facilities, and wagon roads across the Mojave (OHP 2015; DOI 2015).

In addition to the cultural resources associated with historic sites, a significant number of traditional cultural properties ("**TCPs**") under the National Historic Preservation Act and California Historical Resources Information System ("**CHRIS**") sites under the California Office of Historic Preservation exist in and around the County.

To assist in evaluating the REC Element's cultural impacts, 15 tribes associated within the County's jurisdiction were contacted based on a list received from the California Native American Heritage Commission ("**NAHC**"). To-date, four tribes have responded to the County's notification of the proposed REC Element: San Manuel Band of Mission Indians, Agua Caliente Band of Cahuilla Indians, Soboba Band of Luiseno Indians, and the Colorado River Indian Tribes. Senate Bill 18 consultation is ongoing with these tribes, and will continue as the REC Element moves through the public review and adoption process.

The enactment of Assembly Bill 52, Tribal Cultural Resources under CEQA, in 2015 will continue to ensure affected Tribes are notified and have opportunity to evaluate and participate in meaningful consultation regarding future renewable energy projects as they are proposed.

REC Element policies and Development Code performance measures will ensure that implementation of the Proposed Project would not result in an increased severity of cultural resource impacts beyond what were previously identified.

All future projects would be subject to applicable state regulations and requirements, as well as subject to further CEQA analysis. Project siting and design characteristics will dictate the level of this review.

NO NEW OR SUBSTANTIALLY MORE SEVERE SIGNIFICANT IMPACTS WOULD OCCUR AS A RESULT OF THE NEW POLICIES IN THE REC ELEMENT.

[2] While the American period is of course ongoing, resources after 1950 are generally not considered historical.

c) Paleontological Resources

Paleontological resources are evidence of ancient organisms, such as fossils. They occur primary in sedimentary rock (rock composed by the deposition of sand, silt, and other fine particles), although they may be found in other types of rock as well. Fossils are usually buried and can only be discovered through excavation, although some may be found on the surface. There are approximately 3,000 known sites in San Bernardino County with paleontological resources (County of San Bernardino 2007).

Chapter 82.12, Cultural Resources Preservation, of the County's Development Code helps to identify and preserve important archaeological and historical resources, while Chapter 82.19, Paleontological Resources Overlay, helps to identify and preserve significant paleontological resources. Both of these overlay zones are applied to areas known for these resources

All future projects would be subject to applicable state regulations and requirements, as well as subject to further CEQA analysis. Project siting and design characteristics will dictate the level of this review. County standard procedures to protect cultural resources currently in place include: a cultural resources survey and consultation with associated Indian tribes and other specialists as appropriate. In certain cases, specialized cultural monitors are required on the project site during certain ground-disturbing activities.

Monitors have the authority to stop disruptive activities around areas where any such resources are found. Should any human remains be found, the County Coroner's office will be contacted along with the NAHC if any human remains of Native American origin are found (County of San Bernardino 2011b, 2014a, 2014b).

REC Element policies and Development Code performance measures will ensure that implementation of the Proposed Project would not result in an increased severity of cultural resource impacts beyond what were previously identified.

All future projects would be subject to applicable state regulations and requirements, as well as subject to further CEQA analysis. Project siting and design characteristics will dictate the level of this review.

NO NEW OR SUBSTANTIALLY MORE SEVERE SIGNIFICANT IMPACTS WOULD OCCUR AS A RESULT OF THE NEW POLICIES IN THE REC ELEMENT.

6) HAZARDS AND HAZARDOUS MATERIALS

d) Hazardous Waste Sites

A hazardous material is defined as "any material that because of its quantity, concentration or physical or chemical characteristics, poses a significant present or potential hazard to human health and safety or to the environment if released into the workplace or the environment." There are approximately 2,400 known hazardous waste facilities in San Bernardino County. As of January 1, 2006, there were 55 potential hazardous waste sites listed under the Comprehensive Environmental Response, Compensation and Liability Act, also known as Superfund. The Fire Department, on behalf of the County, holds approximately 6,500 permits with businesses throughout the County for various hazardous materials and hazardous waste activities.

The Proposed Project would involve encouraging the placement of utility-oriented renewable energy facilities at degraded sites, including sites that are, or may have been, contaminated with hazardous waste. The California Department of Toxic Substances ("**DTSC**") is responsible for overseeing the identification and reclamation of contaminated sites. Subsequent use of such sites depends on the nature of toxicity and the method of containment. Once reclaimed, conditional uses can be allowed; often future habitation or human occupancy is restricted. Such sites can make preferable sites for renewable energy facilities that require only periodic site monitoring.

The General Plan EIR (the Program EIR and the GHG Plan SEIR) determined that implementation of the General Plan would result in a less than significant impact regarding the release of hazardous materials.

REC Element policies and Development Code performance measures will ensure that implementation of the Proposed Project would not result in an increased severity of hazards or hazardous material impacts beyond what were previously identified.

All future projects would be subject to applicable state regulations and requirements, as well as subject to further CEQA analysis. Project siting and design characteristics will dictate the level of this review.

NO NEW OR SUBSTANTIALLY MORE SEVERE SIGNIFICANT IMPACTS WOULD OCCUR AS A RESULT OF THE NEW POLICIES IN THE REC ELEMENT.

7) HYDROLOGY AND WATER QUALITY

b, f) Groundwater Supply

Groundwater supply has been of particular concern in recent years due to the extended drought being experienced by this region. Water for renewable energy projects is primarily used to suppress fugitive dust generated during construction. It is also used during operations for energy generation technologies that involve heat, and for the periodic cleaning of solar panels. A community's water supply has the potential to result in both short- and long-term impacts. Insufficient supply can also result in a restriction of various forms of new development. Water supply needs for the operation of wind and solar projects is generally minor and much less than agricultural and residential land uses.

Renewable energy generation typically has little effect on groundwater infiltration as ground surfaces are primarily left in a permeable state. The GHG Plan SEIR determined the proposed GHG reduction measures would not increase the severity of groundwater resource impacts or result in a new impact that was not addressed in the Program EIR.

The Program EIR and GHG Plan SEIR determined that implementation of the General Plan would result in a less than significant impact to groundwater supplies and groundwater recharge (Program EIR Impact HWQ-1).

REC Element policies and Development Code performance measures will ensure that implementation of the Proposed Project would not result in an increased severity of groundwater supply impacts beyond what were previously identified.

All future projects would be subject to applicable state regulations and requirements, as well as subject to further CEQA analysis. Project siting and design characteristics will dictate the level of this review.

NO NEW OR SUBSTANTIALLY MORE SEVERE SIGNIFICANT IMPACTS WOULD OCCUR AS A RESULT OF THE NEW POLICIES IN THE REC ELEMENT.

a, c - f) Water Quality and Storm Runoff

The GHG SEIR determined that water quality issues are becoming increasingly significant throughout the County. Improved monitoring techniques reveal the presence of man-made chemicals and their residues, as well as naturally occurring toxic chemicals, in most of the state's surface and groundwater. This is due, among other things, to the recharge of saline water originating from storm flows, urban runoff, imported water and incidental recharge. Stormwater runoff can contribute to water quality degradation. Long-term implementation of the proposed Project could add impervious surfaces that could impact water quality through discharge of pollutants into groundwater basins.

The Santa Ana Regional Quality Control Board has required the San Bernardino Flood Control District, as a permittee, to be included in the National Pollutant Discharge Elimination System ("**NPDES**") Municipal Stormwater Permit. The Permit and Section 4 of the Report of Waste Discharge, dated April 1995, require the development and adoption of New Development/Redevelopment Guidelines. The purpose of the Guidelines is to identify pollutant prevention and treatment measures that could be incorporated into development projects. The GHG Plan SEIR concluded that the County General Plan and Development Code include policies and programs, including NPDES compliance that addresses potential impacts to water quality and, in conjunction with state mandated requirements, provide adequate mitigation for activities anticipated to occur as a result of GHG Plan implementation.

REC Element policies and Development Code performance measures will ensure that implementation of the Proposed Project would not result in an increased severity of water quality and stormwater runoff impacts beyond what were previously identified.

All future projects would be subject to applicable state regulations and requirements, as well as subject to further CEQA analysis. Project siting and design characteristics will dictate the level of this review.

NO NEW OR SUBSTANTIALLY MORE SEVERE SIGNIFICANT IMPACTS WOULD OCCUR AS A RESULT OF THE NEW POLICIES IN THE REC ELEMENT.

8) MINERAL RESOURCES.

a, b) Mineral Resources

The REC Element is consistent with the land uses envisioned in the General Plan and Development Code and would not remove policies that currently protect mineral resources. Future development proposals will be subject to permitting to ensure conformance with the land use designations, as well as with Mineral Resources overlay

zones. The Element contains recommendations that would allow distributed generation renewable energy facilities as an interim use on sites that are preserved for future mineral extraction and otherwise precluded from renewable energy development. As the intended uses would be temporary, and would not affect the long term extraction of mineral resources, there is no impact

REC Element policies and Development Code performance measures will ensure that implementation of the Proposed Project would not result in an increased severity of mineral resource impacts beyond what were previously identified.

All future projects would be subject to applicable state regulations and requirements, as well as subject to further CEQA analysis. Project siting and design characteristics will dictate the level of this review.

NO NEW OR SUBSTANTIALLY MORE SEVERE SIGNIFICANT IMPACTS WOULD OCCUR AS A RESULT OF THE NEW POLICIES IN THE REC ELEMENT.

9) PUBLIC SERVICES

a, b) Police, Fire, and Emergency Services

The Program EIR and the GHG Plan SEIR determined that implementation of the General Plan would result in a less than significant impact to fire protection and emergency services (Program EIR Impacts PS-2 and 3). The GHG Plan SEIR examined the effects of the Project on fire protection and emergency services. The GHG Plan SEIR includes, each subsection, a description of existing facilities and infrastructure, applicable service goals, potential environmental impacts resulting from implementation of the proposed General Plan Update, GHG Reduction Plan, and associated Development Code Amendment.

Certain issues within the public services and utilities topic, such as police protection, schools, parks and other services that could be potentially impacted by the Project were evaluated in the Initial Environmental Study prepared as part of the Notice of Preparation. The Initial Study determined that the GHG Plan would not result any new development potential, population increase, or construction of facilities that would trigger additional or altered needs for these services and were therefore not evaluated in the GHG Plan SEIR.

REC Element policies and Development Code performance measures will ensure that implementation of the Proposed Project would not result in an increased severity of hazards or hazardous material impacts beyond what were previously identified.

All future projects would be subject to applicable state regulations and requirements, as well as subject to further CEQA analysis. Project siting and design characteristics will dictate the level of this review.

NO NEW OR SUBSTANTIALLY MORE SEVERE SIGNIFICANT IMPACTS WOULD OCCUR AS A RESULT OF THE NEW POLICIES IN THE REC ELEMENT.

10) MANDATORY FINDINGS OF SIGNIFICANCE.

For the reasons stated in the analysis above, the County finds and determines that adoption and implementation of the Proposed Project will not have a significant impact on the environment (either by creating new significant environmental impacts or a substantial increase in the severity of significant impacts already identified in the previous CEQA documents, the Program EIR and the GHG Plan SEIR, collectively, the "General Plan EIR"). The analysis included in this document constitutes an Addendum to the General Plan EIR and demonstrates that no further CEQA review is required.

None of the circumstances necessitating preparation of additional CEQA review as specified in CEQA and the Guidelines, including Public Resources Code Section 21166 and Guidelines Sections 15162 and 15163, are present in that:

1) there are no substantial changes to the project that would result in new significant environmental impacts or a substantial increase in the severity of significant impacts already identified in the General Plan EIR;

2) there are no substantial changes in circumstances that would result in new significant environmental impacts or a substantial increase in the severity of significant impacts already identified in the General Plan EIR;

3) there is no new information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the General Plan EIR were adopted, which is expected to result in

   (a) new significant environmental effects or a substantial increase in the severity of significant environmental effects already identified in the General Plan EIR; or

   (b) mitigation measures which were previously determined not to be feasible would in fact be feasible, or which are considerably different from those recommended in the General Plan EIR and which would substantially reduce significant effects of the project, but the County declines to adopt them; and

4) adoption for the REC Element would not require major revisions to the Program EIR and the GHG Plan SEIR because its implementation does not result in new or more sever impacts.

Thus, in considering adoption and implementation of the Proposed Project, the County can rely on the General Plan EIR, and no further/additional CEQA review is required. Furthermore, as a separate and independent basis, the County finds and determines that the Proposed Project is also exempt from further CEQA review pursuant to Public Resources Code section 21083.3 and Guidelines section 15183.

Sources:

Association of Environmental Professionals, 2016 California Environmental Quality Act (CEQA) Statute and Guidelines.

County of San Bernardino 2011. General Plan Amendment and Greenhouse Gas Reduction Plan, Supplemental EIR. Prepared by PMC.

_ _ _ _ _. 2014 Development Code, as Amended.

_ _ _ _ _. 2007 General Plan, as Amended.